CARDIFF SCHOOL DISTRICT
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

NOTICE OF SPECIAL MEETING

Written notice is hereby given in accordance with Education Code Section 35144, Government Code 54956, and other applicable law, that the following Special Meeting of the Board of Trustees of the Cardiff School District will be held on:

DATE: Thursday, February 7, 2019

TIME: 5:00 p.m.

PLACE: Cardiff School Auditorium
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

The business to be transacted at the meeting shall be limited to the following:

I. ORGANIZATIONAL ITEMS

A. Call to Order

B. Pledge of Allegiance

C. Roll Call
Ms. Siena Randall, President
Mr. David Ross, Clerk
Ms. Nancy Orr, Member
Mr. Dave Clark, Member
Mr. Mark Whitehouse, Member
Ms. Jill Vinson, Superintendent

D. Approval of agenda for February 7, 2019

II. Public Comments – *(The purpose of the Board meeting is to conduct the School Board's business in public. The Board welcomes and encourages public comments however Board members may not respond to comments during the public comment portion of the agenda. Any member of the public who wishes to address the Board on an item on the agenda or on another topic which lies within the governing board's jurisdiction may do so, but must present a written request. Please hand your form to the secretary before the meeting. Presentations are limited to 3 minutes per person per topic. The total amount of time to be allowed on any item is twenty minutes, unless the time limit is waived by a majority vote of the Board. The Board may 1) acknowledge receipt of the information; 2) refer to staff for further study; or 3) refer the matter to a future agenda).*

III. FACILITIES *Exhibit*

A. Adopt Resolution No. 18-19-06 Making Findings Pursuant to the California Environmental Quality Act for the Cardiff School Modernization and Reconstruction Project; Making CEQA Categorical Exemption Findings; Adopting CEQA Findings of Fact; Certifying and Approving an Environmental Impact Report; Adopting a Mitigation Monitoring Program; and Approving the Project.

A-E

B. Authorize District staff to file a Notice of Exemption and Notice of Determination for the Project with the San Diego County Clerk and the Office of Planning and Research.

IV. ADJOURNMENT OF MEETING

Cardiff School District
Cardiff-by-the-Sea, California 92007

DATE: February 7, 2019

ITEM: **Adopt Resolution #18-19-06, A Resolution of the Cardiff School District Board of Trustees Making Findings Pursuant to the California Environmental Quality Act for the Cardiff School Modernization and Reconstruction Project; Making CEQA Categorical Exemption Findings; Adopting CEQA Findings of Fact; Certifying and Approving an Environmental Impact Report; Adopting a Mitigation Monitoring Program; and Approving the Project**

BACKGROUND:

The proposed project is the modernization and reconstruction of the Cardiff School site for its continued use as a public elementary school ("Project"). The Project entails demolition of existing structures built between 1949 and 1961 along with various portions of site paving and landscape areas and student playfields, modernization of existing structures, and the construction of new structures and site facilities. The new construction would include single story classroom and specialty laboratory buildings, a multipurpose building, a food service building and adjacent lunch court, pedestrian loading and parking areas, play areas, drainage and utility improvements, and other school amenities. Once complete, the reconstructed Cardiff School would maintain its current operation and student population and would only increase the total net number of classrooms by one.

The Cardiff School District has chosen to act similarly to other school districts throughout San Diego County and the state of California in replacing aging buildings that are inadequate for the current educational program and have become a financial burden due to excessive maintenance expenses. Two other local school districts, Solana Beach School District and San Dieguito Union High School District, recently replaced two aging schools approximately 3 miles south of Cardiff School in Solana Beach. Both schools replaced buildings similar in age and construction to Cardiff School with modern buildings designed to accommodate their current educational program.

In the early 2000's Cardiff School District replaced Ada Harris School with all new construction. The Ada Harris replacement project has been well-received by the community. In November 2016 the community showed its support for the similar modernization and reconstruction of Cardiff School when approximately 66% of the voters approved Measure GG, the District's $22 million bond. Measure GG specifically

contemplated the replacement of aging existing classroom and multipurpose buildings with new buildings.

COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT:

The California Environmental Quality Act (CEQA) requires the District to consider the environmental consequences of the Project. District staff has determined that the Project is categorically exempt from environmental review under CEQA pursuant to State CEQA Guidelines (Title 14 of the California Code of Regulations, section 15000 *et seq*.) sections 15301 (existing facilities), 15302 (replacement or reconstruction), 15303 (new construction or conversion of small structures), 15304 (minor alterations to land), 15314 (minor additions to schools), and 15331 (historical resource restoration/rehabilitation).

Nevertheless, an Environmental Impact Report ("EIR") (State Clearinghouse No. 2018051016) evaluating the Project was prepared in order to provide interested agencies and members of the public an opportunity to participate in review of the Project and demonstrate to the public that the District has thoroughly considered environmental implications of the Project. The District's decision to conduct environmental review under CEQA does not restrict it from also relying on an exemption. (*Santa Barbara County Flower & Nursery Growers Association v. County of Santa Barbara* (2004) 121 Cal.App.4th 864, 873-874; *Del Cerro Mobile Estates v. City of Placentia* (2011) 197 Cal.App.4th 173, 179-180; *Rominger v. County of Colusa* (2014) 229 Cal.App.4th 690, 700.)

The EIR is a public document designed to provide the Board and the public with an analysis of the environmental effects, if any, the project may have on the environment, ways to reduce or avoid environmental impacts, and potential alternatives to the project that could lessen such impacts. The EIR for the Project addresses potential environmental issues as well as other concerns communicated during the public review period.

The Draft EIR was released for public review and comment from October 5, 2018 to November 19, 2018. Public comments on the Draft EIR were submitted to the District. Changes have been made in the Final EIR in response to comments on the Draft EIR to clarify or amplify information. Those comments, as well as the District's detailed responses, have been provided in the Final EIR. None of the changes constitute significant new information showing a new significant environmental impact that would result from approval of the Project requiring recirculation of the EIR for review by the public and agencies under State CEQA Guidelines section 15088.5.

Due to the voluminous nature of the Final EIR, hard copies are available for review at the District's office. All environmental documents related to the Project, including the Draft EIR, Final EIR, and appendices, are available for review on the District's website at: https://www.cardiffschools.com/.

FINANCIAL IMPLICATIONS:

The District assumes the cost for the Cardiff School Modernization and Reconstruction Project and payment for construction of the proposed improvements with Measure GG bond funds and District Capital Improvement funds.

RECOMMENDATIONS:

1. It is respectfully recommended that the Board adopt Resolution #18-19-06 Making Findings Pursuant to the California Environmental Quality Act for the Cardiff School Modernization and Reconstruction Project; Making CEQA Categorical Exemption Findings; Adopting CEQA Findings of Fact; Certifying and Approving an Environmental Impact Report; Adopting a Mitigation Monitoring Program; and Approving the Project.

2. It is respectfully recommended that the Board authorize District staff to file a Notice of Exemption and Notice of Determination for the Project with the San Diego County Clerk and the Office of Planning and Research.

CARDIFF SCHOOL DISTRICT

RESOLUTION #18-19-06
A Resolution of the Cardiff School District Board of Trustees Making Findings Pursuant to the California Environmental Quality Act for the Cardiff School Modernization and Reconstruction Project; Making CEQA Categorical Exemption Findings; Adopting CEQA Findings of Fact; Certifying and Approving an Environmental Impact Report; Adopting a Mitigation Monitoring Program; and Approving the Project

WHEREAS, the Cardiff School District ("District") is a public school district organized and existing under the laws of the State of California; and

WHEREAS, the District proposes the modernization and reconstruction of Cardiff Elementary School located at 1888 Montgomery Avenue in the City of Encinitas ("Project"); and

WHEREAS, the Project entails the demolition of five 1-story buildings, a portion of another building, and eight relocatable classrooms; construction of ten 1-story wood-framed buildings and a two-classroom addition to an existing building; modernization of two existing buildings; improvements to onsite passenger parking and loading; relocation of play structures; and replacement of the existing baseball field with two natural turf soccer fields; and

WHEREAS, construction of the Project would start in the summer of 2019 and end in December 2020. Kindergarten and first grade students would remain at Cardiff school during construction activities. Second and third grade students would be relocated to Ada Harris School (1508 Windsor Road, Cardiff) and return to Cardiff School in August 2020 and August 2021, respectively; and

WHEREAS, the Project and Project Site, as used herein, are more specifically described and depicted in detail in the Final Environmental Impact Report ("EIR") and such descriptions are hereby incorporated herein by this reference; and

WHEREAS, the District is the lead agency for the Project under the California Environmental Quality Act ("CEQA"), Public Resources Code section 21067 and section

15367 of the State CEQA Guidelines (Title 14 of the California Code of Regulations, section 15000 *et seq*.); and

WHEREAS, the District has determined that the Project is categorically exempt from environmental review under CEQA pursuant to multiple exemptions. Nevertheless, an EIR evaluating the Project was prepared in order to provide interested agencies and members of the public an opportunity to participate in review of the Project and demonstrate to the public that the District has thoroughly considered environmental implications of the Project; and

WHEREAS, the District prepared and circulated notice of its intent to prepare the Draft EIR for the Project ("Notice of Preparation") to all affected agencies, including the Office of Planning and Research and responsible and trustee agencies, Native American tribes, and interested members of the public. The NOP was posted with the County Clerk on May 7, 2018, with a response and comment period ending on June 6, 2018; and

WHEREAS, pursuant to Public Resources Code section 21083.9 and State CEQA Guidelines sections 15082(c) and 15083, the District held a scoping meeting on June 12, 2018 to solicit comments on the scope of the environmental review of the proposed Project; and

WHEREAS, in October 2018, the District (1) completed a Draft EIR for the Project (State Clearinghouse No. 2018051016) and (2) circulated the Draft EIR for public review and comment to governmental agencies and potentially interested persons. The Draft EIR incorporated comments received in response to the NOP; and

WHEREAS, in accordance with State CEQA Guidelines section 15085, a Notice of Completion for the Draft EIR was prepared and filed with the Office of Planning and Research on October 5, 2018; and

WHEREAS, as required by State CEQA Guidelines section 15087(a), the District provided Notice of Availability of the Draft EIR to the public at the same time the District sent the Notice of Completion to the Office of Planning and Research and posted the notice with the County Clerk's office on October 5, 2018; and

WHEREAS, the public review and comment period for the Draft EIR commenced on October 5, 2018 and concluded on November 19, 2018 ("Public Comment Period"); and

WHEREAS, in compliance with the CEQA, the District made copies of the Draft EIR available for review by interested persons and governmental agencies at the District's Office at 1888 Montgomery Avenue, Cardiff-by-the-Sea, 92007; Cardiff Branch Library, 2081 Newcastle Avenue, Cardiff, CA 92007; and online on the District's website (https://www.cardiffschools.com/MeasureGG); and

WHEREAS, during the Public Comment Period, the District consulted with and requested comments from all responsible and trustee agencies, other regulatory agencies, and others pursuant to State CEQA Guidelines section 15086; and

WHEREAS, written comments on the Draft EIR were received from residents. No comments were received from agencies. All comments received, whether submitted in writing during the Public Comment Period, have been considered; and

WHEREAS, based on written comments received in connection with the Draft EIR, the District has prepared a Final EIR for the Project; and

WHEREAS, the Final EIR is composed of (1) the Draft EIR dated October 2018, including any exhibits and appendices thereto; (2) a list of persons and/or organizations that commented on the Draft EIR, the comments received, and responses to those comments in compliance with State CEQA Guidelines section 15088; and (3) an errata showing the revisions to the Draft EIR; and

WHEREAS, the District made available a copy of the Final EIR at the District's office, located at 1888 Montgomery Avenue, Cardiff, CA 92007, and online on the District's website located at https: www.cardiffschools.com; and

WHEREAS, to ensure potentially significant impacts identified in the EIR are reduced or avoided, the Final EIR has identified feasible mitigation measures that are consistent with local, state and federal laws and regulations and standard construction management practices for nesting birds and bats, inadvertent discoveries of cultural and paleontological resources, rehabilitation of historic

resources, and geotechnical requirements that adhere to the California Building Standards Code. Those mitigation measures, and the manner in which compliance will be monitored, are shown in the "Mitigation Monitoring Program" prepared for the Project in conjunction with the Final EIR and attached as Exhibit B; and

WHEREAS, the mitigation measures would ensure that all impacts of the Project would be less than significant; and

WHEREAS, as contained herein, the Board of Trustees ("Board") has endeavored in good faith to set forth the basis of its decision. All the findings and conclusions made by the Board pursuant to this Resolution are based upon all of the oral and written evidence presented to it and taken as a whole and are not based solely on the information provided in this Resolution; and

WHEREAS, on February 7, 2019, the Board held a special public meeting to consider the Project; and

WHEREAS, prior to taking action on the Project, the District has evaluated and considered all potentially significant effects on the environment, feasible project alternatives, and the Mitigation Monitoring Program and has made the findings required by CEQA; and

WHEREAS, the Project's environmental effects, when combined with the environmental effects of successive projects of the same type in the same place, over time is not environmentally significant and cumulatively considerable; and

WHEREAS, the Project will not damage scenic resources within a highway officially designated as a state scenic highway; and

WHEREAS, the Project site is not on a list compiled pursuant to Government Code section 65962.5 with an open and/or active case; and

WHEREAS, the Project will not cause a substantial adverse change in the significance of a historical resource; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have been met.

NOW THEREFORE, be it resolved, determined and ordered by the Board of Trustees of the Cardiff School District as follows:

Section 1. All of the recitals set forth above are true and correct.

Section 2. The Project is exempt from CEQA on multiple grounds discussed below.

a) The Project is exempt from CEQA under a Class 1 categorical exemption (State CEQA Guidelines, § 15301) because it involves modernization and reconstruction of existing facilities and topographical features with negligible expansion of existing facilities. The Project would not result in an increase of more than 10,000 square feet, is in an area where all public services and facilities are available to allow for maximum development permissible in the General Plan, and the area in which the Project is located is not environmentally sensitive.

b) The Project is exempt from CEQA under a Class 2 categorical exemption (State CEQA Guidelines, § 15302) because it involves modernization and reconstruction of existing school facilities, in part to provide earthquake resistant structures, on the same site as the structures replaced and will have the same purpose with less than a 50 percent increase in capacity.

c) The Project is exempt from CEQA under a Class 3 categorical exemption (State CEQA Guidelines, § 15303) because it involves modernization and reconstruction of small facilities and structures in an urbanized area surrounded by development, will not involve the use of significant amounts of hazardous substances, all necessary public services and facilities are available, and the surrounding area is not environmentally sensitive.

d) The Project is exempt from CEQA under a Class 4 categorical exemption (State CEQA Guidelines, § 15304) because it involves minor alterations in

the condition of land and vegetation that do not involve removal of healthy, mature, scenic trees, including grading on land with a slope of less than 10 percent, new landscaping, and minor trenching and backfilling where the surface is restored. Project improvements would not substantially alter directional views of scenic resources.

e) The Project is exempt from CEQA under a Class 14 categorical exemption (State CEQA Guidelines, § 15314) because it involves modernization and reconstruction of existing school facilities within existing school grounds, and does not increase original student capacity by more than 25% or ten classrooms.

f) The Project is exempt from CEQA under a Class 31 categorical exemption (State CEQA Guidelines, § 15331) as rehabilitation of the Little Brick Building would be consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

g) None of the exceptions to use of a categorical exemption identified in State CEQA Guidelines section 15300.2 are present. Specifically, the Project will not impact a particularly sensitive environment, will not result in significant cumulative impacts, does not involve unusual circumstances that present a reasonable possibility of a significant effect, does not result in damage to scenic highways, is not on a parcel identified as a hazardous waste site, and will not cause a substantial adverse change in the significance of a historical resource.

   The existing Little Brick Building on the Project Site (identified as an eligible historic resource) would only be retrofitted to comply with current seismic standards and potentially renovated for parent and teacher gatherings and special events consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings and the California 2016 Historical Building Code, Title 24 of the California Code of Regulations, Part 8. The Project does not include any exterior changes to the Little Brick Building.

Section 3. The Board has reviewed all of the documentation before it relative to the Project, including, but not limited to, the CEQA Findings of Fact (included as Exhibit A), the Final EIR, and the Mitigation Monitoring Program (included as Exhibit B), as well as all related documents and public testimony and comments made to the Board relative to the Project, and determined that based on such information and related deliberation, the Project presents the preferred option for the District.

Section 4. The Board hereby certifies that (1) the Final EIR was presented to and considered by the Board; (2) the Board has reviewed and considered the information contained within the Final EIR; (3) the Final EIR has been completed in compliance with CEQA; and (4) the Final EIR reflects the Board's independent judgment and analysis of the Project. The District declares that no evidence of "significant new information," as defined in State CEQA Guidelines section 15088.5, has been received by the District after circulation of the Draft EIR that would require recirculation. The District therefore certifies the Final EIR based on the entirety of the record of proceedings, including but not limited to the findings and conclusions adopted by way of the CEQA Findings of Fact.

Section 5. Pursuant to Public Resources Code section 21081.6, the District adopts the Mitigation Monitoring Program attached as Exhibit B and incorporated by reference. Implementation of the Mitigation Measures contained in the Mitigation Monitoring Program is made a condition of approval of the Project. In the event of any inconsistencies between the Mitigation Measures set forth within the Final EIR, the CEQA Findings of Fact and the Mitigation Monitoring Program, the Mitigation Monitoring Program shall control.

Section 6. The Board hereby approves the Project.

Section 7. The documents and materials that constitute the record of proceedings on which this Resolution has been based, including but not limited to the Final EIR, are on file with the District Superintendent, Jill Vinson, at the District office, 1888 Montgomery Avenue, Cardiff, CA, 92007. This information is provided pursuant to Public Resources Code Section 21081.6.

Section 8. Within five working days after the passage and approval of this Resolution, the Board hereby authorizes and directs staff to prepare, execute, and file a

Notice of Exemption and Notice of Determination for the Project with the San Diego County Clerk and the Office of Planning and Research.

PASSED, APPROVED AND ADOPTED this 7th day of February, 2019, at a Special Meeting of the Board of Trustees of the Cardiff School District, by the following vote:

AYES:_____ NOES: _____ ABSENT: _____

Attest:

_____ _____

Secretary President

Resolution #18-19-06 Exhibit A

CEQA FINDINGS OF FACT
REGARDING THE
FINAL ENVIRONMENTAL IMPACT REPORT
FOR THE
CARDIFF SCHOOL DISTRICT
CARDIFF SCHOOL MODERNIZATION AND RECONSTRUCTION PROJECT
STATE CLEARINGHOUSE NO. 2018051016

I. BACKGROUND

The California Environmental Quality Act (CEQA) requires that a number of written findings be made by the lead agency in connection with certification of an environmental impact report (EIR) prior to approval of the project, pursuant to Sections 15091 and 15093 of the CEQA Guidelines and Section 21081 of the Public Resources Code. This document provides the findings required by CEQA and adopted by the Board of Trustees of the Cardiff School District (District).

A. Project Summary

Project Location

The project site is the Cardiff Elementary School campus at 1888 Montgomery Avenue in Cardiff-by-the-Sea in Encinitas, San Diego County, California (Assessor's Parcel Number [APN] 260-3400-100, 260-3400-200). The project site is north of Mozart Avenue, west and south of Montgomery Avenue, and east of San Elijo Avenue.

Project Description

The proposed project is the modernization and reconstruction of the Cardiff School. The proposed project entails demolition of five 1-story buildings, and the removal of eight relocatable classrooms; construction of ten 1-story wood-framed buildings; and modernization of three existing buildings. The project would increase the school's building area by 5,289 net square feet, including one new classroom and one specialty lab. The project would also enhance onsite passenger loading and parking. Construction would commence summer 2019 and be completed in approximately 18 months.

The project will be constructed in three phases. Phase one would be the demolition of buildings and the surrounding site area and the construction of Buildings A, B, C, D, F and J. Phase two would be the removal of the eight relocatable classrooms and the construction of Building H and the modernization of the existing buildings. Phase three would occur in the future at a date not yet determined.

Kindergarten and first grade would remain at Cardiff School during construction activities. Second and third grades would be relocated to Ada Harris School. Second grade would return to Cardiff School in August 2020. Third grade may return to Cardiff School at a future date depending on enrollment and the implementation of phase three. No interim portable classrooms would be installed during phases one and two construction activities.

B. Environmental Review Process

In conformance with CEQA, the State CEQA Guidelines, the District conducted an extensive environmental review of the proposed project.

- The District elected to prepare an EIR for the proposed project and issued a Notice of Preparation (NOP) and Initial Study on May 8, 2018. The public review period extended from May 8, 2018 to June 6, 2018.

- Based upon the Initial Study and Environmental Checklist Form, the District staff determined that a Draft EIR (DEIR) would be prepared for the proposed project. The scope of the DEIR was determined based on the District's initial study, comments received in response to the NOP, and comments received at the scoping meeting conducted by the District. Section 2.4.2, page 2-9 of the DEIR, lists the issues identified for analysis in the DEIR.

- The District prepared a DEIR, which was made available for a 45-day public review period beginning November 13, 2017, and ending January 2, 2018.

- The District prepared a Final EIR (FEIR), including the Responses to Comments to the DEIR, which contain comments on the DEIR, responses to those comments, and revisions to the DEIR.

C. Record Of Proceedings

For purposes of CEQA and these Findings, the Record of Proceedings for the proposed project consists of the following documents and other evidence, at a minimum:

- The NOP and all other public notices issued by the District in conjunction with the proposed project

- The DEIR for the proposed project

- The FEIR for the proposed project

- The reports and technical memoranda included or referenced in the DEIR

- All written comments submitted by agencies or members of the public during the public review comment period on the DEIR

- All responses to written comments submitted by agencies or members of the public during the public review comment period on the DEIR

- All written and verbal public testimony presented during a noticed public hearing for the proposed project and comments received after the close of the comment period and responses thereto
- The Mitigation Monitoring and Reporting Program
- All documents, studies, EIRs, or other materials incorporated by reference in the DEIR and FEIR
- The Resolutions adopted by the District in connection with the proposed project, and all exhibits and documents incorporated by reference therein, including comments received after the close of the comment period and responses thereto
- Matters of common knowledge to the District, including but not limited to federal, state, and local laws and regulations
- Any documents expressly cited in these Findings
- Any other relevant materials required to be in the record of proceedings by Public Resources Code Section 21167.6(e)

D. Custodian and Location Of Records

The documents and other materials that constitute the administrative record for the District's actions related to the project on which these findings are based are maintained at the Cardiff School District office, 1888 Montgomery Avenue, Cardiff-by-the-Sea, Encinitas, California, 92007. The Cardiff School District Superintendent is the custodian of the administrative record for the project. Copies of these documents, which constitute the record of proceedings, are and at all relevant times have been and will be available upon request at the front desk at the Cardiff School District office. This information is provided in compliance with Public Resources Code Section 21081.6(a)(2) and Guidelines Section 15091(e).

II. FINDINGS AND FACTS REGARDING IMPACTS

A. Impacts Determined to Have No Impact

Initial Study

An Initial Study was prepared by the District to identify the potential significant effects of the project. The Initial Study was completed and distributed with the Notice of Preparation for the proposed project, dated May 8, 2018, and is included in the Draft EIR as Appendix A. The Initial Study determined that the proposed project would not result in impacts to the following resources:

- Agriculture and Forestry Resources
- Hazards and Hazardous Materials
- Mineral Resources
- Population and Housing
- Public Services

- Recreation
- Utilities and Service Systems

All other topical areas of evaluation included in the Environmental Checklist were determined to require further assessment in the Draft EIR.

Final EIR

B. Less Than Significant Impacts

This section identifies impacts of the proposed project which the Draft EIR determined to be less than significant without implementation of project-specific mitigation measures.

Aesthetics

Impact 5.1-1: The proposed project would not substantially alter public views of scenic vistas, scenic corridors or vista points.

Scenic Resources
The project site is situated in a single-family residential neighborhood in an urbanized beach community. Due to the dense development and varying topography, there are limited expansive scenic views of City-designated visual features. The Pacific Ocean, approximately 500 feet to the west, is a visual resource that can be observed at and near the project site.

Mozart Avenue
The Pacific Ocean can be seen from Mozart Avenue near the southern drop-off location, as shown in Photograph 1 of Figure 5.1-4, *Views from Mozart Avenue,* page 5.1-17 of the Draft EIR. Between the south drop-off and the intersection of Mozart Avenue and Montgomery Avenue, the existing buildings, landscaping, and playground equipment along Mozart Avenue completely block views of the Pacific Ocean across the project site (see Photograph 2 of Figure 5.1-4). As shown on Figure 4-2, *Site Plan*, page 4-5 of the Draft EIR, classrooms, cafeteria, pollinator garden, and recreational facilities (hardcourt play space, play equipment/sport court, play apparatus) would be located along this same stretch of Mozart Avenue. Construction of the new cafeteria and maker space/specialty classrooms, shown as items J and K in Figure 4-2, will expand the school building into an area that currently allows partial views of the Pacific Ocean. The new buildings will extend approximately 120 feet into the view area and will be 19.5 feet tall. Building K is approximately 200 feet from Mozart Avenue at its nearest point and extends further away from Mozart Avenue to the north.

Montgomery Avenue
Portions of the Pacific Ocean can be seen from Montgomery Avenue from the proposed loading area at the northern portion of campus, as shown in Photographs 1 and 2 of Figure 5.1-5, *Views from Montgomery Avenue,* page 5.1-19 of the Draft EIR, but views are intermittently impaired by trees, buildings, and fencing along the road. As shown in Photograph 1 of Figure 5.1-5, the existing buildings and trees partially impair views of the Pacific Ocean across the project site. As shown in Figure 4-2, *Site Plan*, the project would remove two of the three trees and the existing building in the foreground of Photograph 1; the project would increase westward views from this portion of

Montgomery Avenue. As shown in Photograph 2 of Figure 5.1-5, views to the west toward the Pacific Ocean include a grass playfield that is partially impaired by trees. The project would remove one of the three trees, but would construct the multipurpose building near the center of the foreground of Photograph 2. The multipurpose building is approximately 21.25 feet in height and would extend approximately 75 feet into the view area. Views of the Pacific Ocean would continue to be intermittently impaired along Montgomery Avenue, but not altered such that views would be substantially changed from existing conditions.

Vista Points

Encinitas Community Park

Scenic views visible from Encinitas Community Park would not be significantly impacted by the implementation of the proposed project due to varying topographies and elevations between the two sites—the highest elevation at the park and project site are approximately 220 feet and 95 feet, respectively. The expansive size of the park offers various viewing points, and the area between the park and the project site consists of residences and vegetation. Therefore, it is unlikely that project implementation would have adverse impacts on the scenic views that are visible from Encinitas Community Park.

Cardiff State Beach

The beach and parking lot are to the west of the project site. Views of the Pacific Ocean are visible to the west of the project site. Therefore, the implementation of the project would have no impacts on this vista point.

Scenic Corridors

The City of Encinitas General Plan implements regulations for developments within the designated Scenic/Visual Corridor, which include regulations on building height, bulk, roof line, and color and scale to ensure there is no obstruction, limitation, or degradation of existing views. The project site is not situated in a scenic/visual corridor.

Manchester Avenue, from San Elijo Avenue to Encinitas Boulevard

The project site is situated to the west of this scenic highway/visual corridor. The implementation of the proposed project would have a less than significant impact on views visible from this scenic corridor due to the varying topographies and elevations, residences, and vegetation between this corridor and the project site. Moreover, the placement of the proposed buildings would roughly be within the same footprint, therefore reducing impacts to changes in views. Building heights would adhere to zoning regulations and would not exceed height restrictions.

San Elijo Avenue and Highway 101, South of Cardiff Beach State to Santa Fe Drive

This scenic corridor is approximately 290 feet west of the project site and separates the project site from the Pacific Ocean. Views of the Pacific Ocean are visible to the west of this corridor. Therefore, since the proposed project is to the east of the Pacific Ocean, project implementations would not impact views from this corridor.

Impact 5.1-2: The proposed project would alter the visual appearance of the site, but would not substantially degrade the existing visual character or quality of the surrounding area.

Construction activities include building and asphalt demolition and excavation, site preparation and rough grading, utility trenching, fine grading, building construction, architectural coating, asphalt paving, finishing, and landscaping.

- **Phase 1A, June 2019 to August 2019.** Demolish existing parking lot and buildings in the eastern portion of the campus; construct new parking lot and loading area along Montgomery Avenue.

- **Phase 1B, June 2019 to August 2020.** Construct new classroom, multipurpose, and food service buildings and eastern playground improvements; retrofit brick building; improve some or all playfields, play structures, and hardcourt areas at the southwest corner of the site.

- **Phase 2A, June 2020 to August 2020.** Reconfigure existing field space and install new play structures on the western portion of the site.

- **Phase 2B, June 2020 to December 2020.** Remove relocatable classrooms and demolish site area near the center of the campus; construct new replacement buildings; modernize existing buildings; improve remaining fields and play areas.

Construction is anticipated to commence in June 2019 and end in December 2020. In order to reduce unappealing sights of the worksite during construction activities, tarps, fences, and other construction barrier methods may be utilized. Although the fence, tarp, and other potential construction barrier methods may not be aesthetically appealing, they would reduce views of the worksite, which could be disorderly and unkempt and create a greater impact on the visual quality of the site than a fence and tarp.

Operation

Exterior Finishes

After construction, the appearance of the project site would be enhanced with new, modern school facilities designed in a modern coastal architectural style. The exterior finishing of the buildings would include cement plastering with an acrylic top coat and sand finishing, and sheet metal roofing. The brick building would be retrofitted, and the exterior of the brick building would retain its current architectural character.

Height of Buildings

The existing school buildings range in height from 15 to 19 feet above ground elevation. The existing building closest to Montgomery Avenue is the Administrative and Library Building, shown as Building E on Figure 4-2, *Site Plan*. This building is 15 feet tall and is at a grade roughly equal to the sidewalk along Montgomery Avenue and the student drop-off area. The tallest building in the proposed project will be the multiuse building, shown as Building L on Figure 4-2. This building will be approximately 22 feet high and is proposed north and west of the existing administrative building. However, because of the grade differential of the site at this location, Building L will be 9 feet below the existing administrative building. As a result, the top of new Building L will be approximately 2 feet below the existing administrative building.

The height of the proposed buildings would be lower than many of the surrounding residences. The proposed buildings' setback from the adjoining roadways and architectural features help break up the buildings' mass, so that they are compatible in scale to the surrounding developments and are similar to the existing conditions of the site. The proposed features would reduce the buildings' appearance as bulky, overbearing, and/or out-of-place. They would be architecturally interesting and compatible with the overall visual characteristics of the surrounding coastal neighborhood.

Location of Buildings
The locations of most of the proposed buildings would be placed within the same footprint that the existing buildings are currently situated, with the exception of the play equipment/sport court, play apparatus, multipurpose building, the cafeteria, and the kindergarten/extended day building. The play equipment/sport court and play apparatus would be relocated from in between the two sports fields, to the southern corner of the project site, south of the sports fields. Therefore, relocating the play equipment/sport court and play apparatus would alter the visual appearance of the project site by increasing views of the western portion of the project site, but would not substantially impact the quality of the surrounding area.

The multipurpose building would be located in between the northern sports field and the northern parking lot. Although approximately 9 feet below the grade along Montgomery Avenue, the building will result in an approximately 75-foot obstruction of views to the Pacific Ocean across this portion of the site from a limited distance along Montgomery Avenue. The obstruction is similar to the view obstructions presented by the existing school buildings in other areas of the site. As shown on Figure 4-2, there is no building on either side of proposed Building L to obstruct views of the ocean. Photos 1 and 2 of Figure 5.1-6, *Viewshed of Building L*, page 5.1-25 of the Draft EIR, show the views that would be obstructed by the proposed Building L. As shown in Photo 2, existing landscaping at the western edge of the project site along San Elijo Avenue currently obstructs view to the west.

The cafeteria would be northwest of Mozart Avenue and east of the hardcourt play space. Locating the cafeteria on this portion of the project site would alter the visual appearance of the project site, since this portion of the site is currently a hardcourt play space. However, the cafeteria would be next to other buildings, would be constructed of similar materials, and would not detract from the visual appearance of the site.

The kindergarten/extended day building would be parallel to Mozart Avenue, on the northeastern portion of the project site. Under existing conditions, the kindergarten play space is parallel to Mozart Avenue. The kindergarten play space would be to the east of the proposed kindergarten/extended day building. Therefore, the visual appearance of the project site would be altered; however, the location of the kindergarten/extended day building would not degrade the existing visual character of the surrounding area.

Figure 4-2, *Site Plan*, illustrates the locations and configurations of the proposed buildings and facilities on the project site.

Cumulative Impact

The geographic context for the analysis of cumulative aesthetics and visual resources impacts includes developments in the City of Encinitas, Cardiff-by-the-Sea, and surrounding communities. The proposed project's physical impacts are localized and would take place within the footprint of the Cardiff School campus. The improvements would be compatible with surrounding uses, in that the buildings would not be taller or wider than other buildings surrounding the project site or in the city. Alone and/or combined with proposed developments in the area, the proposed structures would not substantially alter public views of scenic vistas or scenic corridors.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with the alteration of public views of scenic vistas, scenic corridors or vista points; and degradation of the existing visual character or quality of the surrounding area.

Air Quality

Impact 5.2-1: Construction of the project would not exceed the SDAPCD significance thresholds or substantially contribute to the nonattainment designations of the SDAB.

Short-Term Construction-Related Air Quality Impacts

Construction activities would result in the generation of air pollutants, primarily 1) exhaust emissions from off-road diesel-powered construction equipment; 2) dust generated by ground-disturbing construction activities; 3) exhaust emissions from on-road vehicles; and 4) off-gas emissions of VOCs from asphalt, paints, and coatings.

Construction activities would occur over an approximately 19-month period. During construction, approximately 147 students would be relocated to Ada Harris Elementary School for the 2019-2020 school year, and approximately 50 students would be relocated during the 2020-2021 school year. At buildout of the project, these students would return to Cardiff School. Thus, temporary student housing during construction would not increase the total number of trips to the project site. Results of the construction emissions modeling are shown in Table 5.2-7, *Maximum Daily Construction Emissions,* pages 5.2-16 and 5.2-17 of the Draft EIR. As shown in the table, the maximum daily criteria air pollutant emissions from construction-related activities would be less than the County's regional significance threshold values. Therefore, construction activities would not result in a cumulatively considerable net increase in criteria pollutants. Air quality impacts from project-related construction activities would be less than significant.

Impact 5.2-2: Operation of the project would not exceed the SDAPCD significance thresholds or substantially contribute to the nonattainment designations of the SDAB.

Student Relocation (2019–2021)

Approximately 147 second- and third-grade students would be relocated to Ada Harris School during construction activities; second grade and third grade would return to Cardiff School in August 2020 and August 2021, respectively. Kindergarten and first grade would remain at Cardiff School during construction activities. No new trips would be generated as a result of relocation since existing trips to Cardiff School would be rerouted to Ada Harris School. However, student relocation during

construction could increase VMT by altering student and teacher trips to and from campus. The two schools are approximately 1.1 miles apart, and any change in VMT during construction of the proposed project would be short term and would not generate substantial criteria air pollutant emissions. Impacts to the regional air quality associated with student relocation would be less than significant.

Long-Term Operation-Related Air Quality Emissions

Typical long-term air pollutant emissions associated with an elementary school are generated by area sources, energy use, and mobile sources. The school currently generates criteria air pollutant emissions. The installation and operation of the new facilities would improve current programs at the existing campus and would increase student enrollment by approximately 73 students. The project would result in up to 117 new vehicle trips (see Section 5.10, *Transportation and Traffic*). Emissions associated with operation of the proposed school project are shown in Table 5.2-8, *Regional Operational Emissions,* page 5.2-18 of the Draft EIR. As shown in the table, emissions would not exceed the County of San Diego regional operation-phase significance thresholds or result in a cumulatively considerable net increase in criteria pollutants. Impacts to the regional air quality associated with operation of the project would be less than significant.

Impact 5.2-3: Construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

Localized Impacts

Pursuant to the County of San Diego's Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality*,* projects whose stationary source emissions do not exceed or can be mitigated to less than the SDAPCD trigger level would not be considered to violate an air quality standard or contribute substantially to an existing or projected air quality violation. Since the County of San Diego does not have separate localized significance thresholds for construction, the SDAPCD trigger levels are used for localized construction impacts. Projects that exceed these thresholds would be required to conduct an air quality impact analysis to determine the concentrations of emissions at nearby sensitive receptors. SDAPCD considers emissions from projects that exceed the thresholds in Table 5.2-5, *County of San Diego Air Quality Screening-Level Thresholds*, page 5.2-14 of the Draft EIR, to require dispersion modeling to ensure that localized impacts would not occur. As identified in Table 5.2-7, onsite construction emissions would be substantially below the County's thresholds; therefore, localized construction emissions are also less than significant.

Construction Health Risk

Neither SDAPCD nor the County of San Diego require a health risk assessment to be conducted for short-term emissions from construction equipment. Emissions from construction equipment primarily consist of DPM. The Office of Environmental Health Hazards Assessment (OEHHA) adopted new guidance for the preparation of health risk assessments issued in March 2015. OEHHA developed a cancer risk factor and noncancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM. The proposed project would be developed in approximately 19 months, which would limit the exposure of onsite and offsite receptors. SDAPCD and the County currently do not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. In addition, construction activities would not exceed the regional significance

thresholds, which are used by the SDAPCD to determine if localized air pollutant emissions modeling is necessary. For the reasons stated above, it is anticipated that construction emissions would not pose a threat to onsite and offsite receptors at or near the school; project-related construction health impacts would be less than significant, and no mitigation measures are required.

Impact 5.2-4: Operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

Localized Impacts

As identified in Table 5.2-8 onsite emissions would be substantially below the County's thresholds; therefore, localized emissions are also less than significant.

Operation Health Risk

Operation of the project would not generate substantial quantities of emissions from stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions that would require a permit from SCAQMD include industrial land uses, such as chemical processing and warehousing operations where substantial truck idling could occur onsite. While operation of the new portable classrooms would result in the use of standard mechanical equipment such as heating, ventilation, and air conditioning (HVAC) systems, air pollutant emissions generated would be nominal. Therefore, localized air quality impacts related to operation-related emissions would be less than significant.

Carbon Monoxide Hotspots

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact. The proposed project would generate 117 net daily trips, with 38 trips (23 inbound and 15 outbound) during the AM peak hour and 10 trips (4 inbound and 6 outbound) during the PM peak hour (see Section 5.10, *Transportation and Traffic*), which would not cause a substantial increase in traffic volumes. Typical projects would not expose sensitive receptors to substantial pollutant concentrations, and analysis of CO hotspots is not warranted. Therefore, no significant impacts would occur.

Cumulative Impact

The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is nonattainment under an applicable federal or state ambient air quality standard, including emissions that exceed the SLTs for ozone precursors.

Construction

The SDAB is designated under the California and National AAQS as nonattainment for O3 and under the California AAQS as nonattainment for PM10, and PM2.5 (SDAPCD 2017). As discussed under Impact 5.2-1, implementation project-related construction emissions would be below the SDAPCD significance thresholds on a project and cumulative basis. Therefore, the proposed project's contribution to cumulative air quality impacts would not be cumulatively considerable.

Operation

It is assumed that a project which conforms to the Encinitas General Plan and does not have emissions exceeding the SLTs will not create a cumulatively considerable net increase to ozone since the emissions were accounted for in the RAQS. Operational impacts from land development activities are predominantly the result of vehicular traffic associated with projects. For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by SDAPCD to be a substantial source of air pollution and does not add significantly to a cumulative impact. Operation of the proposed project would not result in emissions in excess of the SDAPCD regional emissions thresholds for VOC, CO, NOX, PM10, and PM2.5 (see Impact 5.2-2). Therefore, the air pollutant emissions associated with the proposed project would not be cumulatively considerable.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with exceeding SDAPCD significance thresholds or substantially contributing to the nonattainment designations of the SDAB during construction or operational activities, and exposing sensitive receptors to substantial pollutant concentrations during construction and operational activities.

Geology and Soils

Impact 5.5-2 Project development would not expose people or structures to substantial hazards from liquefaction or ground subsidence.

Liquefaction

The potential for liquefaction onsite is negligible due to the lack of shallow groundwater and presence of medium dense to dense sediments beneath the site.

Ground Subsidence

The project site is not over a groundwater basin and is not mapped in an area of known subsidence by the California Department of Water Resources. The Santa Fe Irrigation District, which provides water to the project site, does not use groundwater. Moreover, the geotechnical investigation report does not identify ground subsidence as a design consideration. Therefore, potential impacts related to ground subsidence is less than significant.

Cumulative Impact

Impacts relating to soils and geologic influences are site specific and usually cannot be considered in cumulative terms, such as in the case of the proposed Cardiff School Modernization and Reconstruction project. Mitigation of geologic, seismic, and soil impacts of development projects are specific to the affected sites. The proposed project and other new development projects in the City of Encinitas are required to comply with applicable federal, state, and local requirements, including CBC standards. Each project's geologic and soil impacts would be reduced to a less than significant level and would not be cumulatively considerable; therefore, no significant cumulative impacts would occur.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with exposing people or structures to substantial hazards from liquefaction or ground subsidence.

Greenhouse Gas Emissions

Impact 5.6-1: The proposed project would not generate an increase in GHG emissions, either directly or indirectly, that would cause a significant impact on the environment.

The proposed project would result in an increase of 73 students from existing average enrollment and would generate GHG emissions from construction activities, energy use (electricity use and fuel consumed for building heating), and area sources. During construction, approximately 147 students would be temporarily relocated to Ada Harris Elementary School during the 2019-2020 school year, and approximately 50 students would be relocated during the 2020-2021 school year. At project buildout, students would return to Cardiff School, and interim operation would not generate additional trips or a net increase in GHG emissions. Table 5.6-8, *Project-Related GHG Emissions*, page 5.6-23 of the Draft EIR, shows the emissions associated with the proposed project. GHG emissions associated with the plans would primarily be from vehicle trips associated with trips to and from the campus. In addition, GHG emissions from construction activities are amortized into the operational phase GHG emissions inventory to account for one-time emissions from construction. The table also provides a comparison of the proposed project to the existing conditions. As shown in the table, the net change in GHG emissions of 60 $MTCO_2e$ per year as a result of project implementation would not exceed the bright line threshold of 900 $MTCO_2e$. Therefore, the project-related cumulative contribution to GHG emissions is less than significant.

Impact 5.6-2: The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

CARB Scoping Plan

The CARB Scoping Plan is applicable to state agencies, but is not directly applicable to cities/counties and individual projects. However, new regulations adopted by the state agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that would affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the low-carbon fuel standard and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars programs).

The proposed project is required to adhere to the applicable programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies. The proposed project would comply with these state GHG emissions reduction measures since they are statewide strategies. For example, new buildings under the proposed project would meet the applicable CALGreen and Building Energy Efficiency Standards. Furthermore, the Advanced Clean Cars program would be applicable to new vehicles introduced in the state and contribute to reducing mobile-source GHG

emissions, which would be a benefit for the proposed project. Therefore, the proposed project would not obstruct implementation of the CARB Scoping Plan.

SANDAG's Regional Transportation Plan/Sustainable Communities Strategy

The California legislature passed SB 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy in their regional transportation plans to achieve the per capita GHG reduction targets. SANDAG adopted San Diego Forward: The Regional Plan, which is the region's SCS, on October 8, 2015. The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers. The proposed project would construct school facilities to serve existing students in the area and is consistent with the underlying General Plan land use designation (see Section 5-8, *Land Use and Planning*). Consequently, the proposed project would not interfere with SANDAG's ability to implement the regional strategies outlined in San Diego Forward. Therefore, the proposed project would not have the potential to interfere with the State of California's or SANDAG's ability to achieve GHG reduction goals and strategies.

City of Encinitas Climate Action Plan

The City of Encinitas 2018 CAP is a CEQA Section 15183.5–qualified plan and affords development projects the opportunity to use CEQA streamlining tools for analysis of GHG emission if the projects are consistent with the 2018 CAP. GHG reduction strategies in the CAP are organized under six GHG emissions categories: electricity and natural gas, water, on-road transportation, off-road transportation, solid waste, and carbon sequestration. Although the proposed project is within the City of Encinitas, emissions associated with the proposed buildings and transportation sources are under the jurisdictional authority of Cardiff School District. Additionally, the City has not yet adopted ordinances to implement their CAP goals. Therefore, emissions associated with the school facilities are not accounted for in the City's CAP, and the District cannot use the City's CAP to tier off and mitigate significant GHG emission impacts of the project. However, because the project is in the city, a consistency analysis with the applicable measures was conducted to ensure that development of the proposed project is consistent with the applicable goals of the CAP. Table 5.6-9, *Project-Related GHG Emissions*, page 5.6-25 of the Draft EIR, provides a consistency analysis of the proposed project and the 2018 CAP. As shown in this table, the proposed project would generally be consistent with the applicable measures in the CAP, supporting five of the six applicable CAP goals through sustainability measures onsite. Therefore, the proposed project would not obstruct the goals and strategies described in the City of Encinitas's CAP.

Cumulative Impact

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact 5.6-1 are not project-specific impacts, but the proposed project's contribution to the cumulative impact of global warming. Implementation of the proposed project would be consistent with CARB's Scoping Plan, SANDAG's RTP/SCS, and the City of Encinitas's Climate Action Plan. Thus, the proposed project's GHG emissions and contribution to global climate change impacts are not considered cumulatively considerable, and therefore are less than significant.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with generating an increase in GHG emissions, and conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Hydrology and Water Quality

Impact 5.7-1: Development pursuant to the proposed project would increase the amount of impervious surfaces on the site. The project includes proposed biofiltration basins that would reduce postproject runoff flow rates to below existing rates.

Drainage Areas

At project completion, the site would be divided into three drainage areas: Drainage Management Area 1 (DMA 1), in the southern part of the site; DMA 2 in the northern, central, and eastern parts of the site; and a self-mitigating area consisting of two playfields and some landscaped area along the western site boundary (see Figure 5.7-3, *Drainage Management Areas and Proposed Biofiltration Basins,* page 5.7-13 of the Draft EIR).

DMA 1 would comprise 2.06 acres, including 1.66 acres of impervious area. DMA 2 would encompass 3.0 acres, including 2.19 acres of impervious areas. The self-mitigating area would encompass 2.1 acres, including 0.2 acre of impervious areas. The drainage area P1 described in existing conditions consists of DMA 1 plus the south half of the self-mitigating area, and P2 consists of DMA 2 plus the north half of the self-mitigating area (compare Figures 5.7-2, *Project Site Drainage Areas,* page 5.7-11 of the Draft EIR, and 5.7-3). The total existing impervious area onsite is about 3.2 acres; thus, project development would involve a net increase of about 0.85 acre of impervious area.

Proposed Biofiltration Basins and Storm Drains

Project plans include two biofiltration basins—Basin 1 (floor area of 3,364 square feet) is near the southwest corner of the site, and Basin 2 (floor area of 4,356 square feet) is near the northwest corner of the site. The biofiltration basins would infiltrate part of the stormwater flowing into them into soil and discharge remaining stormwater via underdrains. Infiltration was assessed as a possible BMP during PSWQMP preparation. The infiltration rate of site soils is insufficient for full infiltration of stormwater in infiltration BMPs (such as infiltration basins) in postproject conditions. Biofiltration basins were thus chosen as the structural BMPs for this project. The project includes two networks of proposed storm drains on-site, one in the south half of the site conveying stormwater to Basin 1, and one in the north half of the site to Basin 2.

Self-Mitigating Area: Runoff from the two proposed playfields along San Elijo Avenue would flow onto the roadway and continue north and south in the roadway; there is a high point on San Elijo Avenue near the middle of the site.

Drainage Flow Rates, Existing and Postproject Conditions

Project development would increase stormwater flow on-site. Flows from a 100-year storm in P1 would increase from 9 to 15 cubic feet per second (cfs), a net increase of 6 cfs; flows in P2 would increase from 11 to 18 cfs, a net increase of 7 cfs.

The biofiltration basins would detain and treat stormwater such that runoff flow rates discharged from the basins would be lower than existing rates. Postproject runoff rates discharged from the basins are compared to existing rates in Table 5.7-2, *Discharge Flow Rates, Postproject (with Biofiltration) vs. Existing Conditions,* page 5.7-15 of the Draft EIR. Project development would not increase runoff rates discharged into off-site storm drainage systems, and impacts would be less than significant.

Construction

Potential erosion and siltation impacts would occur during the construction phase of the project. During construction, the existing structures that would be demolished from the site would have the footprint of their footing cleared for grading, which would expose and loosen soil, making it susceptible to wind and water erosion. If not controlled, the transport of these materials to local waterways would temporarily increase suspended sediment concentrations and release pollutants attached to sediment particles into local waterways.

However, prior to construction activities, a SWPPP would be prepared and submitted to the SWRCB for approval, and be consistent with the Municipal NPDES permit. The SWPPP would include the BMPs to be implemented during construction to ensure that erosion and siltation impacts are reduced to a less than significant level. The Draft SWPPP is included as Appendix 5.7-2 to the Draft EIR. The final SWPPP will be prepared and approved by the RWQCB after preparation of detailed construction drawings. Adherence to the BMPs in the SWPPP, would ensure that erosion and siltation potential during construction would be less than significant.

Impact 5.7-2: During the construction phase of the proposed project, there is the potential for short-term unquantifiable increases in pollutant concentrations from the site. After project development, the quality of storm runoff (sediment, nutrients, metals, pesticides, pathogens, and hydrocarbons) may be altered.

Urban runoff from storms or nuisance flows (runoff during dry periods) can carry pollutants to receiving waters. This runoff may flow directly into local streams or lakes or into storm drainages and continue through pipes until it is released untreated into a local waterway and eventually the ocean. Untreated stormwater runoff degrades water quality in surface waters and groundwater and can affect drinking water, human health, and plant and animal habitats. Additionally, the increased runoff from urban surfaces can increase the intensity of flooding and erosion. Construction activities could degrade water quality by releasing sediment, oil and greases, and other chemicals into nearby water bodies. In addition, site preparation and grading may expose soils to erosion and release sediment into off-site drainage systems.

Construction

Clearing, grading, excavation, and construction activities associated with the project have potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. The refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, the project would be required to comply with the NPDES Construction General Permit as well as prepare a SWPPP that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. BMPs differ for each project and often for each phase of a project. The final SWPPP will be prepared and approved by the RWQCB after preparation of detailed construction drawings. Adherence to the BMPs in the SWPPP would ensure that erosion and siltation potential during construction would be less than significant.

Additionally, it is standard practice for the District's contractors to comply with the City of Encinitas Municipal Code (Chapter 20.08 Stormwater Management), which requires the project proponent to meet the requirements of Chapter 20.08 and the City of Encinitas BMP Design Manual (Encinitas 2016, Chapter 7) prior to issuance of grading permit.

Operation

After construction of the proposed project, urban runoff could include a variety of contaminants that could impact water quality. Runoff from buildings and parking lots typically contains oils, grease, fuel, antifreeze, by-products of combustion, fertilizers, herbicides, pesticides, and other pollutants. Precipitation at the beginning of the rainy season could result in an initial stormwater runoff (first flush) with high pollutant concentrations.

Pollutants of Concern

The project would not change the use of the site as a school; project operation would result in similar pollutant sources as existing conditions. Project operation is expected to generate the following categories of pollutants that could contaminate stormwater: sediment, nutrients, heavy metals, organic compounds, trash and debris, oxygen-demanding substances, oil and grease, bacteria and viruses, bacteria and viruses, and pesticides.

Pollutants of concern for the proposed project are expected pollutants for which receiving waters are also listed on the Section 303(d) List, that is, sediment and bacteria and viruses.

Best Management Practices

The project's PSWQMP specifies the Site Design, Source Control, and Structural BMPs for minimizing stormwater pollution.

Cumulative Impact

Construction and operation of the proposed project, in conjunction with related projects in the Carlsbad WMA, would result in increased flows that would eventually discharge into the Pacific Ocean. Related projects are those in the Escondido Creek hydrologic area that would direct stormwater flows through streams, channels, and other waterways into the Pacific Ocean. These projects would comply with their respective SWPPP and regulations for water quality standards established by the Carlsbad WMA. The project would result in a net reduction in the site's volume of stormwater runoff, and the project would not result in a significant impact on a cumulative basis.

Although the area around the project site is built out, new projects in the area, both individually and cumulatively, could potentially increase the volume of stormwater runoff and contribute to pollutant loading in the storm drain system with eventual discharge to the Pacific Ocean. However, projects in Encinitas would be required to comply with the drainage and grading regulations and ordinances in Chapter 20.08 of the Encinitas Municipal Code that control runoff and regulate water quality at each development site. New development and redevelopment projects would be required to demonstrate that stormwater volumes could be managed by conveyance facilities and would not induce flooding. New projects would also be required to comply with the City's standard conditions of approval, regulations, ordinances regarding water quality, and NPDES permitting requirements. In consideration of the preceding factors, including the project's beneficial impact to water quality, cumulative water quality impacts would be rendered less than considerable, and therefore, less than significant. Thus, project impacts would not be cumulatively considerable.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with the post-project runoff flow rates, and the quality of stormwater runoff.

Land Use and Planning

Impact 5.8-1: Project implementation would not conflict with applicable plans and policies adopted for the purpose of avoiding or mitigating an environmental effect.

City of Encinitas Municipal Code

According to the City of Encinitas Municipal Code Section 30.28.10, the P/SP designation allows for a floor-area-ratio (FAR) between 0.0 and 0.5. Since the proposed improvements would maintain the property as a public educational facility, and would be within the allowable FAR, the project would be consistent with the City of Encinitas Municipal Code. The proposed improvements would also comply with the development standards of Section 30.28.010 (A), which includes setbacks of 20 feet from the front yard property line, 10 feet for side yards, 20 feet from side yards on streets, 10 feet from rear yard, 50 percent maximum lot coverage, and 30 feet maximum height limit.

City of Encinitas General Plan and Local Coastal Plan

The project consists of the modernization and reconstruction of an existing school on District property zoned P/SP. The proposed improvements would not change the existing land use and would continue to be consistent with the allowed uses and development standards under the P/SP zone. However, the project site is in a coastal zone planning area. In accordance with the City of Encinitas LCP, the District is preparing a Coastal Development Permit (CDP) that will be reviewed for approval by the City of Encinitas. As part of the Coastal Development Permit process, the project has been reviewed for its consistency with the LCP.

The project's consistency review is based on the requirements of Chapter 3, Coastal Resources Planning and Management Policies, of the California Coastal Act (PRC § 30200 et seq.). Table 5.8-1, *Project Consistency with Coastal Resources Planning and Management Policies,* pages 5.8-5 and 5.8-6 of the Draft EIR, lists the policies in Chapter 3 of the Coastal Act that are applicable to the proposed project and explains how the proposed project conforms to them. Table 5.8-2, *Project Consistency with*

City of Encinitas LCP Policies, pages 5.8-7 through 5.8-9 of the Draft EIR, lists the policies within each applicable General Plan element, which has incorporated the City's adopted LCP.

The approval of the CDP, by the City of Encinitas, would verify compliance with the policies of Chapter 3 of the Coastal Act (PRC Code § 30000 et seq.) and the City of Encinitas General Plan/LCP. Therefore, with approval of the CDP, the proposed project would not conflict with the California Coastal Act or the City of Encinitas General Plan/LCP.

Impact 5.8-2: Project implementation would not conflict with the Land Water Conservation Fund Grant.

Improvements proposed within the 6(f)(3) boundary will require approval by NPS. Changes to the existing 6(f)3 boundary may be categorized as conversions, which are defined as removing, taking, closing, or developing land within a 6(f)(3) boundary map and that conflicts with protecting the integrity of the park experience, public recreation, and outdoor viewshed for the benefit of future generations. However, the following changes, are not a conversion: a) replacement of an LWCF-funded facility with a different type of outdoor recreation facility, b) demolition or no replace of an unusable LWCF-funded facility, or c) development of a natural and scenic outdoor open space area into a heavily built-out, outdoor recreation facility.

The proposed project is driven by a desire to enhance the outdoor recreation area for the benefit of the community in addition to the need to provide for increased safety and security of students and current educational program at Cardiff School. The project proposes a new building and outdoor PE- and recreation-supporting improvements within the 6(f)(3) boundary. As with the main objective of the proposed project, which is to develop facilities that support the Cardiff School program, the intent of the proposed outdoor recreational improvements would be to support the existing school, but also the community's current public recreation needs at the site. The proposed improvements would not conflict with the integrity of the existing public recreation uses. Instead, they would enhance the existing outdoor recreational space and student and community use of it.

Because the proposed improvements would encroach on the existing 6(f)(3) boundary and includes uses that are not related to outdoor recreation, i.e., school building, and because there are existing school buildings—constructed in the 2000s—that also encroach on the 6(f)(3) boundary, the project would require an adjustment to the existing 6(f)(3) boundary called a "conversion." Conversions require replacement of the land removed from public outdoor recreation with new land of "equal utility" and "value," subject to NPS approval.

Although co-signatory to the LWCF agreement and owner of the land contained within the 6(f)3 boundary, the District was not the lead agency in maintaining the agreement with OGALS. Communication with OGALS was maintained by the City of Encinitas and the City never shared any communications with the District. Communications from OGALS contained a request to confirm compliance with the agreement. OGALS does not have any documents from the City stating the property was out of compliance. Because the District was not included in the communication with OGALS, the District did not maintain institutional memory of the agreement and, as a result, in the early 2000's the District made improvements to a portion of the open recreation area causing the District and City to fall out of compliance. These improvements included a science and art lab

building that includes restrooms. This building is approximately 2,850 square feet. Improvements were made to apparatus play areas. Some play equipment was relocated, along with new play equipment, to another part of the site so a vehicular drop-off/pick-up area could be added along Mozart Avenue.

It wasn't until early 2018 when the District was again planning improvements on the site that it became aware of the agreement. Upon learning that the District and City were not in compliance with the agreement, the District immediately contacted OGALS. The District has worked closely with OGALS over a period of approximately 10 months to prepare a proposal for a "conversion" in order to regain and maintain compliance. This "conversion" proposes an adjustment to the 6(f)3 boundary that will occur entirely within District owned property. The end result of the conversion process will be an amendment to the Project Agreement that identifies the conversion and includes a modified 6(f)3 boundary map.

As discussed in Section 4 and shown in Figure 4-6, *Proposed 6(f)(3) Boundary Map,* page 4-19 of the draft EIR, the project proposes modification of the existing 6(f)(3) boundary to eliminate new and existing buildings and remove non-recreationally supported uses from the 6(f)(3) boundary. The proposed 6(f)(3) boundary adjustment would include two turf fields, outdoor assembly seating area, picnic areas, dog park, vegetable and pollinator gardens, play apparatus area, and parking along Montgomery Avenue. All buildings within the existing boundary would be excluded from the modified 6(f)(3) boundary. The proposed project would increase the 6(f)(3) boundary by 2,047 sf, from 173,173 sf to 175,220 sf.

Proposal Description and Environmental Screening Form

The applicant is required to submit a Proposal Description (PD) and Environmental Screening Form (ESF) (Form 10-904) to provide descriptive and environmental information for National Park Service (NPS) review and decision as part of the conversion approval process. Upon completion, the ESF will indicate the resources that could be impacted by the proposal and be used by States and/or project sponsors to more accurately follow an appropriate pathway for the National Environmental Policy Act analysis. The completed PD/ESF must be submitted as part of the State's LWCF proposal to NPS.

For the purposes of analyzing project consistency with the NPS PD/ESF requirements and determining the level of NEPA analysis that would be required as part of the proposed conversion, the project improvements were compared to parts A and B of the Environmental Screening Form, as shown in Table 5.8-3, *Environmental Screening Form – Step 6 Part A*, pages 5.8-12 through 5.8-17, and Table 5.8-4, *Environmental Screening Form – Step 6 Part B,* pages 5.8-17 and 5.8-18. Part A requires the project be analyzed for its estimated level of negative impact for each listed resource that may occur directly, indirectly, and cumulatively as a result of proposal approval. Part B contains a list of mandatory impact criteria that preclude the use of categorical exclusions.

As shown in Table 5.8-3 and Table 5.8-4, with implementation of mitigation measures (as identified in their respective sections of the DEIR), the project would result in less than significant impacts. The proposed improvements would not exceed "minor impacts" or require further studies to

determine their significance, and preparation of an EIS or EA would not be required; therefore, the project would not conflict with the LWCF Act.

Cumulative Impact

The development of the proposed project would take place within the footprint of the project site, the Cardiff School Campus, and thus, would not result in citywide land use and planning impacts. The proposed project would be consistent with applicable state and local plans, and after construction, the project site would continue to be used as a school facility. Therefore, the proposed project combined with related projects would not result in cumulatively considerable impacts to land use and planning.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with conflicting with applicable plans and policies adopted for the purpose of avoiding or mitigating an environmental effect, and conflicting with the Land and Water Conservation Fund Grant.

Noise

Impact 5.9-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project.

Construction of the proposed project would generate temporary noise. Project construction would require demolition of five 1-story buildings, a portion of a sixth building, and eight relocatable classrooms; site preparation and utility trenching; construction of ten 1-story wood-framed buildings and a 2-classroom addition to an existing building; and the modernization of two existing buildings on the Cardiff School campus.

Aggregated and adjusted construction phase noise levels were used to estimate predicted community noise levels at nearby receptor areas using a conservative 6 dB per distance doubling attenuation factor. The proposed project is anticipated to begin in June 2019 and be operational by the fourth quarter of 2020. Staging would occur at the baseball field for construction of the parking lot, multipurpose building, and brick building; access would be mainly provided on Montgomery Avenue via the two proposed driveway entrances during construction of the improvements to the new parking lot and multipurpose building. Staging for the remaining new building construction would be on the school's blacktop area with access from Mozart Avenue near San Elijo Avenue. Construction activities include building and asphalt demolition, site preparation and rough grading, utility trenching, fine grading, building construction, architectural coating, asphalt paving, finishing, and landscaping.

Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment. Existing uses surrounding the project site would be exposed to construction noise.

Construction Vehicles

The transport of workers and equipment to the construction site would incrementally increase noise levels along site access roadways. The primary access routes for delivery and construction vehicles to the project site would be from the proposed driveway entrances on Montgomery Avenue and the existing driveway on Mozart Avenue, near San Elijo Avenue. Staging would occur at the baseball field for construction of the parking lot and multipurpose building; staging for construction of the remaining improvements would be on the blacktop area.

Project-related construction worker vehicles, haul trucks, and vendor trucks could pass by existing residential and commercial uses along these streets. The demolition and grading phases would generate the most trips due to soil haul. Note that a doubling of traffic flows (i.e., 10,000 vehicles per day to 20,000 per day) would be needed to create a 3 dB increase.

Since the construction-related trips would not double the flow rates on these streets, these project trips would not notably change the daily traffic flow conditions. In addition, truck trips would be intermittent, spread throughout the workday, and primarily during non-peak traffic periods. While individual construction vehicle pass-bys may create momentary noise levels of up to approximately 85 dBA (L_{max}) at 50 feet from the vehicle, these occurrences—although potentially audible for a few seconds—would generally be infrequent. Due to the infrequency of events, their relatively short-lived durations, and their less than 3 dBA Ldn increase over existing traffic noise conditions, construction vehicle movement noise would be less than significant. No mitigation is needed with respect to construction mobile source noise.

Construction Equipment

Noise generated during construction is based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. The noise produced at each construction stage is estimated by using the FHWA RCNM program and methodology. The anticipated construction equipment list was provided by the construction contractor.

Construction Noise Levels

The majority of land uses surrounding the project site consist of residential uses. Project construction would involve demolition of existing buildings; site preparation and grading of existing land; and construction of a new classroom/administration building and a multi-purpose building. Noise levels from project-related construction activities were calculated from the simultaneous use of all applicable construction equipment at spatially averaged distances (i.e., from the center of the construction area) to the closest receptors. Although construction may occur across the entire site, the area around the center of the project site best represents the potential average construction-related noise levels to the various sensitive receptors during the proposed construction activities of this project.

The nearest sensitive uses includes homes to the north (approximately 140 feet from the center during Phase 1A improvements and 300 feet from the center of the site for Phases 1B and 2), east (300 feet during all phases) and homes to the south (approximately 450 feet from the center of Phase 1A improvements and 350 feet from the center of the site for Phases 1B and 2). Using information provided by the District, coupled with methodologies and inputs employed in the air quality assessment, the expected construction equipment mix was estimated and categorized by construction activity. The whole of the proposed project would be completed in two phases (Phases 1 and 2 would be in two sub-phases), which would begin in summer 2019 and end in the fourth quarter of

2020. The noisiest portions, however (i.e., demolition and grading phases), are expected to take a total of 3 months. The associated, aggregate sound levels—grouped by construction activity—are summarized in Table 5.9-6, *Project-Related Construction Noise Levels*, page 5.9-14 of the Draft EIR.

As shown in Table 5.9-6, Phase 1A demolition and demolition haul, site preparation and grading, and trenching and concrete activities would generate the loudest noise levels of approximately 78 dBA L_{eq}. However, all phases of construction would occur during the City of Encinitas allowable construction hours.

Impact 5.9-2 Project implementation would not result in long-term operation-related noise that would exceed local standards.

To determine if a project would cause a substantial noise increase from project-related traffic, consideration must be given to the magnitude of the increase and the affected receptors. In general for community noise, a noise level increase of 3 dB Ldn is considered barely perceptible, and an increase of 5 dB Ldn is considered clearly noticeable. An increase of 3 dB Ldn is often used as a threshold for a substantial increase for noise environments above 60 Ldn. The increase in traffic noise as a result of project implementation was calculated using the peak-hour trip volumes at intersections (and the resulting roadway segment volumes) identified in the traffic impact analysis (Appendix 5.10-1 of the Draft EIR). As discussed in Section 5.9.1.2, page 5.9-10 of the Draft EIR, the project site is within the 65 dBA CNEL noise, meaning the ambient noise environment is between 65 and 69 dBA CNEL and a 3 dB increase is used as the significance threshold. Per the project's traffic study, the project would generate 117 additional average daily trips, with 38 trips (23 inbound and 15 outbound) during the AM peak hour and 10 trips (4 inbound and 6 outbound) during the PM peak hour.

To calculate the incremental increase in noise as a result of the project trip increases, roadway segment volumes from the project traffic study for Existing and Existing Plus Project AM peak hour (from 7:00 AM to 9:00 AM) were input into a data spreadsheet using the formula 10*LOG(Existing Plus Project/Existing) (full calculations are in Appendix 5.9-1 of the Draft EIR). AM peak hour was used instead of PM peak hour because intersection volumes were generally higher, as shown in Appendix 5.9-1. Projected trip volumes and their respective increases in vehicle noise generation were calculated for Existing, Existing Plus Project, Future 2021, and Future 2021 Plus Project conditions in Table 5.9-7, *Project-Related Increase in Traffic Noise,* pages 5.9-15 and 5.9-16 of the Draft EIR.

As shown in Table 5.9-7, the street segment with the greatest noise increase would be the segment of Mozart Avenue from San Elijo Avenue to Montgomery Avenue under project, cumulative, and cumulative with project conditions; this segment would experience a predicted traffic noise increase of 0.l3, 0.33, and 0.87 dB for each respective scenario. This noise increase would be inaudible and below the 3 dB threshold of significance.

Stationary-Source Noise

Stationary noise sources would include vehicles idling during student drop-off and pick-up times, school buzzers or bells, landscaping equipment, outdoor activities, and heating, ventilation, and air conditioning (HVAC) units. The project would add new sources of stationary HVAC noise at the

new buildings, but these would be comparable or quieter than existing, similar sources at the site and would not result in notable changes to the community noise environment in the project vicinity. For idling vehicles, school buzzers/bells, and landscaping activities, there would be a negligible increase due to the increased capacity at the school of 22 students.

Recreational Noise

The project would result in reconfiguration of outdoor space and recreational facilities. The proposed field area, hardcourt area, and play structures would be reconfigured in generally the same orientation on the western part of the site. The existing baseball field would be replaced with a grass playfield and would be lined for soccer. Outdoor activities would be similar to existing conditions and would generate similar noise as the existing site, such as student and staff voices. In addition, the project does not propose changes in operation of the school bell schedule, and recess and lunch periods would remain the same.

The project would increase the area of the multipurpose building and construct an outdoor assembly area and new courtyard areas, which could result in an increase in the noise environment at these onsite locations. Although these activities may incrementally increase noise levels for activities conducted at the multipurpose building, assembly seating area, or courtyards, noise from these activities would be exempt pursuant to the Encinitas Municipal Code Section 9.32.417, which identifies school-related sporting and entertainment events as being exempt. Therefore, no significant permanent stationary source noise increases would occur.

Impact 5.9-3 The project would not create substantial groundborne vibration and groundborne noise.

Vibration during Operation

Vibration is typically noticed nearby when objects in a building generate noise, such as rattling windows or picture frames. It is typically not perceptible outdoors, and therefore impacts are based on the distance to the nearest building. The effects of vibration vary depending on soil type, ground strata, and receptor building construction. They range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight damage at the highest levels.

The City of Encinitas threshold for vibration at residential zones is 0.003 in/sec for steady-state or continuous sources (non-impacting and non-impulsive sources). Operation of the project would not generate substantial levels of vibration because there are no notable sources of vibrational energy or vibration-generating equipment associated with operation of the project; the project would continue to operate as a school.

Vibration during Construction

As discussed above, the City standards apply to operation of the proposed project and not construction period activity. Construction activities generate varying degrees of ground vibration, depending on the construction procedures, construction equipment used, and proximity to vibration-sensitive uses, that spread through the ground and diminish in amplitude with distance. Table 5.9-8,

Typical Vibration Levels Produced by Common Construction Equipment Items, page 55.9-18 of the Draft EIR, shows the PPV of some common construction equipment and haul trucks (loaded trucks).

Cumulative Impact

Mobile-Source Noise

Project-related cumulative noise impacts would occur if the project's contribution to cumulative noise increases results in a substantial noise increase in comparison to existing conditions (3 dBA or more with existing CNEL greater than 60 dBA in the vicinity of any noise-sensitive receptors). Project-induced traffic noise increases on local roadways in the vicinity of the project site were previously discussed under Impact 5.9-2. The project's traffic analyses analyzed several scenarios, including: Existing, Existing Plus Project, Future 2021, and Future 2021 Plus Project.

The cumulative plus project scenario (Future 2021 Plus Project) traffic noise increases would be less than 1 dBA on affected roadway segments. A significant cumulative traffic noise increase would be identified if project traffic would contribute 1 dBA CNEL or more to a potentially significant cumulative impact. Therefore, project-related traffic noise increases would not contribute to a potentially significant cumulative impact.

Construction Noise

Like stationary-source noise, construction noise and vibration impacts are confined to a localized area of impact. Noise from construction activities would be temporary and would be less than significant. Best management practices would be implemented to reduce impacts from intermittent increases in construction noise above ambient levels. Cumulative impacts would only occur if other projects were being constructed in the vicinity of the project at the same time as the project. There are no other planned and approved projects in the vicinity of the proposed school project that might add simultaneous construction activity noise to the project's construction noise. Therefore, project construction noise impacts would not be cumulatively considerable.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with temporary construction noise, long-term operation-related noise, and ground-borne vibration and ground-borne noise.

Transportation and Traffic

Impact 5.10-1: Project-related trip generation and student relocation during construction phasing would not impact levels of service for the existing area roadway system.

Construction Phasing

Construction of the proposed improvements would occur in two phases, each including two subphases (see Chapter 4, *Project Description*). Phase 1A and 1B, which include construction of the new parking lot on Montgomery Avenue and construction of new classrooms, respectively would begin in June 2019 and end in August 2019. During construction of the Phase 1A and 1B improvements, kindergarteners and first graders would remain at Cardiff School, and the second and third graders would be relocated to Ada Harris Elementary School. The second graders would be brought back to

Cardiff School in August 2020, and third graders in August 2021. Phases 2A and 2B include construction of new classrooms and facilities, which would not impact circulation on roadways in the vicinity of the project site. The interim housing of students at Ada Harris would be temporary, and all second- and third-grade students would return to Cardiff Elementary School after project implementation.

According to the traffic impact analysis, based on the 2017-2018 enrollment at Cardiff Elementary, 147 second- and third-grade students would be moved to Ada Harris School during the 2019-2020 school year, and 50 third-grade students during the 2020-2021 school year.

Ada Harris School

Ada Harris School has two separate drop-off and pick-up locations at the southern and northern sides of the campus. The second and third graders are designated to be picked up at the southern parking lot. There is approximately 800 feet of off-street drop-off curb space on Windsor Road nearest to campus—from Kings Cross Drive to Woodlake Drive—that is allowed to be utilized. According to the traffic impact analysis, anticipated trip generation of the 147 transfer students (235 daily trips, 75 AM trips, and 21 PM trips) from Cardiff School would not meet the requirements for a traffic study (i.e., 500 total daily trips and more than 50 peak hour trips). Although 75 trips are anticipated to occur during the AM peak hour, once distributed between inbound and outbound trips through the five study area intersections, no single intersection would carry more than 50 peak hour trips, the threshold for a traffic study.

Existing and Future Traffic Conditions

LOS C is acceptable at all study roadway segments and intersections. Based on the City of Encinitas General Plan Circulation Element, a project would have a significant impact under CEQA when the addition of project traffic causes an intersection that operates at an acceptable LOS (C or better) under existing traffic conditions to fall to an unacceptable LOS (D or worse). The following condition scenarios are evaluated for the proposed project: Opening Year (2021) No Project, Existing (2018) With Project, and Opening Year (2021) With Project.

An ambient growth rate of 2 percent per year was used for all sets of data from the base year 2018 conditions to project the 2021 opening year no project conditions.

Intersection Level of Service

The projected peak hour turning movement volumes in the traffic impact study were used to assess the intersection performance and are identified in Figure 5.10-4, *Opening Year (2021) No Project Volumes – AM Peak Hour*, page 5.10-23 of the Draft EIR, and Figure 5.10-5, *Opening Year (2021) No Project Volumes – PM Peak Hour*, page 5.10-25 of the Draft EIR. A summary of the AM and PM peak-hour intersection LOS analysis results for the Opening Year (2021) No Project are presented in Table 5.10-8, *Opening Year (2021) No Project Intersection LOS*, page 5.10-20 of the Draft EIR.

As shown in Table 5.10-8, during year 2021 without the project, LOS values would be reduced from B to C for San Elijo Avenue and Montgomery Avenue in the AM peak hour, and for San Elijo Avenue and Birmingham Drive in the PM peak hour.

Existing Year (2018) With Project and Opening Year (2021) With Project

Project Trip Generation

The trip generation calculations for implementation of the Cardiff Elementary School Modernization and Reconstruction Project was estimated using the rates published in the SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego region. The proposed project would not eliminate the school's existing programs, and it is not the intent of the District to expand the enrollment; however, the project would result in an increase in one classroom or 22 seats. To better estimate enrollment that fluctuates from year to year, a 10-year enrollment history average was used for the school's existing baseline. Additionally, the trip generation analysis assumed an average classroom size of 22 students per classroom. Over the past 10 years, the average enrollment at Cardiff Elementary School was 367 students. The project proposed a buildout total of 20 classrooms with a maximum design capacity of 440 students. For the purposes of a conservative analysis, the trip generation assessment assumed an enrollment increase of 73 students.

Table 5.10-9, *Project Trip Generation Rates*, page 5.10-21 of the Draft EIR, shows the projected AM and PM peak hour trip generation based on the increase of 73 students. As shown in the table, the increase in students as a result of the project would generate 117 daily trips, with 38 trips (23 inbound and 15 outbound) during the AM peak hour and 10 trips (4 inbound and 6 outbound) during the PM peak hour.

When the project trip generation is established, the need for a traffic study can be determined. Determination for the need of a traffic study was based on the SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, March 2000. The SANTEC guidelines state:

> A TIS [Traffic Impact Study] should be prepared for all projects which generate traffic greater than 1,000 total average daily trips (ADT) or 100 peak-hour trips. If a proposed project is not in conformance with the land use and/or transportation element of the general or community plan, use threshold rates of 500 ADT or 50 peak-hour trips.

Since the project traffic is calculated to be less than the 500 ADT threshold, and the peak hours are calculated to be less than the 50 peak hour trips, the project would not require a TIS based on the SANTEC/ITE guidelines. However, for the purpose of conducting a focused traffic and circulation analysis and because there would be interim student housing at Ada Harris, a traffic impact analysis was prepared to assess traffic conditions for five existing intersections and two roadway segments providing access to the site.

Trip Distribution

According to the existing pick-up and drop-off locations, the project site would operate with one driveway on Montgomery and two on Mozart Avenue for student loading and unloading. Figure 5.10-6, *Estimated Trip Distribution*, illustrates the local trip distribution; Figure 5.10-7, *Project Turning Movement Volumes – AM Peak Hour*, page 5.10-29 of the Draft EIR, shows the AM peak hour turning movement volumes; and Figure 5.10-8, *Project Turning Movement Volumes – PM Peak Hour*, page 5.10-31 of the Draft EIR, presents the PM peak hour turning movement volumes.

Intersection Level of Service

The projected peak hour turning movement volumes conducted in the traffic impact study were used to assess the intersection performance, and are identified in Figure 5.10-9, *Existing Year (2018) With Project Volumes – AM Peak Hour*, page 5.10-33 of the Draft EIR, and Figure 5.10-10, *Existing Year (2018) With Project Volumes – PM Peak Hour,* page 5.10-35 of the Draft EIR. A summary of the AM and PM peak hour intersection LOS analysis results for the Existing Year (2018) With Project are presented in Table 5.10-10, *Existing Year (2018) With Project Intersection LOS,* page 5.10-22 of the Draft EIR.

As shown in Table 5.10-10, the project's increase in trips would not change the LOS of roadway intersections for AM or PM peak hour volumes compared to Existing (2018) No Project conditions. Therefore, no impact to roadway intersections would occur under Existing Year (2018) With Project conditions.

Opening Year (2021) with Project

The projected peak hour turning movement volumes in the traffic impact study were used to assess the intersection performance and are identified in Figure 5.10-11, *Opening Year (2021) With Project Volumes – AM Peak Hour*, page 5.10-37 of Draft EIR, and Figure 5.10-12, *Opening Year (2021) With Project Volumes – PM Peak Hour,* page 5.10-39 of the Draft EIR. A summary of the AM and PM peak hour intersection LOS analysis results for the Opening Year (2021) are presented in Table 5.10-11, *Opening Year (2021) With Project Intersection LOS,* page 5.10-22 of the Draft EIR.

As shown in Table 5.10-11, LOS values would be reduced from B to C for AM intersection LOS of San Elijo Avenue and Montgomery Avenue, and for AM and PM LOS of the San Elijo Avenue and Birmingham Drive intersection. However, this reduction in LOS value would not cause an intersection operating at an acceptable LOS (C or better) to deteriorate to LOS D or worse; therefore, project implementation under Opening Year (2021) With Project would result in a less than significant impact.

Impact 5.10-2: Project-related trip generation in combination with existing and proposed cumulative development would not exceed CMP performance standards.

The County's CMP was prepared by SANDAG. San Diego Forward: The Regional Plan, is the region's long-range transportation plan and sustainable communities strategy. The CMP arterial route closest to the project site is Manchester Avenue / El Camino Real from Interstate 5 to State Route 78, approximately 1.7 miles east of the project site.

The project would result in approximately 38 trips during the morning peak hour, which generates the highest traffic volume throughout a 24-hour period, and 117 daily trips total. As this is below the CMP threshold of 200 trips per hour or 2,400 average daily trips, a detailed CMP intersection analysis is not required, and the project would not have a significant impact at a CMP intersection. The project would not have an adverse impact during the afternoon peak hour because the proposed elementary school would generate little or no traffic during the afternoon commuter peak period on a typical day of operation. Additionally, the traffic study did not assume that school traffic would use any particular freeway segment as an access route.

Impact 5.10-3: The proposed project would provide adequate parking.

Construction

Construction vehicles would be staged on the northwestern and southern parts of the site during construction of the proposed improvements. The northwestern staging area would be on the field area west of the proposed parking lot and south of the "little brick building;" it would be accessed via the proposed driveway entrances on Montgomery Avenue. The other staging area would be on the southern side of the site on the existing blacktop hardcourt area and would be accessed via an existing driveway on Mozart Avenue, near San Elijo Avenue. Under both project phases, construction vehicles would be staged on the project site and would not impact offsite parking availability.

Additionally, the District would prohibit its construction contractors from parking construction vehicles, equipment, and employees' personal vehicles on the surrounding residential streets. Construction contractor vehicles would either park on the project site within the staging areas or on the western side of San Elijo Avenue, which provides at least 705 feet of parking area. Assuming a standard vehicle parking space length of 22 feet, there would be space for approximately 32 vehicles.

Operation

Off-Street Parking

The project would result in an increase in onsite parking spaces. The existing campus includes 19 classrooms, 2,260 square feet of auditorium space, and 28 off-street parking stalls. The proposed project would result in 20 classrooms, 3,141 square feet of auditorium space, and 45 parking spaces (31 off-street spaces and 14 parallel spaces at drop-off and pick-up areas); the project would result in an increase in 17 parking spaces.

According to the City of Encinitas Municipal Code Section 30.54.030, the minimum parking requirement for schools is 1.5 spaces for each classroom and 1 space for each 100 square feet of auditorium floor area. Table 5.10-12, *Project Parking Requirements*, page 5.10-42 of the Draft EIR, shows the existing, proposed, and increase in parking according to the requirements of the municipal code.

As shown in Table 5.10-12, the project increase of 1 classroom and 881 square feet of auditorium space would result in the need for 11 more parking spaces. The project would add 17 spaces from existing conditions—6 more parking spaces than the parking space requirements. Therefore, the project would result in a beneficial impact to onsite parking availability.

On-Street Parking

The eastern side of San Elijo Avenue, Mozart, and Montgomery Avenues provide on-street parking in addition to parking provided on the site. The eastern portion of San Elijo Avenue provides approximately 705 feet of parking space, and there is approximately 1,585 feet of available curb parking space on Montgomery and Mozart Avenues. Assuming a standard vehicle space off 22 feet, there are approximately 104 on-street parking spaces available along the eastern portion of San Elijo Avenue, Montgomery Avenue, and Mozart Avenue. The improvements to the parking lot and driveways on Montgomery Avenue would result in a loss of 2 on-street parking spaces. The loss of 2

on-street spaces would be accommodated by the project increase in 17 parking spaces, and would result in a negligible difference in on-street parking availability compared to existing conditions.

Special Events

There would be several special events throughout the year when the demand for parking could exceed the number of spaces in the parking lot. During these events, most of the event attendees would have to find parking on the nearby streets or in parking lots in the vicinity of the school. Within the streets adjacent to the project site (San Elijo Avenue, Montgomery Avenue, and Mozart Avenue), there would be approximately 2,290 feet of available on-street parking space and approximately 104 parking spaces. The adjacent streets have been able to adequately accommodate special events during recent operation of the Cardiff School program, and the project would provide an increase in parking beyond what is required as a result of the increase in student capacity (see Table 5.10-12). In addition, these parking situations would be temporary—a few hours—and would occur approximately four to six times annually, which would not constitute a significant environmental impact. For field trips, buses would be used to transport students to and from the school site. Buses would use the student loading area near Montgomery Avenue and would not impact onsite or offsite parking.

Impact 5.10-4: Project circulation improvements have been designed to adequately address potentially hazardous conditions, such as long queues and emergency access.

Construction

Construction staging would occur at the northwestern and southwestern portions of the site with direct access from existing driveways on Montgomery Avenue and Mozart Avenue. Operation of construction vehicles would comply with applicable City requirements, including following the City-designated truck routes. It is also possible that certain activities may require temporary roadway or sidewalk closures and/or traffic detours that could increase roadway hazards. A construction worksite traffic control plan would be prepared and implemented by the District, which would identify haul routes, hours of construction, protective devices, warning signs, and access. The active construction and staging areas would be on the campus and clearly marked with barriers to separate public access from the construction zone. The plan will be submitted to the City of Encinitas Public Works Department for approval and would be followed during construction.

Operation

Vehicular circulation to and from the school site would be constrained during peak arrival and departure times at the beginning and ending of each school session as parents drop off and pick up students (see discussion of Impact 5.10-1, above). However, the existing roadways in the vicinity of the project site are able to operate at an acceptable level of service, and street segments would not be constrained such that safety hazards would arise outside of normal loading and unloading activities.

Passenger Loading

The proposed project would reconfigure and expand the existing onsite loading area on Montgomery Avenue from approximately 80 feet to 250 feet in length. The one-way, student-loading loop from west to east would allow vehicles to access the new parking lot or exit the loop via the easternmost driveway and would increase loading area for onsite vehicle queuing. The driveway would allow for

the safe curbside pick-up and drop-off of students and accommodate required fire department truck access. Additionally, approximately 280 feet of offsite curbside loading would be available on Montgomery Avenue north of the onsite loading area. The project increase in loading space would reduce loading queues and reduce traffic hazards from passenger loading. Existing loading on Mozart Avenue would remain unchanged.

Vehicular, Bicycle and Pedestrian Safety
The increased levels of traffic, bicycles, pedestrians, and vehicular turning movements at the site, nearby intersections, and in the general vicinity of the school as a result of the project would result in an increased number of traffic conflicts and a corresponding increase in the probability of an accident occurring. Potential safety concerns include:

- Pedestrians attempting to cross Montgomery Avenue and Mozart Avenue outside of designated crosswalks.
- No sidewalks along the northern portion of Montgomery Avenue near the northern portion of campus.

Although the project would result in an increase in 22 seats, the school would continue its current bell schedule and drop-off and pick-up operations. A crossing guard would continue to be provided at the existing crosswalk at the intersection of Montgomery Avenue and Mozart Avenue during drop-off and pick-up periods. The increase in students would result in a negligible change to operations over the morning drop-off and afternoon pick-up periods, and would not exacerbate existing safety concerns such that a significant impact would occur.

Cumulative Impact
Cumulative traffic impacts are created when the proposed project combined with other future developments contributes to the overall traffic impacts, requiring additional improvements to maintain acceptable LOS operations. A significant cumulative impact is identified when a facility is projected to operate below the LOS standards due to cumulative future traffic and project-related traffic. Six cumulative projects in the vicinity of the school were provided by the City of Encinitas Planning Department. The cumulative development projects were assumed in the traffic analysis to evaluate potential impacts at 2021 buildout conditions. The project's incremental effect to congested intersections would not be significant at study area intersections. In consideration of the preceding factors, the project's contribution to cumulative traffic impacts would be rendered less than significant; therefore, project impacts would not be cumulatively considerable.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with project-related trip generation and student relocation during construction phasing, project-related trip generation in combination with existing and proposed cumulative development, parking, and hazardous conditions.

Tribal Cultural Resources

Impact 5.11-1: The project site is not listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources.

According to the historical resource assessment report prepared for the project, the buildings on the project site were constructed between the 1950s and 1960s and replaced the previous Cullen School buildings, and the new administration buildings were constructed in 2002 (Appendix 5.4-2). The Little Brick Building on the project site was constructed in the late 1930s, and it may have held telephone repeater equipment (Appendix 5.4-2). As provided in Section 5.11.1, *Environmental Setting*, page 5.11-2 of the EIR, only two locations in Encinitas have been designated as historic places, according to Encinitas Register of Historic Places. The Cardiff School campus and the Little Brick Building are not listed in the California Register of Historical Resources.

The Cardiff School campus is not eligible for listing in the National Register or California Register because it does not meet the requirements listed in Criteria A/1 through D/4 (Appendix 5.4-2). The Little Brick Building would be eligible for listing in the National Register or California Register under Criterion A/1 because it is associated with telecommunications from the 1930s to 1960s (Appendix 5.4-2). The Little Brick Building is also eligible for listing under Criterion C/3 as a rare example of an early twentieth-century telephone system repeater hut designed in the Colonial Revival–style architecture (Appendix 5.4-2). The site has historically operated as a school, and none of the buildings on the project site are associated with TCRs. A records search of the NAHC Sacred Lands File in February 2018 resulted in negative results (see Appendix 11-1, *Agency Coordination*).

Cumulative Impact

As with the proposed project, each related cumulative project would be required to comply with AB 52 and PRC Section 21083.2(i), which addresses accidental discoveries of archaeological sites and resources, including tribal cultural resources. Therefore, any discoveries of TCRs caused by the project or related projects would be mitigated to a less than significant level, and therefore project impacts would not be cumulatively considerable.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with the project site being eligible for listing in the California Register of Historical Resources or in a local register of historical resources.

Energy

Impact 5.15-1: Construction activities would not result in wasteful, inefficient, and unnecessary consumption of energy or have excessive energy requirements.

During construction, the project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Transportation Energy

Vehicle Miles Traveled

Transportation energy use depends on the type and number of trips, vehicle miles traveled (VMT), fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would

come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would be temporary and would fluctuate according to the phase of construction. The majority of construction equipment during demolition and grading would be gas powered or diesel powered, and the later construction phases would require electricity-powered tools. Table 5.12-1, *Construction Worker Trips,* page 5.12-5 of the Draft EIR, Table 5.12-2, *Construction Vendor Trips,* page 5.12-6 of the Draft EIR, and Table 5.12-3, *Construction Haul Trips,* page 5.12-6 of the Draft EIR, provide the VMT for construction worker trips, vendor trips, and haul trips, respectively, generated by the proposed project.

Project-Related Fuel Consumption

Based on the estimated vehicle miles traveled and duration of construction, Table 5.12-4, *Off-Road Construction Equipment Fuel Use,* page 5.12-7 of Draft EIR, provides the estimated fuel usage for construction vehicles. As discussed in Section 5.2 *Air Quality*, all diesel-fuel commercial motor vehicles must not idle for more than five consecutive minutes at any location.

As shown in Table 5.15-4, the project's fuel consumption from construction would be 7,784 gallons of gasoline and 29,662 gallons of diesel fuel over the 19-month construction period; therefore, the project would result in a daily consumption of 13.6 gallons of gasoline and 52 gallons of diesel fuel per day. According to the EMFAC Fuel Usage estimates for San Diego County, the county uses 3,915,607 gallons of gas per day and 556,349 gallons of diesel per day. The project increase in gasoline and diesel consumption would be 0.0003 percent and 0.009 percent, respectively, of San Diego County's daily consumption. Therefore, project construction would not represent a substantial increase in demand for local or regional energy supplies. Construction fuel use for the proposed project would cease upon completion of project construction. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or state. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than similar development projects. Impacts related to the use of transportation energy during construction would not require expanded energy supplies or the construction of new infrastructure. Impacts would be less than significant.

Construction Materials

Construction building materials may include recycled materials and products originating from nearby sources in order to reduce the costs of transportation. The District may use recycled materials for construction of the proposed improvements, as appropriate and as available. With increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

The type of construction is conventional and would be similar to other schools in the District. Substantial reductions in energy inputs for construction materials can be achieved by building with recycled materials, which require substantially less energy to produce than nonrecycled materials. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for

construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ reasonable energy conservation practices in the interest of minimizing the cost of doing business. Construction of the school is conventional and is not expected to use unnecessary amounts of material or to use materials in a wasteful manner, since both would increase the cost of construction. Impacts to energy from construction materials would be less than significant.

Impact 5.15-2: Operation of the school does not create a land use and pattern that cause wasteful, inefficient, and unnecessary consumption of energy or create buildings that would have excessive energy requirements.

Electricity and Gas

Operational use of energy would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems, security, and control center functions; use of on-site equipment and appliances; and indoor, outdoor, perimeter, and parking lot lighting. The CalEEMod model used to calculate air quality impacts also generates natural gas and electricity usage. As shown in Table 5.15-5, *Electricity and Gas Consumption,* page 5.12-9 of the Draft EIR, the proposed project would result in less natural gas and electricity use than the existing school use. The reduction in energy use is attributed to the new building standards associated with the proposed project.

Transportation Energy

Student Relocation (2019-2021)

Approximately 147 second- and third-grade students would be temporarily relocated to Ada Harris School during construction activities; kindergarten and first grade would remain at Cardiff School. Second and third grades would return to Cardiff School in August 2020 and August 2021, respectively. No new trips would be generated as a result of relocation since existing trips to Cardiff School would be rerouted to Ada Harris School. However, student relocation during construction could increase VMT by altering student and teacher trips to and from campus. The two schools are approximately 1.1 miles apart, and any change in VMT during construction of the proposed project would be short term and would not generate substantial criteria air pollutant emissions.

Operation at Buildout

For the purposes of this analysis, it is assumed that the existing trips and traffic associated with operation of the school would not change. Implementation of the proposed project would result in an increase in one classroom and 22 seats, which would result in an increase in 117 net daily trips, with 38 trips (23 inbound and 15 outbound) during the AM peak hour and 10 trips (4 inbound and 6 outbound) during the PM peak hour (see Section 5.10, *Transportation and Traffic*).

The CalEEMod program estimates average trips associated with commercial and employment land uses. The VMT estimate ranges from 10.8 to 16.6 miles for commercial-customer and commercial-work trips. These trip lengths are longer than necessary for travel to the school; therefore, for this analysis, a VMT more representative of the proposed project has been calculated.

The average trip lengths associated with students were determined by measuring the longest possible home-to-school trip for the school, approximately 0.75 mile north, 1.75 mile east, and 1 mile south. The analysis assumes that the shortest vehicle trip would be 1,000 feet because people closer than

1,000 feet to a school are more likely to walk or ride a bike. The average trip length for Cardiff School is 1.16 miles. Therefore, assuming an increase in 117 daily trips, the project would result in an increase in approximately 24,430 annual VMT.

Fuel Usage
CARB publishes the EMFAC2017 Web Database, which was used to calculate fuel consumption for the 24,430 new vehicle miles traveled. The database search was limited to San Diego County and assumed the 2017 calendar year and light-duty private vehicles with a range of model years and fuel types. Based on the CARB database, the average miles per gallon (mpg) for vehicles in San Diego is 14.3 for the year 2018.3 Using this estimate, the new vehicle trips associated with the school could result in use of approximately 1,708.4 gallons of fuel for the school year. This is a conservative figure, because as fuel efficiency in passenger cars increases, electric vehicle use expands and fuel usage will decrease. The calculated fuel use represents less than 0.001 percent of the total fuel usage for light vehicles in the region over the same 180-day school year for the year 2018 (177 million gallons) (see Appendix 5.12-1). This increase in fuel usage represents a conservative estimate, with the real use likely being less than calculated. The 0.001 percent increase in VMT associated with this project is considered negligible when compared to the region as a whole.

Cumulative Impact

The proposed project will have a stable energy use over time and, as shown in Table 5.15-4, will reduce energy use from the current condition. The project would not significantly contribute to VMT or gasoline consumption and would therefore not add to the cumulative demand for power in the region. Therefore, impacts from the proposed project would be less than cumulatively considerable.

Finding: The District finds, based on the Final EIR, and the whole of the record, that the proposed Project will result in less than significant impacts and less than cumulatively considerable impacts associated with construction activities resulting wasteful, inefficient, and unnecessary consumption of energy or have excessive energy requirements; and operation of the school creating a land use and pattern that cause wasteful, inefficient, and unnecessary consumption of energy or create buildings that would have excessive energy requirements.

C. Impacts Mitigated to Less Than Significant

This section identifies impacts of the proposed project which the Draft EIR determined to be less than significant without implementation of project-specific mitigation measures.

Biological Resources

Impact 5.3-1: Development of the proposed project could impact four special-status bat species—Mexican long-tongued bat, Yuma myotis, western mastiff bat and western red bat—and could impact protected nesting birds. One of the species of ornamental trees to be removed is a special-status species, Torrey pine. Project development would involve replacement of Torrey pines.

Sensitive Species

No sensitive plant species are onsite due to frequent disturbances by school use and landscape maintenance, and no impacts would occur. Construction will occur within the campus boundaries, and will not affect adjacent habitat across Mozart Avenue, or been San Elijo Avenue and South Coast Highway 101.

Three sensitive bird species could inhabit riparian scrub and/or riparian forest habitats east of the campus, and might use the campus for incidental foraging: tricolored blackbird, white-tailed kite, and yellow-breasted chat. A fourth sensitive bird species, least Bell's vireo, could inhabit riparian habitat east of the campus, but is considered highly unlikely to occur on campus due to its rarity; it is listed as federal and state endangered. Burrowing owl could occur in scrub and disturbed habitat west of the campus; however, it nests in underground burrows and thus is unlikely to occur on campus due to frequent disturbances.

Two sensitive bat species listed on the CNDDB with occurrences in the region roost in buildings and could roost in buildings onsite: Mexican long-tongued bat and Yuma myotis. Two other sensitive bat species listed in CNDDB results for the region roost in trees and could roost in trees onsite: western mastiff bat and western red bat.

Tree removals could have a significant impact on the two sensitive bat species that might roost in trees onsite: western mastiff bat and western red bat. Removal of trees that could be used for incidental foraging by sensitive bird species would not be a significant impact.

The proposed project would remove one of the two sensitive species of trees on the project site assigned Rare Plant Rank of 1B.2 by the CNPS, indicating that the species is rare, threatened, or endangered in California and elsewhere, and moderately threatened in California. The Catalina ironwood tree would not be impacted by the proposed project; however, five Torrey pine trees would be removed because of program needs and design constraints and/or the poor health/condition of the tree per the arborist's report. Torrey pines do not have a federal or state special status. The Torrey pine trees on campus are part of the ornamental landscaping and are not remnants from native habitat predating the school, as shown on historical aerial photographs. Removal of the trees is not considered a significant impact.

Sensitive Habitat

The project site is a developed elementary school campus with ornamental landscape vegetation. It is frequently disturbed by landscape maintenance activities and use of turf areas for play. There are no sensitive habitats or communities onsite, and no impacts to such habitats would occur.

Nesting Birds

Project development would involve removal of 47 trees: 36 trees on the campus and 9 street trees on San Elijo Avenue next to the south site boundary (see Figure 5.3-1, *Tree Inventory,* page 5.3-7 of the Draft EIR), in addition to some shrubs. Trees and shrubs could be used for nesting by birds protected under the MBTA and California Fish and Game Code Sections 3503 et seq. Legal protections for nesting birds apply to birds generally, not just sensitive bird species. Fish and Game Code Section 3503 protects all bird species, and the MBTA covers thousands of species of birds. This impact would be significant.

Mitigation Measures:

The following mitigation measures were included in the DEIR and the FEIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the FEIR.

BIO-1 A preconstruction nesting bird survey shall be conducted by a qualified biologist (i.e., one with experience conducting nesting bird surveys) to ensure potential impacts to nesting bird species do not occur during the breeding season. The survey shall comply with the conditions in the MBTA and California Fish and Game Code with methods accepted by the US Fish and Wildlife Service and the California Department of Fish and Wildlife to protect active bird/raptor nests. To the extent feasible, vegetation/tree clearing shall take place outside the general avian breeding season (February 1 through August 31). If vegetation clearing and/or tree removal cannot occur outside the general avian breeding season, then a preconstruction survey for avian nesting shall be conducted by a qualified biologist on the project site and areas within 500 feet of the site, within seven calendar days prior to the start of construction.

If the biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. If the biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the biologist shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended.

To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified biologist: work may proceed if it is (1) at least 500 feet from raptor nests; (2) at least 300 feet from federal- or state-listed bird species' nests; and (3) at least 100 feet from non-listed bird species' nests. Encroachment into the buffer area around a known nest shall only be allowed if the biologist determines that the proposed activity would not disturb the occupants of the nest. A qualified biologist shall conspicuously mark the buffer so that vegetation clearing and/or tree removal/trimming does not encroach into the buffer until the nest is no longer active (i.e., the nestlings fledge, the nest fails, or the nest is abandoned, as determined by a qualified biologist). All recommendations provided by the biologist shall be complied with.

BIO-2 No less than 7 days and no more than 14 days prior to beginning ground disturbance and/or demolition, a qualified wildlife biologist will conduct surveys for special-status bats on two days, during the appropriate time of day to maximize detectability, to determine if bat species are roosting near the work area. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, mistnetting, bat sign (e.g., guano),

or use of ultrasonic detectors (e.g., Anabat). The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required.

If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts.

If roosts are identified in structures onsite and must be removed, the bats will be excluded from the roosting site before the facility is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed prior to implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., while females in maternity colonies are nursing young).

If roosts must be removed, the project applicant shall provide bat houses constructed on- or off-site in locations and settings where bats would be likely to use them. If bat houses are required, the District shall consult with the wildlife biologist regarding the design, materials, locations, and settings of the bat houses.

Cumulative Impact

The area considered for cumulative impacts to biological resources is the part of the South Coast Geographic Subdivision of California in San Diego and southern Orange counties, which extends from the Pacific Coast inland up to several miles; geographic subdivisions of California are designated by the Jepson Herbarium at the University of California, Berkeley.

Many other projects in the region would impact sensitive species directly and/or indirectly through impacts on those species' habitats. Other projects would be required to comply with existing laws and regulations protecting biological resources.

Proposed project development would not have significant impacts on sensitive species or sensitive habitat. Project vegetation impacts would be limited to ornamental landscape vegetation on campus and would not impact native habitat. Therefore, project impacts to biological resources would not be cumulatively considerable.

***Finding*:** The District hereby finds that implementation of Mitigation Measures BIO-1 and BIO-2 are feasible, and are therefore adopted (Public Resources Code § 21081[a][1], Guidelines § 15091[a][1]). Therefore, the District hereby finds that changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Cultural Resources

Impact 5.4-1: Development of the project could impact an identified historic resource.

Cardiff School Buildings

According to the Historic Resources Assessment Report prepared for the project (see Appendix 5.4-2), the Cardiff School campus buildings do not appear eligible for listing in the National Register of Historic Places under Criterion A, B, C, or D, or the California Register of Historic Resources under Criterion 1, 2, 3, or 4.

Little Brick Building

According to the Historic Resources Assessment Report, the "Little Brick Building" appears eligible for listing in the in the National Register and/or California Register individually under Criterion A/1 and C/3 as a rare example of a telephone repeater hut constructed circa 1938 to boost telephone signals between San Diego and Los Angeles, and as a rare example of a repeater hut designed in the Colonial Revival style of architecture.

- **Criterion A/1. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.**

  The Little Brick Building is an example of a building associated with telephone communications from the 1930s to 1960s. The building was constructed and used by the Pacific Telephone Company to transmit telephone calls over trunk lines between San Diego and Los Angeles. These small buildings were called "repeater huts" and were once frequently found situated between large cities and rural communities. They have now largely disappeared due to the growth of suburban populations and being redundant to modern communication systems. Therefore, the Little Brick Building appears eligible for listing in the National Register Under Criteria A and California Register under Criteria 1.

- **Criterion C/3. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.**

  The Little Brick Building appears eligible for listing in the National Register or California Register under Criterion C/3 as a rare example of an early twentieth-century telephone system repeater hut designed in the Colonial Revival–style architecture. Not only is the building significant for its functional architecture, it is also an excellent example of Colonial Revival architecture as interpreted in the late 1930s. The workmanship of the brick mason who applied his skills to the building is remarkable for its artistic and imaginative use of Roman brick veneer to create a modern interpretation of a classic building design. The mason achieved his design by setting bricks in horizontal and vertical alignments, by slightly projecting or recessing the bricks, and by using full, half, header, and stretcher bricks to achieve the cohesive design. The building's overall design is also rather remarkable in that if the shutters were once again put in place over the original windows on the structure (currently replaced by inset brick), most passersby would not know that this was historically used as a telephone utility building and not a private residence.

According to the CEQA Guidelines, a project would result in a significant impact to historical resources if it would materially impair a historical resource (CEQA Guidelines Section 15064.5[b][1]). Impairment occurs if the historical resource is demolished or materially altered in an adverse manner in its physical characteristics or features that convey the historical significance and justify its inclusion in or eligibility for inclusion in the California Register of Historical Resources (CEQA Guidelines Section 15064.5[b][2]). The CEQA Guidelines also specify a means of evaluating the relative significance of project impacts on historical resources. CEQA Guidelines Section 15064.5(b)(3) states:

> Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

Compliance with the Secretary's Standards indicates that a project may have a less than significant impact on a historical resource. The converse of this does not hold; that is, failure to comply with the Secretary's Standards does not, by definition, result in a significant impact under CEQA. CEQA recognizes that alterations that are not consistent with the Secretary's Standards may still not result in significant impacts to the historical resource. Therefore, the significance of project impacts on a historical resource can be evaluated by determining:

- Whether a project is in conformance with the Secretary's Standards (less than significant impact).
- Whether a project is in substantial conformance with the Secretary's Standards and does not result in material impairment (less than significant impact, with mitigation if required).
- Whether a project is not in conformance with the Secretary's Standards and results in material impairment (significant impact).

The District has proposed renovations to the Little Brick Building to meet seismic requirements for future use on the Cardiff School property as a historic resource consistent with the Secretary's Standards. Changes to the surrounding landscape may also be made to provide a viewing area, patio, and seating. It is possible that the building could be used as a focal point for garden events, community meetings, or activities in support of the school.

Because the Little Brick Building has been determined eligible for listing as a historical resource in the California Register, if the District should decide to rehabilitate and/or reuse the Little Brick Building, Mitigation Measure CUL-1 requires that the District demonstrate that the provisions of *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings* have been followed. The measure requires a public report on the plan demonstrating compliance with the Secretary's Standards prior to application for a building permit to conduct the repairs.

Additionally, any repairs, alterations, and/or additions necessary for the preservation, restoration, rehabilitation, moving, or continued use of a historical building or structure would fall under the

regulations of the California 2016 Historical Building Code (CHBC), 24 CCR Part 8 (January 1, 2017). The intent of the CHBC is to facilitate the preservation and continuing use of qualified historical buildings while providing reasonable safety for the building occupants and access for persons with disabilities. The regulations of the CHBC have the same authority as state law, and therefore additional mitigation is not required.

Impact 5.4-2: Development of the project could impact archaeological resources.

The project site is entirely developed and is not a designated archaeological site. Based on a review of historical information, the subject site has been used as a school site since the 1950s. Prior to the construction of the school, the campus had a former residential structure near Mozart Avenue. Excavation and ground disturbance near this structure, as well as near the existing school buildings, may result in the accidental discovery of unique artifacts that are of public interest, have a particular quality (e.g., oldest or the best available example of its type), and/or are associated with a recognized important prehistoric or historic event or person.

Impact 5.4-3: The proposed project could destroy paleontological resources.

Project development would involve disturbance of approximately 7.4 acres of land and would involve grading and trenching into subsurface soil. Subsurface soil consists of Quaternary Previously Placed Fill (encountered from 2 to 4 feet below ground surface [bgs]), Quaternary Older Paralic Deposits Units 6 and 7 across the western portion of the site (encountered at 14.5 feet bgs), and Units 2 to 4 along the eastern portion (encountered at 31.5 feet bgs). According to the geotechnical report prepared for the project (see Appendix 5.5-1), within the footprint of proposed structures it is recommended that existing fill soils should be over-excavated to competent paralic deposits, a minimum uniform depth of four feet below existing or proposed grades and five feet beyond the building footprint. Therefore, excavation for the footings for the improvements would extend beyond the subsurface fill and could encounter native soils.

A paleontological records search was conducted by the San Diego Natural History Museum for the proposed project (see Appendix 5.4-3). According to the paleontological records search, the project site is underlain by Bay Point Formation (approximately 10,000 to 750,000 years old) at the surface and Delmar Formation (approximately 49 to 50 million years old) at unknown depths beneath the Bay Point Formation (SDNHM 2018). Although there are no recorded fossil localities from the Bay Point Formation within a one-mile radius of the project site, a large number of diverse marine localities are within the Bay Point Formation throughout San Diego County. Additionally, three fossil localities have been identified within Delmar Formation within a one-mile radius. According to the County of San Diego Guidelines, the Bay Point Formation and Delmar Formation have a high sensitivity for paleontological resources.

Mitigation Measures:

The following mitigation measures were included in the DEIR and the FEIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the FEIR.

CUL-1 Prior to start of construction, the Cardiff School District shall retain a qualified historic architect or architectural historian (with experience in preparing

rehabilitation plans) to assist in developing plans for the future use and function of the Little Brick Building. The District shall provide documentation to the public prior to application for a building permit that the plans for the building meet the requirements of *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings*.

CUL-2 Prior to the start of construction, Cardiff School District shall retain a qualified archaeologist to monitor ground-disturbing activities. The archaeologist shall attend a meeting with the grading contractor, engineering geologist, grading engineer, and school authorities to establish a protocol for monitoring during all earth-disturbing activities. The meeting shall briefly summarize the prehistoric and historic use of the land, describe the types of cultural resources that may be encountered in the project area, and outline steps to follow in the event a discovery is made. The training shall be developed and presented by a registered professional archaeologist (RPA) and may run concurrently with other environmental training (biological, paleontology, safety training, etc.). The training may be videotaped or presented in an informational brochure for future use by field personnel not present at the start of the project phase. The RPA shall have the authority to stop grading or construction work within 25 feet of any discovery of potential historical or archaeological resources in order to test, analyze, and make a finding of significance under Section 15064.5 of the California Environmental Quality Act Guidelines; develop a plan for recovery, analysis, report, and curation of the recoveries, as appropriate; and report to an accredited and permanent scientific institution, such as the South Central Coastal Information Center and San Diego Natural History Museum.

CUL-3 Prior to the start of construction, the Cardiff School District shall retain a qualified paleontologist to determine if grading and excavation activities will encounter older Quaternary paralic deposits. If it is determined that older Quaternary paralic deposits will not be encountered, no additional work is required.

If it is determined that construction could encounter older Quaternary deposits, the qualified paleontologist shall provide training to the construction staff, including but not limited to the grading contractor, engineering geologist, grading engineer, and school authorities to outline steps to follow in the event that a discovery is made. The paleontologist shall establish a protocol for monitoring during all earth-disturbing activities. The training shall be developed and presented by the paleontologist and may be videotaped or presented in an informal brochure for future use by field personnel not present at the start of the project phase.

During construction, the paleontologist shall have the authority to halt construction activities to allow a reasonable amount of time to identify potential resources. If paleontological resources are discovered, the construction crew shall immediately cease work in the vicinity of the find. The paleontologist shall prepare a recovery plan in accordance with the Society of Vertebrate Paleontology guidelines (1996), which may include, but is not limited to, a field survey, construction monitoring,

sampling and data recovery procedures, museum storage coordination, and a report of findings. Necessary and feasible recommendations in the recovery plan can also be provided by the lead agency and shall be implemented before construction activities resume at the site where the resources were discovered. Any discovered resources shall be curated with the facilities at the San Diego Natural History Museum.

Cumulative Impact

The proposed project would have a cumulatively considerable effect on historical resources if the project and related projects were historically significant under the same criteria and conditions, and their alterations were inconsistent with the Secretary's Standards.

Other projects in the region would involve ground disturbances and thus could disturb surface or buried archaeological and/or paleontological resources. The potential for cumulative impacts to cultural resources from other projects is unknown but likely similar due to their location along the coast. Destruction of significant cultural resources from each of these projects would constitute a significant cumulative impact.

However, similar to the proposed project, all projects would require mitigation of impacts, including construction monitoring, testing, archiving, and recovery of any found resources prior to development of the site. The proposed project has incorporated mitigation measures that would reduce the potential to contribute to cumulative impacts. Therefore, the project would not result in significant impacts to cultural resources. In consideration of the preceding factors, the project's contribution to cumulative cultural resource impacts would be rendered less than significant, and therefore, project impacts would not be cumulatively considerable.

Finding: The District hereby finds that implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3 are feasible, and are therefore adopted (Public Resources Code § 21081[a][1], Guidelines § 15091[a][1]). Therefore, the District hereby finds that changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Geology and Soils

Impact 5.5-1: Project development could expose people and structures to hazards from collapsible soils and expansive soils.

Collapse

The previously placed fill and highly weathered sediments encountered at the site are generally considered to be compressible under the proposed loading conditions. Surficial soils were also found to be locally disturbed and weathered. The geotechnical investigation report therefore recommends that previously placed fill and highly weathered sediments be over-excavated to a depth of at least four feet below existing grades, or at least two feet below proposed foundation bottoms, whichever is greater.

Expansive Soils

Based on geologic observation and laboratory testing, the near-surface materials at the project site are anticipated to exhibit very low to low expansion potential. The geotechnical investigation report recommends that additional evaluations of soil expansion potential be conducted during grading and upon completion of rough grading. The geotechnical investigation also states that select grading may be necessary to ensure fill placed at the project site is nonexpansive (expansion index of 50 or less). The geotechnical investigation report recommends foundations of continuous and/or isolated spread footings.

Mitigation Measures:

The following mitigation measures were included in the DEIR and the FEIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the FEIR.

GEO-1 The proposed project shall be designed and constructed in accordance with the geotechnical engineering recommendations presented in Construction Testing & Engineering's *Geotechnical Investigation Proposed Improvements to Cardiff School*, subsequent geotechnical studies prepared for the proposed project, and recommendations provided by the geotechnical engineer. These recommendations address site preparation and grading, excavation, fill placement and compaction, onsite materials, and foundation and slab design to ensure potential soil hazards are remedied and the project adheres to the California Building Standards Code.

Finding: The District hereby finds that implementation of Mitigation Measure GEO-1 is feasible, and is therefore adopted (Public Resources Code § 21081[a][1], Guidelines § 15091[a][1]). Therefore, the District hereby finds that changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Tribal Cultural Resources

Impact 5.11-2: It is possible that tribal cultural resources could be discovered on the project site by the lead agency or a California Native American tribe during ground-disturbing activities.

Effective July 1, 2015, AB 52 added TCRs as a resource subject to review under CEQA, and requires meaningful consultation between lead agencies and California Native American tribes on potential impacts to TCRs, as defined in PRC Section 21074. A TCR is a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that is either on or eligible for inclusion in the California Historic Register or a local historic register, or is a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a TCR (PRC §§ 21074[a][1–2]).

TCRs may be found throughout San Diego County, but information about them is much more difficult to obtain than for most archaeological resources. Identification of TCRs requires coordination with Native American tribes, and their precise location is often difficult to determine because they are often only documented through the oral history of the tribe.

The District has not received a tribal request to be notified about projects. However, with the results of a Sacred Lands search, the NAHC sent a list of 14 tribes that might have local knowledge. On February 9, 2018, the District issued letters informing tribes of the proposed project and requested information on the project site and tribal cultural resources sensitivity. The Pauma Band of Luiseno Indians indicated the project site is within their traditional use area and recommended provision of a tribal monitor in conjunction with an archaeological monitor during ground-disturbing activities. The Iipay Nation also recommended that a Kumeyaay Native American Monitor be present for all ground-disturbing activities. As excavation for the proposed buildings' foundations and footings may encounter previously undisturbed soils, it is possible that construction-related earthwork may inadvertently uncover buried tribal cultural artifacts.

Mitigation Measures:

The following mitigation measures were included in the DEIR and the FEIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the FEIR.

CUL-2 Prior to the start of construction, Cardiff School District shall retain a qualified archaeologist to monitor ground-disturbing activities. The archaeologist shall attend a meeting with the grading contractor, engineering geologist, grading engineer, and school authorities to establish a protocol for monitoring during all earth-disturbing activities. The meeting shall briefly summarize the prehistoric and historic use of the land, describe the types of cultural resources that may be encountered in the project area, and outline steps to follow in the event a discovery is made. The training shall be developed and presented by a registered professional archaeologist (RPA) and may run concurrently with other environmental training (biological, paleontology, safety training, etc.). The training may be videotaped or presented in an informational brochure for future use by field personnel not present at the start of the project phase. The RPA shall have the authority to stop grading or construction work within 25 feet of any discovery of potential historical or archaeological resources in order to test, analyze, and make a finding of significance under Section 15064.5 of the California Environmental Quality Act Guidelines; develop a plan for recovery, analysis, report, and curation of the recoveries, as appropriate; and report to an accredited and permanent scientific institution, such as the South Central Coastal Information Center and San Diego Natural History Museum.

TCR-1 The RPA shall also monitor for potential tribal cultural resources. If tribal cultural resources are recovered, the RPA shall contact the liaisons for the local Native American tribes, including their Native American monitors, to assess the find and as appropriate return the artifact to the appropriate tribe(s).

Finding: The District hereby finds that implementation of Mitigation Measures CUL-2 and TCR-1 are feasible, and are therefore adopted (Public Resources Code § 21081[a][1], Guidelines § 15091[a][1]). Therefore, the District hereby finds that changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

D. Significant Unavoidable Adverse Impacts

The EIR did not identify any significant and unavoidable adverse impacts that would result from implementation of the proposed project.

III. ALTERNATIVES TO THE PROPOSED PROJECT

In preparing and adopting findings, a lead agency need not necessarily address the feasibility of both mitigation measures and environmentally superior alternatives when contemplating the approval of a project with significant environmental impacts. Where the significant impacts can be mitigated to less than significant by the adoption of mitigation measures, the lead agency has no obligation in drafting its findings to consider the feasibility of environmentally superior alternatives, even if their impacts would be less severe than those of the project as mitigated.

The FEIR determined that all of the potentially significant impacts of the project can be avoided or reduced to a level below significance by the implementation of feasible mitigation measures. The potentially significant impacts and the mitigation measures that can avoid or reduce them below significance, and the Cardiff School District's findings concerning them are set forth in Section II, above. The mitigation measures also are set forth in the Mitigation Monitoring and Reporting Program adopted by the Cardiff School District pursuant to Public Resources Code Section 21081.6 and State CEQA Guidelines Section 15097.

The FEIR examined a reasonable range of alternatives to determine whether they could meet the project's objectives while avoiding or substantially lessening one or more of the project's significant impacts. Based on numerous community comments, the DEIR analyzed the below four project alternative variations:

- Alternative 1: Maintain Multipurpose Room in Current Location
- Alternative 2: Scheme B Site Plan
- Alternative A. No Project Alternative
- Alternative B: Reduced Capacity Alternative

The alternatives analyzed in Chapter 7 of the Draft EIR included the No Project Alternative. However, the FEIR determined that all of the potential significant impacts of the project can be reduced or avoided to a level below significance by the implementation of feasible mitigation measures set forth in the Mitigation Monitoring and Reporting Program. Accordingly, no findings regarding the feasibility of project alternatives are required.

IV. STATEMENT OF OVERRIDING CONSIDERATIONS

The Draft EIR includes thresholds of significance that are used to establish normally acceptable standards for Project impacts in the District. In many instances, the Project meets the standards without the need for modification. In some cases, mitigation measures have been required that modify the Project to reduce impacts to below the normally accepted thresholds. While there are

many reasons why this may occur, reasons usually fall into the following categories: the issue is much larger than the District's jurisdiction or capability to resolve; there are no feasible mitigation measures; the measures that are identified cannot be guaranteed to reduce the impact to less than significant; or the proportionate share of the mitigation for the Project is small and there is no identified source for the remainder of the funding. When an impact is above the normally accepted threshold and cannot be mitigated, the impact is identified as significant and unavoidable in the Draft EIR. The CEQA Guidelines allow the District to approve a Project with significant and unavoidable impacts provided specific findings are made.

A. Significant and Unavoidable Impacts

There were no significant and unavoidable adverse impacts identified in the EIR that would result from implementation of the proposed project.

B. Project Benefits

The proposed Cardiff School Modernization and Reconstruction project would redevelop and modernize an existing school campus with similar facilities for continued use of the site as a school that serves the surrounding community. The project site is in an urban area served by existing infrastructure, including water and sewer mains and electricity and natural gas services. The proposed project would:

- Improve facilities at Cardiff Schools by:
    - Creating a safe and secure environment
    - Connecting the schools to the community – placing community and active uses along the school's perimeter
    - Prioritizing green space and public views; providing ample play space
    - Improving traffic flow and safety for pick-up
    - Emphasizing sustainability and environmentally focused design
    - Prioritizing learning spaces; creating useable outdoor learning environments
- Replace portable classrooms with permanent facilities
- Renovate/retrofit the "Little Brick Building"
- Maximize use of limited District funds
- Maximize use of District-owned property
- Regain and maintain compliance with the Land and Water Conservation Fund Agreement

February 2019 | Mitigation Monitoring and Reporting Program

CARDIFF SCHOOL MODERNIZATION AND RECONSTRUCTION PROJECT

Cardiff School District

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PLACEWORKS

Exhibit C

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1. Introduction

1.1 PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

The Cardiff School District (District) is the lead agency for the proposed Cardiff School Modernization and Reconstruction project and has developed this Mitigation Monitoring and Reporting Program (MMRP) to provide a vehicle by which to monitor mitigation measures outlined in the Cardiff School Modernization and Reconstruction Environmental Impact Report (EIR), State Clearinghouse No. 2018051016. The MMRP has been prepared in conformance with the CEQA Guidelines and Section 21081.6 of the Public Resources Code, which states:

> (a) When making findings required by paragraph (1) of subdivision (a) of Section 21081 or when adopting a mitigated negative declaration pursuant to paragraph (2) of subdivision (c) of Section 21080, the following requirements shall apply:
>
> (1) The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead or responsible agency, prepare and submit a proposed reporting or monitoring program.
>
> (2) The lead agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based.

The MMRP consists of mitigation measures that avoid, reduce, and/or fully mitigate potential environmental impacts. The mitigation measures have been identified and recommended through preparation of the EIR and drafted to meet the requirements of Public Resources Code Section 21081.6.

1.2 EIR SUMMARY

1.2.1 Project Location

The project site encompasses the Cardiff School property at 1888 Montgomery Avenue in the beach community of Cardiff-by-the-Sea, City of Encinitas. The property is roughly triangular and surrounded by

Montgomery Avenue on the north, Mozart Avenue on the south, and San Elijo Avenue on the west. The City of Encinitas is surrounded by the City of Carlsbad to the north, the City of Solana Beach to the south, and unincorporated areas of San Diego County to the east.

1.2.2 Proposed Improvements

Cardiff School would be modernized and reconstructed to facilitate a safe and secure campus and to better align with the current instructional program needs. The proposed project consists of demolition of five 1-story buildings, a portion of a sixth building, and eight relocatable classrooms; construction of ten 1-story wood-framed buildings and a 2-classroom addition to an existing building; and modernization of two existing buildings. A demolition plan showing the location of the facilities that would be demolished is included as Figure 5, *Demolition Plan,* and the proposed improvements are included in Figure 6, *Site Plan*. A breakdown of the proposed improvements based on facility use, including a comparison of existing and proposed square footage of facilities, is provided in Table 2, *Proposed Uses and Spaces.* As shown, the proposed improvements would increase the building area by 4,760 net square feet.

Table 2 Proposed Uses and Building Spaces

School Uses	Existing Space (NSF)	Proposed Space (NSF)	Change in Space (NSF)
District Administration Office (Building E)	1,375	1,375	0
School Administration Office (Building E)	3,190	3,190	0
Library/Media Center (Building E)	3,510	3,510	0
Kindergarten Instruction Areas (Buildings A and B)	7,200	6,500	-700
Classroom Instruction Areas (Buildings C-H, K, and M)	19,250	23,045	3,795
Multipurpose Building (Building L)	3,560	5,000	1,440
Food Service Building (Building J)	1,580	1,805	225
Brick Building (Building N)	800	800	0
Total (NSF)	**40,465**	**45,225**	**4,760**

NSF = net square feet

New Construction

- **Classroom Buildings:** All existing classroom buildings would be demolished. The reconstructed classroom buildings would remain in the eastern portion of the site and in the general area of the existing buildings. The project would include 20 classrooms in Buildings A to H (see Figure 6, *Site Plan*). Five kindergarten classrooms and two extended day rooms would be in Buildings A and B in the eastern corner of the campus.

- **Special Program Buildings:** Specialty program classes would be in Buildings K and M, west of the classroom buildings and east of the grass playfields. Building K would include maker space/art lab,

reading group room, and special education resource room. Building M would include a learning lab, science/STEAM lab, and restrooms.

- **Multipurpose Building:** A 5,000-square-foot multipurpose building would replace the existing smaller 3,560-square-foot multipurpose facility. The new building is proposed near the northwest portion of the site, between the grass playfield and main parking lot and loading area. In addition to replacing the existing auditorium with a larger multipurpose room sized to accommodate school programs, the multipurpose building would include a music classroom, stage, audio/visual storage, restrooms, and a storage room.

- **Food Service Building and Lunch Court:** A 1,805-square-foot food service building would replace the existing 1,580-square-foot food service building. The new food service building and lunch court would be constructed in the southeastern portion of the site, between the hardcourts and classroom buildings. The food service building would include a dry storage room, queuing area, restrooms, PE equipment storage, and maintenance and electric rooms. A lunch court would be north of the food service building.

Modernization

- **Library/Media Center:** An Information Technology (IT) Office/Workroom would be created within the existing facility by constructing a wall within the Library.

- **Science/Art Lab:** Minor casework modifications to convert the facility from its existing joint use to a dedicated science lab.

1.2.3 Operation Schedule

Kindergarten and first grade would remain at Cardiff School during construction activities. Second and third grades would be relocated to Ada Harris School. Second grade would return to Cardiff School in August 2020. Third grade would return to Cardiff School in August 2021. No interim portable classrooms would be installed during construction activities.

1.3 ENVIRONMENTAL IMPACTS

1.3.1 Impacts Considered Less Than Significant

The EIR identified various thresholds from the CEQA Guidelines among a number of environmental categories that would not be significantly impacted by the proposed project and therefore did not require mitigation. Impacts to the following environmental resources were found to be less than significant:

- Aesthetics
- Air Quality
- Energy
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation and Traffic

1.3.2 Potentially Significant Adverse Impacts That Can Be Mitigated, Avoided, or Substantially Lessened

Biological Resources, Cultural Resources, Geology and Soils, and Tribal Cultural Resources were topics identified as having potentially significant impacts that could be reduced, avoided, or substantially lessened through the implementation of a mitigation measure.

1.3.3 Unavoidable Significant Adverse Impacts

No environmental resource topics have been identified as having potentially significant impacts that could not be reduced, avoided, or substantially lessened to acceptable standards.

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2. Mitigation Monitoring Process

2.1 MITIGATION MONITORING PROGRAM ORGANIZATION

Overall MMRP management is the responsibility of the Cardiff School District. The District's technical consultants (CEQA consultant, noise analyst/specialist, etc.) may perform related monitoring tasks under the direction of the environmental monitor if they are contracted by the District.

2.2 CARDIFF SCHOOL DISTRICT

As the lead agency, the District is responsible for the review of all monitoring reports, enforcement actions, and document disposition. The District will rely on information provided by individual monitors (e.g., CEQA consultant, noise analyst/specialist) as accurate and up to date, and will field check mitigation measure status, as required.

2.3 MITIGATION MONITORING TEAM

The mitigation monitoring team, consisting of the designated District Project Manager and Technical Consultants (CEQA consultant and noise analyst/specialist), are responsible for monitoring implementation and compliance with all adopted mitigation measures and conditions of approval. A major portion of the team's work is in-field monitoring and compliance report preparation. Implementation disputes are brought to the District's designated Project Manager.

2.3.1 Monitoring Team

The following summarizes key positions in the MMRP and their respective functions:

- **District Project Manager:** Responsible for coordination of mitigation monitoring team, technical consultants, report preparation, and overall program administration and document/report clearinghouse.
- **Construction Contractor:** Responsible for coordination of mitigation monitoring team; technical consultants; report preparation; and implementing the monitoring program, including overall program administration, document/report clearinghouse, and first phase of dispute resolution.
- **Technical Consultants:** Responsible for monitoring in respective areas of expertise (CEQA consultant, project engineer, noise analyst/specialist). Report directly to the District Project Manager.

2.3.2 Recognized Experts

The use of recognized experts on the monitoring team is required to ensure compliance with scientific and engineering mitigation measures. The mitigation monitoring team's recognized experts assess compliance with

required mitigation measures, and recognized experts from responsible agencies consult with the District's designated Project Manager regarding disputes.

2.4 ARBITRATION RESOLUTION

If the mitigation monitor determines that a mitigation measure, in the opinion of the monitor, has not been implemented or has not been implemented correctly, the problem will be brought before the District's Project Manager for resolution. The decision of the Project Manager is final unless appealed to the District's Superintendent. The Project Manager will have the authority to issue stop-work orders until the dispute is resolved.

2.5 ENFORCEMENT

Public agencies may enforce conditions of approval through their existing police power, using stop-work orders, fines, infraction citations, or in some cases, notice of violation for tax purposes.

3. Mitigation Monitoring Requirements

3.1 PREMONITORING MEETING

A premonitoring meeting will be scheduled to review mitigation measures, implementation requirements, schedule conformance, and mitigation monitoring team responsibilities.

3.2 CATEGORIZED MITIGATION MEASURES/TABLE

Table 1, *Mitigation Monitoring Requirements*, identifies the environmental impact, specific mitigation measure, schedule, and responsible monitor. The mitigation table will serve as the basis for scheduling the implementation of and compliance with the mitigation measure.

3.3 IN-FIELD MONITORING

Project monitors and technical consultants shall exercise caution and professional practices at all times when monitoring the implementation of the mitigation measure. Protective wear (e.g., hard hat, glasses) shall be worn at all times in construction areas. Injuries shall be immediately reported to the designated District Project Manager.

3.4 COORDINATION WITH CONTRACTORS

The District Project Manager is responsible for coordination with contractors and for contractor completion of required mitigation measures.

3. Mitigation Monitoring Requirements

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3. Mitigation Monitoring Requirements

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
BIOLOGICAL RESOURCES					
BIO-1	A preconstruction nesting bird survey shall be conducted by a qualified biologist (i.e., one with experience conducting nesting bird surveys) to ensure potential impacts to nesting bird species do not occur during the breeding season. The survey shall comply with the conditions in the MBTA and California Fish and Game Code with methods accepted by the US Fish and Wildlife Service and the California Department of Fish and Wildlife to protect active bird/raptor nests. To the extent feasible, vegetation/tree clearing shall take place outside the general avian breeding season (February 1 through August 31). If vegetation clearing and/or tree removal cannot occur outside the general avian breeding season, then a preconstruction survey for avian nesting shall be conducted by a qualified biologist on the project site and areas within 500 feet of the site, within seven calendar days prior to the start of construction. If the biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. If the biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the biologist shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified biologist: work may proceed if it is (1) at least 500 feet from raptor nests; (2) at least 300 feet from federal- or state-listed bird species' nests; and (3) at least 100 feet from nonlisted bird species' nests. Encroachment into the buffer area around a known nest shall	Qualified Biologist	Seven calendar days prior to start of construction	District	

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	only be allowed if the biologist determines that the proposed activity would not disturb the occupants of the nest. A qualified biologist shall conspicuously mark the buffer so that vegetation clearing and/or tree removal/trimming does not encroach into the buffer until the nest is no longer active (i.e., the nestlings fledge, the nest fails, or the nest is abandoned, as determined by a qualified biologist). All recommendations provided by the biologist shall be complied with.				
BIO-2	No less than 7 days and no more than 14 days prior to beginning ground disturbance and/or demolition, a qualified wildlife biologist will conduct surveys for special-status bats on two days, during the appropriate time of day to maximize detectability, to determine if bat species are roosting near the work area. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, mistnetting, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat). The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required. If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. If roosts are identified in structures onsite and must be removed, the bats will be excluded from the roosting site before the facility is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed prior to implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., while females in maternity colonies are nursing young). If roosts must be removed, the project applicant shall provide	Qualified Biologist	Seven to fourteen calendar days prior to ground disturbance and/or demolition	District	

3. Mitigation Monitoring Requirements

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	bat houses constructed on- or off-site in locations and settings where bats would be likely to use them. If bat houses are required, the District shall consult with the wildlife biologist regarding the design, materials, locations, and settings of the bat houses.				
CULTURAL RESOURCES					
CUL-1	Prior to start of construction, the Cardiff School District shall retain a qualified historic architect or architectural historian (with experience in preparing rehabilitation plans) to assist in developing plans for the future use and function of the Little Brick Building. The District shall provide documentation to the public prior to application for a building permit that the plans for the building meet the requirements of *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings*.	Qualified Architect	Prior to the start of construction	District	
CUL-2	Prior to the start of construction, Cardiff School District shall retain a qualified archaeologist to monitor ground-disturbing activities. The archaeologist shall attend a meeting with the grading contractor, engineering geologist, grading engineer, and school authorities to establish a protocol for monitoring during all earth-disturbing activities. The meeting shall briefly summarize the prehistoric and historic use of the land, describe the types of cultural resources that may be encountered in the project area, and outline steps to follow in the event a discovery is made. The training shall be developed and presented by a registered professional archaeologist (RPA) and may run concurrently with other environmental training (biological, paleontology, safety training, etc.). The training may be videotaped or presented in an informational brochure for future use by field personnel not present at the start of the project phase. The RPA shall have the authority to stop grading or construction work within 25 feet of any discovery of potential historical or archaeological resources in order to test, analyze, and make a finding of	Qualified Archaeologist	Prior to the start of construction	District	

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	significance under Section 15064.5 of the California Environmental Quality Act Guidelines; develop a plan for recovery, analysis, report, and curation of the recoveries, as appropriate; and report to an accredited and permanent scientific institution, such as the South Central Coastal Information Center and San Diego Natural History Museum.				
CUL-3	Prior to the start of construction, the Cardiff School District shall retain a qualified paleontologist to determine if grading and excavation activities will encounter older Quaternary paralic deposits. If it is determined that older Quaternary paralic deposits will not be encountered, no additional work is required. If it is determined that construction could encounter older Quaternary deposits, the qualified paleontologist shall provide training to the construction staff, including but not limited to the grading contractor, engineering geologist, grading engineer, and school authorities to outline steps to follow in the event that a discovery is made. The paleontologist shall establish a protocol for monitoring during all earth-disturbing activities. The training shall be developed and presented by the paleontologist and may be videotaped or presented in an informal brochure for future use by field personnel not present at the start of the project phase. During construction, the paleontologist shall have the authority to halt construction activities to allow a reasonable amount of time to identify potential resources. If paleontological resources are discovered, the construction crew shall immediately cease work in the vicinity of the find. The paleontologist shall prepare a recovery plan in accordance with the Society of Vertebrate Paleontology guidelines (1996), which may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination, and a report of findings. Necessary and feasible recommendations in the recovery plan can also be provided by the lead agency and	Qualified Paleontologist	Prior to the start of construction	District	

3. Mitigation Monitoring Requirements

Table 1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	shall be implemented before construction activities resume at the site where the resources were discovered. Any discovered resources shall be curated with the facilities at the San Diego Natural History Museum.				
GEOLOGY AND SOILS					
GEO-1	The proposed project shall be designed and constructed in accordance with the geotechnical engineering recommendations presented in Construction Testing & Engineering's *Geotechnical Investigation Proposed Improvements to Cardiff School*, subsequent geotechnical studies prepared for the proposed project, and recommendations provided by the geotechnical engineer. These recommendations address site preparation and grading, excavation, fill placement and compaction, onsite materials, and foundation and slab design to ensure potential soil hazards are remedied and the project adheres to the California Building Standards Code.	Geotechnical Engineer	During construction	District	
TRIBAL CULTURAL RESOURCES					
TCR-1	In addition to implementing Mitigation Measure CUL-2, which requires a registered professional archaeologist (RPA) to monitor ground-disturbing activities for the discovery of potential historical or archaeological resources, the RPA shall also monitor for potential tribal cultural resources. If tribal cultural resources are recovered, the RPA shall contact the liaisons for the local Native American tribes, including their Native American monitors, to assess the find and as appropriate return the artifact to the appropriate tribe(s).	Qualified Archaeologist	During construction	District	

4. Mitigation Monitoring Reports

Mitigation monitoring reports are required to document compliance with the Mitigation Monitoring and Reporting Program and to document arbitration enforcement resolution. Specific reports include:

- Field Check Report
- Implementation Compliance Report
- Arbitration/Enforcement Report

4.1 FIELD CHECK REPORT

Field check reports are required to record in-field compliance and conditions.

4.2 IMPLEMENTATION COMPLIANCE REPORT

The Implementation Compliance Report (ICR) is prepared to document the implementation of mitigation measures, based on the information in Table 1. The report summarizes implementation compliance, including mitigation measures, date completed, and monitor's signature.

4.3 ARBITRATION/ENFORCEMENT REPORT

The Arbitration/Enforcement Report is prepared to document the outcome of arbitration review and becomes a portion of the ICR.

4. Mitigation Monitoring Reports

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5. Community Involvement

Monitoring reports are public documents and are available for review by the general public. Discrepancies in monitoring reports can be taken to the District Superintendent and/or their designee.

February 2019 | **Final Environmental Impact Report**





CARDIFF SCHOOL MODERNIZATION AND RECONSTRUCTION PROJECT

Cardiff School District

PLACEWORKS

Exhibit D

February 2019 | Final Environmental Impact Report
State Clearinghouse No. 2018051016

CARDIFF SCHOOL MODERNIZATION AND RECONSTRUCTION PROJECT

Cardiff School District

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1. Introduction

1.1 INTRODUCTION

This Final Environmental Impact Report (FEIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code §§ 21000 et seq.) and CEQA Guidelines (California Code of Regulations §§ 15000 et seq.).

According to the CEQA Guidelines, Section 15132, the FEIR shall consist of:

(a) The Draft Environmental Impact Report (DEIR) or a revision of the Draft.

(b) Comments and recommendations received on the DEIR either verbatim or in summary.

(c) A list of persons, organizations, and public agencies comments on the DEIR.

(d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.

(e) Any other information added by the Lead Agency.

This document contains responses to comments received on the DEIR for the Cardiff School Modernization and Reconstruction Project during the public review period, which began October 5, 2018, and closed November 19, 2018. This document has been prepared in accordance with CEQA and the CEQA Guidelines and represents the independent judgment of the Lead Agency. This document and the circulated DEIR comprise the FEIR, in accordance with CEQA Guidelines, Section 15132.

1.2 FORMAT OF THE FEIR

This document is organized as follows:

Section 1, Introduction. This section describes CEQA requirements and content of this FEIR.

Section 2, Response to Comments. This section provides a list of interested persons commenting on the DEIR, copies of comment letters received during the public review period, and individual responses to written comments. The District did not receive comments from any agencies on the project. To facilitate review of the responses, each comment letter has been reproduced and assigned a number R-1 through R-62 (for letters received from residents). Individual comments have been numbered for each letter, and the letter is followed by responses with references to the corresponding comment number.

The responses to comments contain material and revisions that will be added to the text of the FEIR. District staff has reviewed this material and determined that none of this material constitutes the type of

significant new information that requires recirculation of the DEIR for further public comment under CEQA Guidelines Section 15088.5. None of this new material indicates that the project will result in a significant new environmental impact not previously disclosed in the DEIR. Additionally, none of this material indicates that there would be a substantial increase in the severity of a previously identified environmental impact that will not be mitigated, or that there would be any of the other circumstances requiring recirculation described in Section 15088.5.

1.3 CEQA REQUIREMENTS REGARDING COMMENTS AND RESPONSES

CEQA Guidelines Section 15204 (a) outlines parameters for submitting comments, and reminds persons and public agencies that the focus of review and comment of DEIRs should be "on the sufficiency of the document in identifying and analyzing possible impacts on the environment and ways in which significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible. …CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR."

CEQA Guidelines Section 15204 (c) further advises, "Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence." Section 15204 (d) also states, "Each responsible agency and trustee agency shall focus its comments on environmental information germane to that agency's statutory responsibility." Section 15204 (e) states, "This section shall not be used to restrict the ability of reviewers to comment on the general adequacy of a document or of the lead agency to reject comments not focused as recommended by this section."

In accordance with CEQA, Public Resources Code Section 21092.5, copies of the written responses to public agencies will be forwarded to those agencies at least 10 days prior to certifying the environmental impact report. The responses will be forwarded with copies of this FEIR, as permitted by CEQA, and will conform to the legal standards established for response to comments on DEIRs.

2. Response to Comments

Section 15088 of the CEQA Guidelines requires the District, as the Lead Agency, to evaluate comments on environmental issues received from public agencies and interested parties who reviewed the DEIR and prepare written responses.

This section provides all written responses received on the DEIR and the District's responses to each comment.

Comment letters and specific comments are given letters and numbers for reference purposes. Where sections of the DEIR are excerpted in this document, the sections are shown indented. Changes to the DEIR text are shown in <u>underlined text</u> for additions and ~~strikeout~~ for deletions.

The following is a list of comments on the DEIR during the public review period.

Number Reference	Commenting Person/Agency	Date of Comment	Page No.
Residents			
R1	Annie and Justin Hawkins	November 4, 2018	2-15
R2	Renee Hilton	November 4, 2018	2-19
R3	Kevin Mulhern	November 4, 2018	2-23
R4	Dennis Reusch	November 4, 2018	2-27
R5	Kyle Gerrity	November 5, 2018	2-31
R6	Gary Gidlow	November 5, 2018	2-35
R7	Rod Goodson	November 6, 2018	2-39
R8	Sally Nelson	November 5, 2018	2-43
R9	Marla Gidlow	November 6, 2018	2-47
R10	Barbara Rodgers	November 8, 2018	2-51
R11	Juliana Risner	November 12, 2018	2-55
R12	Kay Moody	November 13, 2018	2-59
R13	Julie Fairchild	November 15, 2018	2-63
R14	Len Harvey	November 15, 2018	2-67
R15	George Hejduk	November 15, 2018	2-71
R16	Siena Randall	November 15, 2018	2-77
R17	Brett Farrow	November 16, 2018	2-81
R18	Karen Kavan	November 16, 2018	2-95
R19	Justine Nielson	November 16, 2018	2-99
R20	Greta Ott	November 16, 2018	2-127
R21	Julie Parker	November 16, 2018	2-131
R22	Carolyn Van Lear	November 16, 2018	2-135
R23	Jill Vinson	November 16, 2018	2-139
R24	Mark Whitehouse	November 16, 2018	2-143

2. Response to Comments

Number Reference	Commenting Person/Agency	Date of Comment	Page No.
R25	J. Barry	November 17, 2018	2-147
R26	Dave Clark	November 17, 2018	2-151
R27	Russell Davis	November 17, 2018	2-155
R28	Rayn Garrett	November 17, 2018	2-159
R29	Kari Hamilton	November 17, 2018	2-163
R30	Eleanor Musick	November 17, 2018	2-167
R31	Joy Newcomer	November 17, 2018	2-209
R32	Ann and Nick Stahl	November 17, 2018	2-213
R33	Christa Stone	November 17, 2018	2-217
R34	Daniel Littrell	November 18, 2018	2-221
R35	Judith Ogata	November 18, 2018	2-235
R36	Gary and Kathleen Schneiderman	November 18, 2018	2-239
R37	Barbara Stewart	November 18, 2018	2-247
R38	Leslie Tuchman	November 18, 2018	2-251
R39	Prem Bovie-Ware	November 19, 2018	2-257
R40	Jon Cohen	November 19, 2018	2-265
R41	Jeff and Roxanne Goggin	November 19, 2018	2-269
R42	Judy Hejduk	November 19, 2018	2-273
R43	Tiana Hejduk	November 19, 2018	2-277
R44	James Howell	November 19, 2018	2-283
R45	Karen Knight	November 19, 2018	2-287
R46	Niels Lund	November 19, 2018	2-291
R47	Thomas Newcomer	November 19, 2018	2-295
R48	Justine Nielsen	November 19, 2018	2-299
R49	Nancy Orr	November 19, 2018	2-319
R50	Cynthia Price	November 19, 2018	2-323
R51	Darren Quinn	November 19, 2018	2-327
R52	Lynn Sallans	November 19, 2018	2-331
R53	Gary and Kathleen Schneiderman	November 19, 2018	2-335
R54	Mridula Sherin	November 19, 2018	2-341
R55	Tricia Smith	November 18, 2018	2-345
R56	Shad Thielman	November 19, 2018	2-389
R57	Leslie Tuchman	November 18, 2018	2-393
R58	Ben Wall	November 20, 2018	2-399
R59	Rosemary Kimbal	November 27, 2018	2-403
R60	Richard Cottrell	November 30, 2018	2-409
R61	Raymond Elstad	November 30, 2018	2-415
R62	Patricia Frischer	November 30, 2018	2-419

2.1 MASTER RESPONSE FOR PROPOSED RECREATIONAL AREA/6(F)(3) LAND "CONVERSION" ISSUES

As thoroughly described in the Draft EIR, the primary purpose of the Project is to modernize and update the existing school for the benefit of the educational programs and facilities the District provides to its students. Detailed more thoroughly in Attachment 1 to this FEIR, the District went through a lengthy and highly detailed analysis of the school facilities and site safety needs for the students in the design process that ultimately developed the Project design analyzed by the Draft EIR (see Master Response 2.2). Throughout this process, the paramount concern for the District has been fulfillment of its primary mission, which is delivery of safe and modern school facilities for student learning with appropriate improvements for 21st century learning. This includes modernization and improvement to the existing playfield and other recreational areas the District makes available for public use when not in use for school purposes. As shown in Master Response 2.2, the District altered the proposed design concept multiple times in response to community input.

That being said, several of the comments raised concerns regarding the potential loss of all or a portion of the school field and play areas referred to as "George Berkich Park" to other school program or facilities use. Many of these comments appear to be based on a basic misunderstanding of the Project on two points: First, that the Project is taking away the nonschool hours public recreational use of the playfields, and second, that the portion of the school property referred to as George Berkich Park that was subject to a past federal grant agreement is somehow parkland not owned/controlled by the District, neither of which is accurate. These issues are not technically relevant environmental impact issues for CEQA purposes; however, since these comments were received multiple times, the District is clarifying them as part of this report. This Master Response explains the background and process followed by the District for the proposed Project recreational area improvements and the federal grant agreement.

2.1.1 Ownership and Legal Designation of Site

Cardiff School, originally called Cullen School, was founded in 1913 on land donated to the District by J. Frank Cullen. Subsequently the District acquired adjacent parcels of land and to this day legally owns 100% of all lands bordered by Montgomery Avenue, Mozart Avenue and San Elijo Avenue. The entire site is designated as an operational school site. None of the property is owned by the City of Encinitas, nor is it owned by the county, state, or federal government. It is not owned by the California State Parks or National Park Service, or otherwise designated legally as a park. There are no deed restrictions and/or easements on the property that identify the property as parkland on the title to the property. The portion of the property that consists of the school's play fields was named George Berkich Park by the District to honor George Berkich, a previous principal of the District.

Some of the play-field area of the District-owned property was identified as "outdoor recreation areas" per a "Project Agreement" entered into with the City of Encinitas and the National Park Service (NPS) in exchange for less than $160,000 from a Land and Water Conservation Fund grant obtained in 1993. The Office of Grants and Local Services (OGALS), a department within California State Parks, administers this agreement. As a condition of the agreement, the school's outdoor play areas are to remain as "outdoor

recreation area" in perpetuity when not in use for school purposes. A site plan referred to as a 6(f)3 identifies the boundary of the "outdoor recreation area" and was approved with the original agreement. However, this agreement and any other subsequent agreements have always recognized the District's ownership and the primary purpose of the property as an active school site, where public recreational use was and is restricted to use after school hours when the property is not needed for school purposes. As described further in the Draft EIR and this document, the District remains committed to making the property's playfield and other outdoor recreational areas available for public use when not in use by the school.

The Draft EIR summarizes the fact that NPS and OGALS recognize that for grants such as the one obtained by the District in 1993, changes in land use or development over time are likely—particularly in rapidly changing urban areas—and therefore they have created a specific process for making adjustments to the original project agreements for such grants. This process is identified in "Land and Water Conservation Fund Park Stewardship: A Guide to Permanent Operation and Maintenance"[1]. As described in greater detail below, the District is currently working with and following the explicit direction of OGALS and NPS in proposing a "conversion" that will result in an adjustment to the outdoor recreation area boundary that continues to preserve the public recreational use of portions of the property when they are not needed for school purposes as well as brings the City and District back into compliance with the terms of the original agreement.

The majority of the school's classrooms and the multi-purpose building were designed and constructed in four phases between 1949 and 1961. The architect was C.W. Dresser from the architecture firm, Sam W. Hammill. C. A. Larsen Construction Company constructed the majority of the classrooms in two phases. This work included 7 classrooms, a kindergarten, storage, toilets, janitorial office, and covered walkways. T. W. Thornburg Construction Company constructed one phase with two classrooms, a kindergarten, and a multi-purpose building, including a kitchen and serving area. Smith Construction Company constructed one phase that included four classrooms, an administration room, toilets, heater and utility rooms, and covered walkways. A building containing two laboratory/classrooms and a second building containing the library/learning resource center, school administration, health office, staff workroom, lounge and restroom facilities, and District offices were designed and constructed in the early 2000's. The architecture firm was HMC Architects, located in San Diego, and the builder was a company subsequently acquired by Balfour Beatty Construction.

2.1.2 Land and Water Conservation Fund Act Background

The Land and Water Conservation Fund (LWCF) Act was established by Congress in 1964 to fulfill a commitment to safeguard natural areas, water resources, and cultural heritage, and to provide recreation opportunities to all Americans. The fund invests earnings from offshore oil and gas leasing to help strengthen communities, preserve American history, and protect America's national endowment of lands and waters. The LWCF program can be divided into the "state side," which provides grants to state and local governments,

[1] Office of Grants and Local Services. Land and Water Conservation Fund (LWCF) Park Stewardship: A Guide to Permanent Operation and Maintenance. https://www.parks.ca.gov/pages/1008/files/LWCF_Park_Stewardship_Guide%2011.29.16_12.1.16.pdf

and the "federal side," which is used to acquire lands, waters, and interests therein necessary to achieve the natural, cultural, wildlife, and recreation management objectives of federal land management agencies.

Administered by the National Park Service in cooperation with states, Section 6(f)(3) of the LWCF Act discourages casual discards and conversions of state and local park and recreation facilities to other uses.

> SEC. 6(f)(3) No property acquired or developed with assistance under this section shall, without the approval of the Secretary, be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.

The LWCF program rules are firm but flexible. They recognize the likelihood that changes in land use or development may make some assisted areas obsolete over time, particularly in rapidly changing urban areas. At the same time, the law discourages casual "discards" of park and recreation facilities by ensuring that changes or "conversions from recreation use" will bear a cost—a cost that assures taxpayers that investments in the "national recreation estate" will not be squandered. The LWCF Act contains a clear and common sense provision to protect grant-assisted areas from conversions that the NPS has been granted substantial discretion to review and administer.

2.1.3 History of Cardiff School Site

In the early years following its incorporation, the District understands that the City of Encinitas lacked public park facilities for community use. Cardiff School District assisted the City in filling this void for the benefit of Encinitas by agreeing to make both Cardiff School buildings and outdoor field areas available for use by the community when not in use for school purposes. In 1991 the District and the City entered into a joint-use agreement whereby the District allowed City and public use of school facilities when not in use by the District. In exchange, the District and City partnered to seek financial assistance from the federal government in order to make improvements to the recreation areas. The City led an application process to obtain LWCF grant funds from the NPS as a way to help pay for the improvements.

In 1993, NPS approved a grant through the LWCF program to finance outdoor recreational improvements at Cardiff School on the playfields. The conditions of the grant identified in the project agreement with the National Park Service identify both the Cardiff School District and the City of Encinitas as co-signatories. The original boundary of the public use/playfield areas, required to remain as outdoor recreation area in perpetuity pursuant to the terms of the grant agreement, is shown in Figure 3-6, *Existing 6(f)(3) Boundary Map,* of the Draft EIR. As shown in the figure, the following uses are currently within the existing 6(f)(3) boundary: an underutilized baseball/multipurpose field, soccer field, dog park, playground apparatus, pollinator garden, and a passenger loading area, an entire school classroom building, and a pick-up/parking area that were constructed in the early 2000s. The outdoor recreation areas have been well maintained by the District since the time of the original grant agreement and are available for public use when not used by

2. Response to Comments

Cardiff School, as allowed by the LWCF Act and Civic Center Act (California Education Code §§ 38130 et seq.).

Although co-signatory to the LWCF agreement and owner of the land within the 6(f)3 boundary, the District was not the lead agency in maintaining the agreement with OGALS since the time of the original grant agreement in 1993. Communication with OGALS, to the extent it occurred, was maintained by the City of Encinitas, and the District has no record of the City sharing any communications with the District. The District understands communications from OGALS included a request to confirm compliance with the agreement and that OGALS does not have any documents from the City stating the property was out of compliance. Because the District does not appear to have been included in the communications with OGALS since the original grant agreement, the District did not have any records and did not maintain institutional memory of the agreement. As a result, in the early 2000s the District made improvements to a portion of the open recreation area without obtaining formal OGALS and NPS review and approval, causing the District and City to technically fall out of compliance with the terms of the original grant agreement. These improvements included a science and art lab building that includes restrooms necessary for District educational programs. This building is approximately 2,850 square feet. In addition, improvements were made to apparatus play areas. Some play equipment was relocated, along with new play equipment, to another part of the site so a vehicular drop-off/pick-up area could be added along Mozart Avenue.

It wasn't until early 2018 when the District was again planning improvements on the site for this Project that it became aware of the original grant agreement dating back to 1993. Upon learning that the District and City were not in compliance with the terms of the grant agreement, the District immediately contacted OGALS and notified them of the plans for this Project, and expressed the District's commitment to continue allowing public use of the school's outdoor recreational use areas when not needed for school purposes.

The following is a summary of the communication and interaction between the District and OGALS from the time the District learned of the Project Agreement with NPS until the date of this Final EIR.

- **February 2018:** NPS agreement documentation is provided to the District. The District immediately contacted OGALS. The District learns that the improvements made to the school site in the early 2000s caused both the District and the City of Encinitas to fall out of compliance with the NPS agreement and that the District's proposed Project would also be out of compliance. Prior to this date the District was only aware of a joint-use agreement with the City of Encinitas.

- **March 2018:** District meets with OGALS in Sacramento to discuss the agreement, the current condition of the site, and the District's proposed Project. OGALS informs the District of a specific process called a "conversion" that would allow the District to regain compliance for improvements made previously and also make the proposed changes. The conversion process is documented in the "Stewardship Guide" that OGALS has created specifically for this type of situation. OGALS informed the District that from the time of the original signing of the agreement until present day, OGALS had communicated directly with the City of Encinitas in order to verify continued compliance with the Project Agreement. The District further learned that the City had confirmed that no changes had ever been made to the site even though

changes had been made in 2002. The District has no records that the City had ever shared any of this communication and/or documentation with the District.

- **March 2018:** District updated the City of Encinitas on the meeting with OGALS and the status of the Project Agreement. The District informed the City that it was pursuing a conversion in order to regain and maintain compliance for the benefit of both the District and the City. The District and City have met in person and via telephone on multiple occasions since to discuss the project and process. The District has requested the City consider using some City land to help the City and District regain compliance. City staff has denied that request.

- **April–May 2018:** District decides to pursue an adjustment to the 6(f)3 boundary and coordinates with OGALS in the preparation of a preliminary proposal.

- **June 2018:** District meets again with OGALS in Sacramento. District presents multiple boundary adjustment scenarios. OGALS commented on the various scenarios. OGALS suggested the District submit a letter explaining the project and a boundary map that incorporated OGALS recommendations.

- **July 2018:** District submitted a draft letter for preliminary review to OGALS describing the history of the site and the District's proposal. It included a draft proposed 6(f)3 map with proposed adjustments to the boundary.

- **July 2018:** District met with OGALS at the site to discuss the project. OGALS conducted a site assessment. OGALS stated to the District that it is apparent the site is a school and that OGALS observations of the site support the District's proposal for a conversion. OGALS stated that the increased parking and inclusion of parking within the boundary was an enhancement. They stated they viewed onsite parking as safer than curbside parking and more parking allowed people outside walking distance to be able to enjoy the outdoor recreation area.

- **July 2018:** District submitted a final letter describing the history of the site and the District's proposal. It included a proposed 6(f)3 map with proposed adjustments to the boundary. The City of Encinitas was copied on this letter. This proposal allows the District to regain and maintain compliance for the benefit of both the District and the City completely within school property without any assistance from the City, which they had already communicated they were unwilling to do. The District's proposal does not require any City owned land or facilities, or otherwise impact any City operations.

- **August 2018:** District provided a public presentation of the OGALS proposal at the District's Board meeting.

- **August 2018:** OGALS submitted the District's information to NPS for preliminary review.

- **October 2018:** The District received a letter from OGALS stating that NPS preliminary review determined the land contained within the proposed conversion may be eligible for conversion as proposed and may also be eligible for a Categorical Exclusion.

- **November 2018–Current:** District continues to coordinate with OGALS on the preparation of requisite documents for final review and approval by NPS.

The District has worked closely with OGALS over this period of almost a year to prepare a proposal for a "conversion" in order to regain and maintain compliance as part of this project. This "conversion" proposes an adjustment to the 6(f)3 boundary that will occur entirely within District-owned property. The end result of the conversion process will be an amendment to the Project Agreement that identifies the conversion and includes a modified 6(f)3 boundary map, as further described in Attachment 2 to this FEIR.

As described above, the District has worked closely with OGALS to develop this modified map, and OGALS has expressed its concurrence with the proposed new 6(f)(3) boundary map and the Project by submitting the preliminary information to NPS for preliminary review. Per discussions between the District and OGALS, at the conclusion of the EIR process the District will submit a Proposal Description and Environmental Screening Form (PD/ESF) for final review and approval by NPS.

The purpose of a PD/ESF is to provide descriptive and environmental information about a variety of LCWF state assistance proposals submitted for NPS review and decision. The completed PD/ESF becomes part of the "federal administrative record" in accordance with the National Environmental Policy Act (NEPA) and its implementing regulations. The PD portion of the form captures administrative and descriptive details, enabling the NPS to understand the proposal. The ESF portion is designed for states and/or project sponsors to use while the LWCF proposal is under development. Upon completion, the ESF will indicate the resources that could be impacted by the proposal, enabling states and/or project sponsors to more accurately follow an appropriate pathway for NEPA analysis: 1) a recommendation for a Categorical Exclusion, 2) production of an Environmental Assessment, or 3) production of an Environmental Impact Statement. The ESF should also be used to document any previously conducted yet still viable environmental analysis if used for this federal proposal. The completed PD/ESF must be submitted as part of the State's LWCF proposal to NPS.

The District will remain available to provide NPS any additional documentation and/or information requested by OGALS and/or NPS.

2.1.4 Proposed Improvements

Improvements proposed within the 6(f)(3) boundary will require review and final approval by NPS. Changes to the existing 6(f)3 boundary may be categorized by NPS as conversions, which are defined as removing, taking, closing, or developing land within a 6(f)(3) boundary map and that conflict with protecting the integrity of the park experience, public recreation, and outdoor viewshed for the benefit of future generations.[2]

[2] The following changes, however, are not a conversion: a) replacement of an LWCF-funded facility with a different type of outdoor recreation facility, b) demolition or no replacement of an unusable LWCF-funded facility, or c) development of a natural and scenic outdoor open space area into a heavily built-out, outdoor recreation facility (California Department of Parks and Recreation Office of Grants and Local Services 2016). https://www.parks.ca.gov/pages/1008/files/LWCF_Park_Stewardship_Guide%2011.29.16_12.1.16.pdf

The proposed Project here is driven by the District's educational priorities, including a desire to first provide for increased safety and security of students and the current educational program at Cardiff School, but also to enhance the outdoor recreation area for the benefit of the community when such areas are made available for public use outside school hours. The project proposes a new building and outdoor PE- and recreation-supporting improvements within the 6(f)(3) boundary. As with the main objective of the proposed Project, which is to develop facilities that support the Cardiff School program, the intent of the proposed outdoor recreational improvements would be to support the existing school, but also the community's current public recreation needs at the site. The proposed improvements would not conflict with the integrity of the existing public recreation uses and are not intended to restrict or limit any current public uses. Several of the comments expressed a concern that the area of proposed conversion would be paved and used for parking. As described on Page 4-18 of the Draft EIR, the proposed Project would only enhance the existing outdoor recreational space and student and community use of it.

The following is a description of the District's proposed Project as it relates to the areas within the boundaries of the outdoor recreation area. Final details of these outdoor recreational uses may be modified in consultation with the NPS.

- The existing softball/baseball field is underutilized and would be converted to a soccer/multi-use field. The dirt softball/baseball infield is proposed to be covered with grass in support of soccer and other open field activities. The backstop would remain in order to accommodate softball and/or kickball activities, but the infield would be grass instead of dirt. This enhancement would add approximately 9,850 square feet of useable grass play surface to the open field areas.

- The playground apparatus area currently bifurcates the two grass fields and makes security and supervision difficult. The playground would be relocated (not removed) to the southwest corner of the site to improve the safety and supervision of children, and it would be the same size as the current apparatus area.

- A concrete terraced seating area would be built into the side of the slope adjacent to the outdoor plaza area. This type of seating currently does not exist. It would provide a large area for seating either for large group functions or for viewing games in the adjacent field areas. It would utilize a portion of the site that is currently not used due to the slope. An adjacent outdoor plaza area would be provided along the eastern edge of the field areas. This type of space currently does not exist. It would provide a large plaza for group gatherings adjacent to the field and assembly seating areas. Both the terraced seating and plaza areas would be immediately adjacent to the multi-purpose building and parking lot, making it convenient for visitors to the school for school functions and to the field areas for community events during nonschool hours. These two areas of the site have a total area of approximately 6,200 square feet.

- Picnic areas for public gathering are proposed in two locations. Approximately 9,000 square feet of area would be north of the multi-purpose building near Montgomery Avenue, west of the parking lot, and another approximately 13,000 square feet of area would be south of the apparatus play area near Mozart Avenue.

2. Response to Comments

- The project would increase the number of parking spaces in the parking lot along Montgomery Avenue from 28 spaces to 45 spaces. It would also increase the adjacent pick-up/drop-off area to allow approximately ten cars instead of two and allow this area to be used as additional public parking during nonschool hours. The increases in parking and the length and width of the pick-up/drop-off areas are in direct response to requirements of the City of Encinitas Planning and Fire Departments and the California Department of Education. The increases to these areas not only benefit the school by providing safer and better pick-up/drop off, but also benefit the greater community public use of the outdoor recreational areas by increasing the number of on-site parking spaces for community members who do not live within walking distance. The area bounded by the northern edge of the parking, southern edge of the pick-up/drop-off area, and both the east and west driveways total approximately 26,700 square feet, which is approximately 13,900 square feet more than the existing parking and pick-up/drop-off area, which is approximately 12,800 square feet.

- A parcel of land in the northwest corner of the site is currently used as a school garden. It is currently fenced off from the rest of the site and used exclusively for school programs. The District proposes to make this parcel accessible to the community when not in use by school programs and establish a community-based garden program that coexists with the existing school garden program. This parcel of land would add 8,350 net square feet to the outdoor recreation area.

- The multi-purpose building and a portion of the parking along Montgomery Avenue utilize approximately 12,950 square feet of the flat field and sloped berm areas within the 6(f)3 boundary. The addition of the parcel of land at the northwest corner of the site, the conversion of the dirt infield to grass, and the addition of assembly seating in an unusable berm area of the site total approximately 19,780 square feet. This results in an overall net gain in useable open space of approximately 6,830 square feet within this area.
- The project would also improve drainage to further reduce off-site runoff.

Because the proposed improvements would encroach on the existing 6(f)(3) boundary and include uses that are not related to outdoor recreation, i.e., school building, and because there are existing school buildings—constructed in the 2000s—that also encroach on the 6(f)(3) boundary, the District understands the project would require an adjustment to the existing 6(f)(3) boundary called a "conversion" in order to maintain compliance with the terms of the original grant agreement. Conversions generally require replacement of the land/areas removed from public outdoor recreation with new land/areas of "equal utility" and "value," subject to NPS review and approval in its discretion. Because the proposed Project improvements keep the open space of the park, increase visitor amenities, and improve visitor experience, the District considers the conversion to be reasonably equivalent uses consistent with 36 CFR 59.3(B)(3). As described above, OGALS has concurred with the District's current plans and has presented the proposal to NPS for preliminary review. The District received a letter from OGALS dated October 16, 2018, indicating a favorable response from NPS regarding the acceptance of land for conversion. In addition, NPS has indicated that the project may qualify for a Categorical Exclusion, which is consistent with information communicated to the District by OGALS.

As discussed in Chapter 4 of the DEIR and shown in Figure 4-6, *Proposed 6(f)(3) Boundary Map,* the project currently proposes modification of the existing 6(f)(3) boundary to eliminate new and existing buildings and remove nonrecreationally supported uses from the 6(f)(3) boundary. The proposed 6(f)(3) boundary adjustment would include two turf fields, outdoor assembly seating area, picnic areas, dog park, vegetable and pollinator gardens, play apparatus area, and parking along Montgomery Avenue. All new and existing buildings within the existing boundary would be excluded from the modified 6(f)(3) boundary. In response to OGALS's request that the boundary not bisect the parking lot, the District adjusted the boundary to include the entire parking lot and drop-off/pick-up area, which OGALS and NPS consider to be a supportive space for outdoor recreation areas. In order to maintain approximately the same square footage within the 6(f)3 boundary, the District has proposed a boundary adjustment at the hardcourt area. While this hardcourt area will not be contained within the 6(f)3, the District proposes to make this area available for community use. The net result of the proposed Project would increase the 6(f)(3) area by approximately 2,047 square feet, from approximately 173,173 square feet to approximately 175,220 square feet. Confirmation of the area will be determined upon final amendment to the Project Agreement with NPS.

2.1.4.1 ALTERNATIVE DESIGN WITHOUT BUILDINGS WITHIN THE 6(F)(3) BOUNDARY

As noted above, a classroom building and other school improvements already exist within the original 6(f)(3) boundary. Because these improvements exist and some will be upgraded as part of the proposed Project, and since the proposed improvements within the boundary are reasonably equivalent to the existing park, the District did not consider demolition of buildings for parkland as an alternative that is feasible. Figure 4-6 of the Draft EIR shows the change in boundary proposed. As shown on the figure, the shift in boundary removes the as-built improvements, includes the open space around the little brick building, and does include the school parking lot.

2.1.5 NEPA

The project consistency with the LWCF Agreement was addressed in Impact 5.8-2 of the DEIR and was not written off in the Initial Study. For the purposes of analyzing project consistency with the National Parks System Proposal Description and Environmental Screening Form requirements and determining the level of NEPA analysis that would be required as part of the proposed conversion, the project improvements were compared to parts A and B of the Environmental Screening Form, as shown in Tables 5.8-3 and 5.8-4 in Section 5.8 of the DEIR. As provided, with implementation of mitigation measures (as identified in their respective sections of the DEIR), the project would result in less than significant impacts. The proposed improvements would not exceed "minor impacts" or require further studies to determine their significance, and preparation of an EIS or EA would not be required. The District understands from its discussions with OGALS that the District's current proposed boundary map adjustment would qualify for a Categorical Exclusion, making it exempt from any further NEPA review.

2.2 MASTER RESPONSE TO CARDIFF SCHOOL SITE DESIGN PROCESS

The Cardiff School District conducted a very comprehensive planning process both during the development of the District's bond measure GG and the design of the Cardiff School Modernization and Reconstruction

2. Response to Comments

Project. The District has engaged the public and solicited input throughout the process via numerous community workshops and other public meetings. Teacher workshops were also conducted in order to gain insights from teachers and staff at the school. It was public input at the initial community workshops conducted prior to the beginning of design that created "Guiding Principles," which establish the foundation for the development of the project's design.

After Measure GG was approved by approximately 66 percent of the vote in November 2016, the District established a Bond Implementation Team to be its planning committee during the design phases. This committee consisted of two District board members, the District Superintendent, the Cardiff School Principal, a Cardiff School teacher, and a community member at large. Subsequent to the community workshop and teacher workshop, and in preparation for presentations to the District's Board, the Bond Implementation Team worked closely with the District's architect to study various design options and alternatives. Both the architects and the Bond Implementation Team used the Guiding Principles as the drivers of their design decisions throughout the process.

Numerous District Board presentations also provided for additional community input. Community input at the Board meeting where the initial site design was presented resulted in the project being completely redesigned. The District continued to respond to community input as it further developed the design. A summary of the process follows.

In June 2017, prior to beginning the design of the project, the District facilitated two workshops, one for the community and the other for teachers and staff. During the community workshop, the "Guiding Principles" were created.

- Create a Safe and Secure Environment
- Connect the School to the Community: Put Active Uses at the Edges
- Prioritize Green Space and Views. Provide Ample Space to Play
- Improve Traffic Flow and Safety for Pick-up
- Emphasize Sustainability and Environmentally Focused Design
- Prioritize Learning Spaces. Create Usable Outdoor Learning Environments, All Suited to their Place

Following the June workshops, the Bond Implementation Team began the conceptual design process with the architects. The architects initially presented conceptual bubble diagrams (see Exhibit 1 in Attachment 1) for how the site might be developed. Based on feedback from the Bond Implementation Team, these diagrams developed into various conceptual design options (see Exhibit 2 in Attachment 1). The Bond Implementation Team communicated to the architects which of the various elements from these design options they felt best supported the educational program while adhering to the Guiding Principles. The architects took these elements into consideration as they further developed the conceptual site design, and they presented the Bond Implementation Team with four schemes (see Exhibit 3 in Attachment 1). The Bond Implementation Team once again evaluated the schemes presented and again communicated to the architects which elements from the four schemes they felt best supported the educational program while adhering to the Guiding Principles.

The architects further developed the conceptual site design (see Exhibit 4 in Attachment 1), and it was presented at a community workshop and a teacher workshop in August 2017. While the feedback from the community, teachers, and staff overall was positive, some concerns were expressed. The District and architects noted these, and the District instructed the architects to look at ways to mitigate the concerns.

In September 2017 the District met with a few community members who requested a meeting to express concerns about the impact the proposed design might have on their views to the ocean. Again the District instructed the architects to look at ways to mitigate these concerns.

In October 2017, the conceptual site plan was presented to the District's Board for review (see Exhibit 5 in Attachment 1). This plan took steps to address concerns regarding views by adjusting the building designs and lowering the buildings on the site below the height of existing buildings. A large contingent of community members expressed concern about the conceptual design. The primary concern was the number of buildings between the existing administration building and the existing red brick building near the corner of Montgomery Avenue and San Elijo Avenue, the impact they would have on neighboring views, and the feeling that the campus was too spread out. Following this Board meeting, the District instructed the architects to look at modifying the design to address the community concerns.

At the November 2017 Board meeting and third community workshop, the architects presented a completely redesigned conceptual site plan (see Exhibit 6 in Attachment 1). In order to address the concerns of the majority of the community members, the conceptual site plan was redesigned with the kindergarten and extended day programs moved from the western side of the campus to the eastern edge of the campus. The District approved this redesign even though the compromise meant they would no longer have a direct view from the administration building to the kindergarten and extended day buildings, and these two program areas would not have direct access to the field areas. In addition, this compromise to the design resulted in increased construction costs.

At the December 2017 Board meeting, another revised conceptual site plan (see Exhibit 7 in Attachment 1) was presented that showed a reduction in the length of parking and refined building layout views. These revisions were made in direct response to community concerns regarding the length of the parking lot and pick-up/drop-off areas.

At the February 2018 Board meeting and fourth community workshop, an updated proposed site plan (see Exhibit 8 in Attachment 1) was presented. At the conclusion of the February Board meeting, confident that it had the support of the greater Cardiff community, the District moved forward with further development of the project.

The site plan continued to be developed as a result of coordination with governing agencies, including the City of Encinitas planning, zoning and other departments. The final schematic site plan was presented to the Cardiff School Board is shown in Exhibit 9 of Attachment 1.

2. Response to Comments

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LETTER R1 – Annie and Justin Hawkins (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Save George Berkich park land
2 messages

Anne Hawkins <[redacted]> Sun, Nov 4, 2018 at 3:35 PM
To: cardiffDEIR@cardiffschools.com

R1-1 Hello,
Both my husband and I strongly oppose the destruction of George Berkich Park as proposed by the Cardiff School District. We have lived in Cardiff for 25 years. My niece attended Cardiff Elementary. My sister and her husband are long time Cardiff residents.
All of us feel that we need all the open space we currently enjoy. Any plan that results in the lessening of open space is anti-Cardiff.
Please do not ruin our community. It's perfect just the way it is. That's why we all moved here decades ago and it's why we've stayed.
Thank you,
Annie and Justin Hawkins

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 12:01 PM
To: Tyree.Dorward@bbklaw.com

[Quoted text hidden]

2. Response to Comments

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R1. Response to Comments from Annie and Justin Hawkins, dated November 4, 2018.

R1-1 The commenters state that they are opposed to the proposed Project because open space is needed, and any plan that lessens open space is "anti-Cardiff."

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act lands on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R2 – Renee Hilton (2 pages)

Subject: FW: City of Encinitas: RE: Draft eir

From: Keith Goodsell
Sent: Tuesday, November 06, 2018 2:22 PM
To: Renee Hilton
Cc: Roy Sapau; Jennifer Campbell
Subject: City of Encinitas: RE: Draft eir

Good Afternoon Ms. Hilton,

Thank you for taking your time to share your concerns with us regarding this issue. The Mayor and City Council have received your message and I've forwarded it to our Development Services department for their review and consideration.

If you have any questions or other concerns, please feel free to contact me.

Very Respectfully,

KEITH GOODSELL
Executive Assistant to the Mayor
and City Council

505 South Vulcan Ave, Encinitas, CA 92024
760-633-2618 | kgoodsell@encinitasca.gov
www.encinitasca.gov

From: Renee Hilton [redacted]
Sent: Sunday, November 04, 2018 7:48 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov; Council Members
Subject: Draft eir

Please enter my formal response to your draft EIR.

R2-1 *I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing.*

Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.

Concerned resident,
Renee Hilton

1

2. Response to Comments

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Draft eir

2 messages

Renee Hilton <[redacted]> Sun, Nov 4, 2018 at 7:47 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

Please enter my formal response to your draft EIR.

I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing.

R2-2 *Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.*

Concerned resident,
Renee Hilton

Sent from my iPhone

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 12:00 PM
To: Tyree.Dorward@bbklaw.com

[Quoted text hidden]

R2. Response to Comments from Renee Hilton, dated November 4, 2018.

R2-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

The District agrees that open space is valuable and should be preserved. As discussed in Chapter 5.8 of the DEIR, the District has worked closely with the Office of Grant and Local Services to prepare a proposal for a "conversion" in order to regain and maintain compliance with the terms of the original Land and Water Conservation Fund Agreement and 6(f)(3) boundary on behalf of both the District and the City. The proposed Project would increase the 6(f)(3) area by 2,047 square feet, from 173,173 square feet to 175,220 square feet.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R2-2 This comment is a repeat of the comment provided in R2-1.

See Response to R2-1.

2. Response to Comments

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LETTER R3 – Kevin Mulhern (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff school plan
2 messages

Kevin Mulhern <[redacted]> Sun, Nov 4, 2018 at 7:39 PM
To: cardiffDEIR@cardiffschools.com

R3-1 I am strongly opposed to the plan to modify George Berkich Park that the Cardiff School District is currently proposing. I have reviewed the Land and Water Conservation Fund program. It clearly protects that land in perpetuity and the program isn't open to change by the school district. Please do not allow the boundary of the park to be exchanged for a parking lot. It will have a negative impact on Cardiff, future generations, and the environment. Has the school district given to consideration to the proximity of parking lots and vehicles to the classrooms? Have you addressed studies regarding air and noise pollution? As a parent, that concern is key.

Sincerely,

Kevin

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 12:00 PM
To: Tyree.Dorward@bbklaw.com

[Quoted text hidden]

2. Response to Comments

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R3. Response to Comments from Kevin Mulhern, dated November 4, 2018.

R3-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that the LWCF Program protects land in perpetuity. The commenter states that exchanging the park boundary for a parking lot would result in negative impacts on the environment and future generations. The commenter asks if the District has considered the proximity of parking lots and vehicles to classrooms, and studies regarding air and noise pollution.

The commenter is correct in that the terms of the original LWCF Program grant agreement are intended to protect, in perpetuity, public use of recreational areas when not in use for school purposes. As discussed in Section 5.8 of the DEIR, the District has worked closely with the Office of Grant and Local Services to prepare a proposal for a "conversion" in order to regain and maintain compliance with the Land and Water Conservation Fund Agreement and 6(f)(3) boundary on behalf of both the District and the City. The proposed Project would increase the 6(f)(3) area by 2,047 square feet, from 173,173 square feet to 175,220 square feet. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, OGALS has concurred with the District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval. Additionally, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

Regarding the proximity of parking lots and vehicles to classrooms, the proposed classrooms would be at a similar distance to the proposed parking improvements as existing conditions. The closest classroom is approximately 15 feet from the parking lot. The proposed improvements would result in construction of new classrooms at a similar or greater distance than existing conditions. See Sections 5.2, *Air Quality*, and 5.9, *Noise*, of the DEIR for discussion of impacts related to air and noise. Appendices 5.2-1 and 5.9-1 provide calculations for air pollutants and noise generation as a result of the proposed Project. The project would result in a less than significant impact to air quality and noise.

2. Response to Comments

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LETTER R4 – Dennis Reusch and Linda Walker (2 pages)

Subject: FW: City of Encinitas: RE: george berkich park

From: Keith Goodsell
Sent: Tuesday, November 06, 2018 2:22 PM
To: Dennis Reusch
Cc: Roy Sapau; Jennifer Campbell
Subject: City of Encinitas: RE: george berkich park

Good Afternoon Ms. Walker and Mr. Reusch,

Thank you for taking your time to share your concerns with us regarding this issue. The Mayor and City Council have received your message and I've forwarded it to our Development Services department for their review and consideration.

If you have any questions or other concerns, please feel free to contact me.

Very Respectfully,

KEITH GOODSELL
Executive Assistant to the Mayor
and City Council

505 South Vulcan Ave, Encinitas, CA 92024
760-633-2618 | kgoodsell@encinitasca.gov
www.encinitasca.gov

From: Dennis Reusch [redacted]
Sent: Sunday, November 04, 2018 1:00 PM
To: cardiffDEIR@cardiffschools.com; david_siegenthaler@nps.gov; Council Members
Subject: george berkich park

R4-1 *I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.*
Dennis Reusch
Linda Walker

1

2. Response to Comments

Cardiff DEIR <cardiffdeir@cardiffschools.com>

george berkich park
4 messages

Dennis Reusch <[redacted]> Sun, Nov 4, 2018 at 12:59 PM
To: cardiffDEIR@cardiffschools.com, david_siegenthaler@nps.gov, council@encinitasca.gov

R4-2 *I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.*
Dennis Reusch
Linda Walker

R4. Response to Comments from Dennis Reusch and Linda Walker, dated November 4, 2018.

R4-1 The commenters are opposed to the modification of George Berkich Park. The commenters state that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenters state that the Park boundary should not be exchanged for a parking lot.

Please see Master Response Section 2.1 to this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R4-2 This comment is a repeat of the comment provided in R4-1.

See response to R4-1.

2. Response to Comments

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LETTER R5 – Kyle Gerrity (2 pages)

Subject: FW: City of Encinitas: RE: Strong Concerns about Cardiff Elementary Expansion Plans

From: Keith Goodsell
Sent: Tuesday, November 06, 2018 2:22 PM
To: Kyle Gerrity
Cc: Roy Sapau; Jennifer Campbell
Subject: City of Encinitas: RE: Strong Concerns about Cardiff Elementary Expansion Plans

Good Afternoon Mr. Gerrity,

Thank you for taking your time to share your concerns with us regarding this issue. The Mayor and City Council have received your message and I've forwarded it to our Development Services department for their review and consideration.

If you have any questions or other concerns, please feel free to contact me.

Very Respectfully,

KEITH GOODSELL
Executive Assistant to the Mayor
and City Council

505 South Vulcan Ave, Encinitas, CA 92024
760-633-2618 | kgoodsell@encinitasca.gov
www.encinitasca.gov

From: Kyle Gerrity [redacted]
Sent: Monday, November 05, 2018 12:22 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov; Council Members
Subject: Strong Concerns about Cardiff Elementary Expansion Plans

To whom it may concern:

R5-1 I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.

R5-2 Further, I believe the loss of the unique, flat-roofed, mid-century architecture of the school will be a sad day for the community. Cardiff has an extremely limited number of civic or institutional structures, and the beauty of the casement windows, flat roof lines, and mid-century construction of the current Cardiff School will be disappointing to lose.

Thank you,

Kyle Gerrity

1

2. Response to Comments

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Strong Concerns about Cardiff Elementary Expansion Plans
2 messages

Kyle Gerrity <[redacted]> Mon, Nov 5, 2018 at 12:21 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

To whom it may concern:

R5-3 I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.

Further, I believe the loss of the unique, flat-roofed, mid-century architecture of the school will be a sad day for the community. Cardiff has an extremely limited number of civic or institutional structures, and the beauty of the casement windows, flat roof lines, and mid-century construction of the current Cardiff School will be disappointing to lose.

Thank you,

Kyle Gerrity

R5. Response to Comments from Kyle Gerrity, dated November 5, 2018.

R5-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R5-2 The commenter states that losing the unique, flat-roofed, mid-century architecture and casement windows of the school would be sad for the community. There is a limited number of institutional structures, and loss of casement windows, flat roof lines, and mid-century construction would be disappointing.

Please see Section 5.1, *Aesthetics*, of the DEIR, for discussion of project-related changes to visual character and quality of the site; the project would not result in a significant impact to visual character and quality of the site.

The Cardiff School campus buildings constructed before 1962 represent a set of modestly designed elementary school buildings united by an organic campus plan that was first developed in 1949 by the architect Samuel Wood Hamill. While related by function and used as school buildings, the structures were designed using an unremarkable version of International-style architecture, and it appears that due to cost considerations each phase of construction had to be designed around the available budget. The classroom buildings were constructed using different types and styles of fenestration to create the bands of windows on the north and south façades that embrace the horizontal emphasis of the International design aspect. While not so visible, the buildings had low-pitched gable, shed, and hip roof styles, depending on the dates of that building's construction. The original administration and kindergarten buildings were enlarged with the addition of classrooms, and the original pedestrian entrance of the school was abandoned when the new administration buildings were constructed in 2002.

Of the structures on the project site, only the Little Brick Building was identified as being historically significant (see DEIR Section 5.4, *Cultural Resources*); implementation of mitigation measure CUL-1 would provide documentation to the public prior to application for a building permit that the improvement plans for the Little Brick Building would meet the requirements of "The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings."

2. Response to Comments

R5-3 This comment is a repeat of the comments in R5-1 and R5-2.

See responses to R5-1 and R5-2.

LETTER R6 – Gary Gidlow (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

George Berkich Park
2 messages

[redacted] Mon, Nov 5, 2018 at 12:32 PM
To: cardiffDEIR@cardiffschools.com
Cc: [redacted]

R6-1 I am strongly opposed to the destruction of land at Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.
Very truly yours
Gary Gidlow
Cardiff, CA.92007

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 12:00 PM
To: Tyree.Dorward@bbklaw.com

[Quoted text hidden]

2. Response to Comments

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R6. Response to Comments Gary Gidlow, dated November 5, 2018.

R6-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R7 – Rod Goodson (2 pages)

Subject: FW: City of Encinitas: RE: Cardiff School Expansion Plan

From: Keith Goodsell
Sent: Tuesday, November 06, 2018 2:21 PM
To: Rod Goodson
Cc: Roy Sapau; Jennifer Campbell
Subject: City of Encinitas: RE: Cardiff School Expansion Plan

Good Afternoon Mr. Goodson,

Thank you for taking your time to share your concerns with us regarding this issue. The Mayor and City Council have received your message and I've forwarded it to our Development Services department for their review and consideration.

If you have any questions or other concerns, please feel free to contact me.

Very Respectfully,

KEITH GOODSELL
Executive Assistant to the Mayor
and City Council

505 South Vulcan Ave, Encinitas, CA 92024
760-633-2618 | kgoodsell@encinitasca.gov
www.encinitasca.gov

From: Rod Goodson [redacted]
Sent: Monday, November 05, 2018 6:06 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov; Council Members
Subject: Cardiff School Expansion Plan

To Whom it May Concern,

R7-1 *I am a Cardiff resident of over 25 years and have enjoyed using and observing the George Berkich park in my neighborhood. I think this park is a gem in Cardiff. I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.*

Sincerely yours,
Rod Goodson
[redacted]

1

2. Response to Comments

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff School Expansion Plan
1 message

Rod Goodson <rg[redacted]> Mon, Nov 5, 2018 at 6:05 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

To Whom it May Concern,

R7-2 *I am a Cardiff resident of over 25 years and have enjoyed using and observing the George Berkich park in my neighborhood. I think this park is a gem in Cardiff. I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.*

Sincerely yours,
Rod Goodson
r[redacted]t

R7. Response to Comments from Rod Goodson, dated November 5, 2018.

R7-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act lands 6(f)(3) boundary on the project site. As described in the Master Responses 2.1 and 2.2, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R7-2 This comment is a repeat of R7-1.

See response to R7-1.

2. Response to Comments

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LETTER R8 – Sally Nelson (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

George Berkich Park

2 messages

Sally Nelson <s[redacted]> Mon, Nov 5, 2018 at 11:46 AM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov

R8-1 *I knew George Berkich, my daughter attended Cardiff Elementary when he was the Principle. I supported the development of George Berkich Park to become parkland and it is currently protected parkland under a Land and Water Conservation Fund agreement. The agreement signed by the Cardiff School District, the City of Encinitas and the State of California promises that this land will be protected in perpetuity and remain available for recreational activity.*

R8-2 ***I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing.***

Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.

Sally J. Nelson, Ph.D.
Cardiff, Ca. 92007

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 12:00 PM
To: Tyree.Dorward@bbklaw.com

[Quoted text hidden]

2. Response to Comments

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R8. Response to Comments from Sally Nelson, dated November 5, 2018.

R8-1 The commenter states that George Berkich Park is protected under the LWCF Agreement which was signed by the District, the City of Encinitas, and the State of California, which protects the land and ensures it remains available for recreational activity.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R8-2 The commenter is opposed to the destruction of land at George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

The District does not propose to destroy land at George Berkich Park. The District has worked closely with the Office of Grant and Local Services to prepare a proposal for a "conversion" in order to regain and maintain compliance with the Land and Water Conservation Fund Agreement and 6(f)(3) boundary on behalf of both the District and the City. The proposed Project would increase the 6(f)(3) area by 2,047 square feet, from 173,173 square feet to 175,220 square feet. Please see Master Response in Section 2.1 of this FEIR. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R9 – Marla Gidlow (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff School District
2 messages

[redacted] Tue, Nov 6, 2018 at 9:44 AM
To: cardiffDEIR@cardiffschools.com
Cc: siegenthaler@nps.gov, council@encinitas.gov

R9-1 I am strongly opposed to the changes being proposed by Cardiff School District. Berkich Park needs to be a Park, and taking any space from it is unacceptable. In fact, as I understand it, it is totally against the Land and Water Conservation Fund program that was designed to ensure open space would be protected, supposedly in perpetuity. And to change part of the park to a Parking lot is in direct violation and I strongly oppose it,

Marla Gidlow

Cardiff, CA 92007

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 12:00 PM
To: Tyree.Dorward@bbklaw.com

[Quoted text hidden]

2. Response to Comments

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R9. Response to Comments from Marla Gidlow, dated November 6, 2018.

R9-1 The commenter is opposed to the modifications proposed by the District. The commenter states that taking any land from George Berkich Park is unacceptable, as it should remain a park. The commenter states that changing part of the park to a parking lot is in violation of the LWCF Program.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R10 – Barbara Rodgers (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Berkick Park
2 messages

Barbara Rodgers [redacted] Thu, Nov 8, 2018 at 1:34 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

R10-1 After living in a crowded city (San Francisco) all my life, i moved down to North County, San Diego in 1969. At the time, there was much open space, but as the years went on, many of the fields and trails got filled in with many houses, and concrete. There is not much open space left, and we, our government, should be preserving what little we have left. It seems that George Berkich in his wisdom left an open space by a school.
Not many school children these days get such a marvelous opportunity, to be able to see the ocean from their playing fields. We must preserve this open space in perpetuity, as he intended, Please, do not build a parking lot on this very special place.
Sincerely,
Barbara Rodgers
[redacted]
Cardiff, CA. 92007

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:59 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R10. Response to Comments from Barbara Rodgers, dated November 8, 2018.

R10-1 The commenter states that, over the years, open space has decreased, and that remaining areas of open space should be preserved. The commenter states that George Berkich Park should be preserved and that a parking lot should not be constructed.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R11 – Juliana Risner (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff Elementary School / George Berkich Park Draft EIR
2 messages

Juli Risner, Grounded [redacted] Mon, Nov 12, 2018 at 6:03 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

PUBLIC COMMENTS TO THE DRAFT EIR FOR CARDIFF ELEMENTARY SCHOOL / GEORGE BERKICH PARK

I am dismayed and strongly opposed to the proposed plans that the Cardiff School District is currently proposing which would destroy a portion of George Berkich Park. I am a resident of Cardiff and I walk to the park or alongside it multiple times a week. The park is used by so many people like our family throughout the year.

As many of you know from the very vocal feedback to other projects in Cardiff, open space is one of our most prized community resources. We're an outdoor-centric community. We love getting together with neighbors for ice cream socials, dog walks and exercise. As a city, the city council specifically set aside millions of dollars to acquire Pacific View, the Hall property and numerous parks because they know the value of open space to our community. Please don't let this be the exception. R11-1

This property was secured under the Land and Water Conservation Fund program specifically to ensure that at-risk open space would be protected in perpetuity. A parking lot is not equivalent to park space. And once you've paved it over, it's gone forever.

I am so excited and happy about the redevelopment of the school. But it should not be at the expense of the park. You can rebuild a premier elementary school without encroaching onto this lovely space and I urge you to do so.

Thank you for your time.

Juliana Risner

[redacted]

Cardiff, CA 92007

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:59 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R11. Response to Comments from Juliana Risner, dated November 12, 2018.

R11-1 The commenter is opposed to the project proposed by the District, which would modify a portion of George Berkich Park. The commenter states that open space is a prized community resource in Cardiff, and that the park is protected under the LWCF Program. The commenter states that a parking lot is not equivalent to park space. The commenter is supportive of the redevelopment of Cardiff School, but states that the redevelopment should not be at the expense of the park.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R12 – Kay Moody (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

George Berkich Park
2 messages

kay&john moody [redacted] Tue, Nov 13, 2018 at 8:43 PM
Reply-To: kay&john moody [redacted]
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitas.gov

I am a long time resident of Cardiff. We moved here in 1970. Over the years, my children attended Cardiff and Ada Harris Schools and used Cardiff School Park for baseball practice, soccer practice, and games for too many hours to count. It was a well used facility then, even before it was called George Berkich Park.

I think that taking away any portion of the park is a mistake. Drive by almost any afternoon and you will see many residents using this well loved area. You have little ones on the play equipment, kids practicing soccer, older folks just walking, families having picnics, and parents doing what they always do, waiting. George Berkich would be very proud to see so many familiar faces because he was a long time principal and knew everyone he served.

R12-1

In many ways, Cardiff is still a little town and many homes today belong to yesterday's students. I can't imagine them endorsing any plan to make the park smaller and the parking lot bigger. I know that every day mostly in the afternoon, there is a long line of parents waiting for their children. But, 20 minutes later, everyone is gone. No one is waiting for parking spaces. I also know the same scenario is repeated at Oak Crest, San Dieguito High School, Aviara Oaks Elementary, and every other school that has no buses. I know because I am a grandmother that is called on now and then and because I worked at several local schools. I don't see them making bigger parking lots. In Cardiff, I see parents walking, riding bikes and pushing carriages to get the children. Good alternatives for those who can. Safety issues can be addressed with staff supervision and parents having patience.

R12-2 Another question. I understood that the park itself was protected space. How can this agreement be overridden? I did read the proposal yesterday and even though I am an interested and involved resident, this was the first time I had heard of the many pieces to the remodel. Cardiff is not a big city. I think when major changes are being considered ALL
R12-3 taxpayers should at least be informed. Email contact would, I imagine, include most of the residents. The others could be contacted by mail. Honestly, I don't like just a few making decisions for so many. Several times in the proposal the words used are "viewed by the greater community as an enhancement". Since I am not included in that group, I wonder who is?

Yes, I love Cardiff School. It is a beautiful spot with a full on ocean view and wonderful weather. Children receive the base of their education from educators dedicated to excellence. George and his wife were both wonderful teachers and I
R12-4 am sure Ada Harris was too. There is history in Cardiff Schools and those of us lucky enough to live here want the excellence to continue. I voted for bringing the facility up-to-date but I did not vote to make the park smaller. As said in the proposal, it is the hub of the community, with a lot of residents using the facility. I would vote for bigger and better park facilities. I think the current number of students is about the same as it was in 1970s. Rebuilding where needed is understandable, but is bigger always better?

R12-5 The proposal talks of the neighbors that oppose their view being obstructed. That is not why I object and I don't like the infernce. I live about 100 yards from the fields on Lake Drive. Again, a facility that is always in use. It is another hub to the community through sports and play. Does Cardiff School really need a two story multi purpose room? Do we really need to treat neighbors so badly? I say this and also say I know no one involved in the dispute. I just wanted to put in my thoughts to the plan. I would be happy to talk further to anyone involved in this issue.

Sincerely,
Kay Moody
[redacted]

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:59 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R12. Response to Comments from Kay Moody, dated November 13, 2018.

R12-1 The commenter states that taking away a portion of the park is a mistake, as it is used by members of the community for various activities. The commenter states that residents of Cardiff, including those who have attended Cardiff School, would not support making the park smaller and enlarging the parking lot. The commenter states that other schools are not enlarging their parking lots, despite these schools also having long lines of parents waiting to pick up their children.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

As shown in Impact 5.10-4 of the DEIR (page 5.10-44), the proposed improvements to the parking lot would improve AM and PM student loading operations and reduce queueing on residential streets during these times as well as make pick-up/drop-off safer for students.

R12-2 The commenter asks how the agreement that protects the park can be overridden.

As discussed in Chapter 5.8 of the DEIR, the District has worked closely with the Office of Grant and Local Services to prepare a proposal for a "conversion" in order to regain and maintain compliance with the Land and Water Conservation Fund Agreement and 6(f)(3) boundary. The agreement allows for conversion of lands as proposed with the project on behalf of both the District and the City. The proposed Project would increase the 6(f)(3) area by 2,047 square feet, from 173,173 square feet to 175,220 square feet. Please see Master Response in Section 2.1 of this FEIR. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R12-3 The commenter states that she is an involved resident, and that she did not hear about various components of the proposed Project until recently. The commenter suggests that when major changes are being proposed, all taxpayers should be informed through email and/or mail.

A Notice of Preparation (NOP) was published in *The Daily Transcript* newspaper on May 8, 2018, in accordance with CEQA Guidelines Section 15082. The NOP and Initial Study were available for review and comment at the Cardiff School District Office (1888 Montgomery Avenue, Cardiff CA 92007), the Cardiff-by-the-Sea Branch Library (2081 Newcastle Avenue, Cardiff CA 92007), and on the District website (https://www.cardiffschools.com) from May 8, 2018, to June 6, 2018. Additionally, the Draft EIR was available for public review at the same locations, and was available for

public comment from October 5, 2018, through November 19, 2018. The District also underwent a lengthy design development process with numerous public meeting and opportunities for public input, further described in Attachment 1 of this FEIR and Master Response 2.2, above.

R12-4 The commenter states that she voted to update Cardiff School, and not to make the park smaller. The commenter states that park is used by many residents. The commenter deems that the number of students attending Cardiff School is approximately the same as it was in the 1970s, and that rebuilding where necessary is understandable.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes. The proposed Project would increase the 6(f)(3) area by 2,047 square feet, from 173,173 square feet to 175,220 square feet.

The project would result in an increase in one classroom and would increase capacity by only 22 seats (see page 4-14 of the DEIR). As discussed throughout the DEIR, the increase in capacity by one classroom would not result in significant impacts.

R12-5 The commenter states that the park is always in use, and asks if Cardiff School needs a two-story multipurpose building.

As discussed in Section 5.1, *Aesthetics*, of the DEIR, the multipurpose building would be 21.25 feet in height. Although private views are not protected, the project would not result in a significant impact to public views of scenic vistas, including the Pacific Ocean (see pages 5.1-15 through 5.1-21 of the DEIR). Additionally, the ground level of the proposed multipurpose building (referred to as Building L in Figure 4-2 of the DEIR) would be approximately 9 feet below the existing administrative building (Building E). As a result, the top of the new Building L would appear to be approximately 2 feet below the existing administrative building (see page 5.1-22 of the DEIR).

LETTER R13 – Julie Fairchild (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Please Don't Let Them Take our Open Protected Land

2 messages

Julie Fairchild [redacted] Thu, Nov 15, 2018 at 10:47 AM
To: cardiffDEIR@cardiffschools.com

To Those Drafting the Environmental Impact Report,

R13-1 My great grandfather, one of 27 founding members of the Sierra Club and on the original Board of Directors, would want the George Berkich Park to remain as it currently is, as do I. One of the original purposes of the Sierra Club was to preserve the scenic resources of the U.S., which is what I assume you all want as well. What is proposed and being pushed through is not a boundary line 'adjustment' as presented. It is a boundary removal. I, like many of my neighbors, voted for the measure to repair and rebuild Cardiff Elementary School. But, now they are going beyond what they were given permission to do, by building new buildings on land they never had. Our park is currently protected under a Land and Water Conservation Fund agreement. There was nothing in measure GG saying they were going to acquire additional land and take over part of our Cardiff Park.

R13-2 I understand the school remodel, but the current footprint is more than large enough to accommodate this remodel without taking away nearly 25% of the community's park. We have had family attend the school and it truly is a wonderful school. Everyone I knew there felt the footprint was more than adequate....until developers, builders, and those with personal interests became involved and wanted to take more. How did this project go from a school remodel to taking away a huge piece of what should be our protected parkland and open space for the community? Was there a misunderstanding by the school board or Bond Mgr. from the beginning as to what is school property and what is protected parkland for the community's use (which was established decades ago)?

R13-3 Both my mom and I live in Cardiff (pay Cardiff property taxes) and were drawn to Cardiff because of the park. We enjoy walking it's path, seeing the view at sunset from the benches, and driving by it daily without having buildings clutter it. The letter the Bond Manager sent in favor of removing boundaries seemed a bit deceiving and many of it's points were untrue. There were not just a 'few' in the community that were against losing our beautiful parkland, the meeting room was overflowing. Again, many of those in the room had voted for the measure and all were happy for the school remodel. However, once we learned the board was going beyond what was stated in the measure and railroading their own plans through, we spoke up. We had hoped to work together on a win win for all. Instead, all of our input was ignored and disregarded. To tell us we will get free picnic tables in the corners of the park in exchange for our land is insulting. Have these people taking our land ever been to the park? After school hours, we enjoy walking and playing on the sports fields (not sitting in the corners).

R13-4 This park is a very unique jewel with it's majestic trees, open land and adjacent open view of the ocean. The other park referred to in correspondence is a few feet from the busy I-5 freeway. It is very beautiful, but it certainly is hard to compare the two areas and what makes George Berkich Park so special.

Looking at history, we know that once we allow this to happen, more land with be taken in the future. It may not be for many years, but it will happen once this precedent is set where our land is stolen away unnecessarily. This open land truly makes Cardiff by the Sea a special place for people to live and visit.

Thank you for your time and your consideration for keeping our present boundaries,
Julie Fairchild

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:59 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R13. Response to Comments from Julie Fairchild, dated November 15, 2018.

R13-1 The commenter states that the proposed boundary line adjustment is a boundary removal. The commenter voted to repair and rebuild Cardiff School, but states that the District is proposing to construct new buildings on land they do not have. The commenter states that the park is protected under the LWCF Agreement, and that Measure GG did not mention that additional park land would be acquired for the proposed Project.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes, and the land proposed for conversion and construction has been under District ownership since before the LWCF Agreement.

R13-2 The commenter states that the current footprint of Cardiff School is more than large enough to accommodate the proposed Project without taking almost 25 percent of the park. The commenter asks how the proposed Project went from remodeling a school to taking away parkland and community open space. The commenter also asks if there was a misunderstanding by the school board or Bond Manager about what is school property and protected park land.

Please see Master Response in Section 2.1 of this FEIR. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The comment that the proposed Project would take almost 25 percent of park is speculative and unsubstantiated. The proposed Project would increase the 6(f)(3) area by 2,047 square feet, from 173,173 square feet to 175,220 square feet.

Additionally, the District and school board have a clear understanding of the limits of the 6(f)(3) boundary and LWCF lands. As discussed in Chapter 5.8 of the DEIR, the District has worked closely with the Office of Grant and Local Services to prepare a proposal for a "conversion" in order to regain and maintain compliance with the Land and Water Conservation Fund Agreement and 6(f)(3) boundary on behalf of both the District and the City.

R13-3 The commenter states that she and her mother were drawn to Cardiff because of the park, and states that the letter sent by the Bond Manager in favor of removing park boundaries was deceiving. The commenter states that once community members learned that the measure they all voted on would include changing the park boundaries, they were no longer in favor.

2. Response to Comments

Commenter expresses an opinion regarding a bond measure vote. The issue raised does not affect the analysis in the EIR, and no further response is necessary.

R13-4 The commenter states that George Berkich Park is unique in comparison to the other park that was referred to, which is a few feet away from the I-5 freeway. The commenter states that if taking land is allowed now, then more land will be taken in the future.

The commenter is not clear which "other park" they are referring to; however, it is assumed they are referring to Encinitas Community Park. Additionally, the commenter's assertions that land will be taken in the future are speculative, and do not address the adequacy of the DEIR as it relates to CEQA. The District owns the project site and the proposed Project would not take land away; the 6(f)(3) area would be expanded by 2,047 square feet from its current boundary. The grass playfield and asphalt play court portion of the site would be reconstructed to accommodate the proposed school building improvements.

LETTER R14 – Len Harvey (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff school designe
2 messages

leonard harvey [redacted] Thu, Nov 15, 2018 at 4:54 PM
To: CardiffDEIR@cardiffschools.com

R14-1 I've seen the design of the cardiff school remodel and i like it .... it most definitely fits well with the character of the community. As a community member i think it'll be nothing but a great use for the space .
Thanks, Len Harvey.
Sent from my iPhone

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:58 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R14. Response to Comments from Len Harvey, dated November 15, 2018.

R14-1 The commenter believes that the proposed design for the project fits well with the character of the community, and that it is a great use of space.

The analysis of the DEIR Section 5.1, *Aesthetics*, is in agreement with the commenter's assertion. The commenter does not address the adequacy of the EIR; therefore, no further response is required.

2. Response to Comments

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LETTER R15 – George Hejduk (2 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff Elementary School Reconstruction/ Draft EIR
2 messages

Tiana Hejduk [redacted] Thu, Nov 15, 2018 at 5:14 PM
To: CardiffDEIR@cardiffschools.com

R15-1 Reviewing the Cardiff Elementary School District letter to the California State Parks Office of Grants and Local Services concerning the planned "major reconstruction" of the Cardiff Elementary K-3 school as passed in November of 2016 by Measure GG, a 22 million dollar bond initiative, the following is concluded.

Looking over the contents of Measure GG to renovate and/or replace current facilities and surrounding areas there is NO mention that any portion of the current area of George Berkich Park would be confiscated and not replaced to complete the project as it was passed by voters. The hidden facts are there is no mention that 12% or 24,000 square feet of the park and an almost total reconstruction of the school was to take place. If this had been revealed before the vote to include community discussion it is almost certain that the measure would have failed in receiving the needed voter percentage.

R15-2 No matter how the Cardiff School District Board of Trustees and their hired planning associates portrays the replacing and renovation of the current K-3 campus building and landscaping there is a reality to be looked at. A revised design, including the relocation of a planned kindergarten complex from the now park acreage to be replaced by a new multi-purpose room to include a reconfigured drop off and pick up paved tract in an adjacent portion of the park. When confronted with this "slight of hand" checker board movement as to whether or not the current George Berkich Park square footage would still be affected it was revealed that take-a-way would remain the same. This is unconscionable and unacceptable.

With the elimination of the initial kindergarten design it appeared that the original park square footage was to be preserved. Obviously this was not the case!

R15-3 An interesting fact was that when the Cardiff School District allowed for the few poorly publicized community input sessions, the old school design was never placed side by side with the current set up. It would have revealed the park square footage elimination.

R15-4 There is no reason why the new design plans could not have stayed within the current school area. No one is against the proclamation of lofty goals to modernized and enhance learning environments and safety but at the cost involving the seizure of park land to complete such is at best disingenuous and illegal. And let's be honest, although the Cardiff School District claims they were unaware of the park land being preserved, they have already built on this land illegally with no reprocussions.

R15-5 The current plan still blocks neighbors ocean views, before and after school traffic is not solved by the new design due to narrow streets and George Berkich Park is reduced in size.

R15-6 How can it be stated by the bond project manager that a majority now approve of this plan? That is his biased oppinion at the cost of tax payers dollars. If the Cardiff School Board had done its homework in regards to the park land and had been honest in its Measure GG presentation this situation would never had occurred.

No matter how the Cardiff School District has presented their elaborate reconstruction report the "bottom line" is that they have stolen a significant portion of George Berkich Park, put away in perpetuity, never to be replaced.

The school district, no matter how spun has evidently been intent upon out lawyering, out spending (already 3+ million dollars over budget) and more prominently outlasting any opposition no matter how they minimize that group.

Please don't allow them to finalize this ruse!

Thank you for your time.

Sincerely,

George D. Hejduk

2. Response to Comments

Retired Educator
Cardiff Resident for 42 years

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:58 AM
To: [redacted]

[Quoted text hidden]

R15. Response to Comments from George Hejduk, dated November 15, 2018.

R15-1 The commenter states that Measure GG does not mention that any portion of George Berkich Park would be taken and not replaced in order to construct the proposed Project. The commenter states that if Measure GG mentioned that 12 percent of the park and an almost total reconstruction of the school were to occur, the measure would have failed to pass.

Commenter expresses an opinion regarding a bond measure vote. The issue raised does not affect the analysis in the EIR, and no further response is necessary. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The purpose of an Environmental Impact Report is to address the impact that a proposed Project has on the environment. It is not to review or address a previous bond measure. It is not clear where the commenter derived that 12 percent of the park was to be reconstructed. The proposed changes to the existing open space are a result of reconfigured classroom buildings and subsequent impacts to the existing layout of grass playfield and hardcourt play areas. Please see text from the Measure GG Ballot text, which identifies reconstruction of classroom facilities and play areas:

Projects for Cardiff School include:

- Upgrade and improve playgrounds and playfields for school and community use.
- Resurface, repair, and/or replace paved surfaces, play court areas, turf, and other grounds to eliminate safety hazards and improve outside instructional areas.
- Replace aging temporary portable classrooms with new classrooms.
- Replace outdated classrooms that are now between 55 and 65 years old with new classrooms.

R15-2 The commenter states that when the revised design was released, it was revealed that the square footage of the park would remain the same. The commenter states that the elimination of the initial kindergarten design appeared as though the original park square footage was to be preserved; however, the commenter states that this is not the case.

The District prepared multiple iterations of the proposed site plan prior to developing the current proposed Project plans; the District underwent a lengthy design development process with numerous public meeting and opportunities for public input, as described in Section 2.2 and Attachment 1 of this FEIR. Several alternative site

designs were considered and rejected as infeasible, as shown on Page 7-3 of the Draft EIR. The site development information was available for public review as a result of the community outreach meetings and public input process.

R15-3 The commenter states that the previous design was not placed side by side with the current design during community input sessions, which would have revealed the elimination of park square footage.

As is typical with community outreach for proposed Projects, previous versions of site plans are not provided in the EIR because the site plans were revised based on previous input. Providing both site plans would provide confusion as to which plan was the most recent. See also Master Response 2.2 and response to comment R15-2.

R15-4 The commenter believes that there is no reason why the proposed designs could not be placed within the current school footprint. The commenter states that no one is against the modernization of the school; however, the commenter states that seizure of park land to complete the proposed Project is illegal. The commenter states that the District has already taken park land without facing repercussions.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R15-5 The commenter deems that the current plan blocks neighbors' ocean views, and that traffic, before and after school, is not resolved by the proposed design due to narrow streets and reduced park size.

CEQA is generally concerned with effects on the environment, not effects on persons or businesses. An adverse effect on scenic views enjoyed by the public is significant; however, obstruction of private views is not a significant impact. *Ocean View Estates Homeowners Ass'n v. Montecito Water Dist.* (2004) 116 CA4th 396, 402. DEIR Impact 5.1-1 adequately analyzes the project's impact on views and concludes that the proposed Project would not block public views of the ocean; existing public views of the ocean would be maintained.

See Section 5.10, *Transportation and Traffic*, of the DEIR for discussion of traffic impacts as a result of the proposed Project. The project would not result in a significant traffic impact. The comment related to narrow streets is unsubstantiated. The City of Encinitas General Plan identifies Montgomery and Mozart Avenues as two-lane undivided roadways that can readily accommodate both directions of traffic.

See response to R15-1 for discussion of changes to play facilities at the site.

R15-6 The commenter asks how the bond manager can state that the plan is approved by a majority. The commenter states that if the Board had been honest in the Measure GG presentation about the park, this situation would have not occurred. The commenter states that park land would be taken away and never replaced. The commenter states that the District intends on using its resources to overcome opposition.

It is not clear where the commenter derived the statement that the bond project manager states a majority approve of the plan. The current version of the site plan has been developed with input from federal, state, and local agencies, as well as with input from the community via public outreach.

It is not clear what the commenter means by stating the Board has been dishonest in its Measure GG presentation. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R16 – Siena Randall (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Rebuild of Cardiff School
2 messages

Siena Randall [redacted] Thu, Nov 15, 2018 at 6:09 PM
To: cardiffDEIR@cardiffschools.com

To whom it may concern,

R16-1 As a lifelong citizen of the Cardiff community, parent and alum of Cardiff School District I strongly support the rebuild of Cardiff School. The District gathered much input from community members, parents, teachers and staff prior to the passing of Measure GG in 2016 and throughout the different stages of design. As a result, the master plan for the Cardiff School campus significantly improves safety and security for students, staff & community, better supports the educational program and provides enhanced recreational areas for community use. The District continues to keep the community involved and aware of developments and progress related to the project. I applaud the District for all of the hard work being taken on to provide a safer and enhanced learning environment for the students of the future generations.

Respectfully,
Siena Randall

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:58 AM
To: [redacted]

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2. Response to Comments

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R16. Response to Comments from Siena Randall, dated November 15, 2018.

R16-1 The commenter supports the proposed Project, stating that the District has gathered input from the community at various stages, and has kept the community involved and aware of the progress. The commenter opines that the proposed plan improves safety, supports the educational program, and provides enhanced recreational areas for community use.

The District appreciates the supportive response of the project. The commenter does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R17 – Brett Farrow (10 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff School DEIR
2 messages

Brett Farrow [redacted] Fri, Nov 16, 2018 at 3:25 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov

To Whom It May Concern;

I wish to add my voice to those who are very concerned about the impact of the proposed demolition and reconstruction of Cardiff Elementary School on the community.

To begin with I live across the street from the school and have one daughter in the school district attending Ada Harris Elementary. For years I have been active in the school's betterment including assisting in the creation of a native pollinator garden, school vegetable garden, community dog park and leading the successful addition of approximately 800 linear feet of sidewalk along the school's western edge. This provided both a safe route for parents, students and the community to get to school, and, it also greatly increased the number of available on-street parking spaces.

R17-1

With this in mind I find it disturbing that the concerns raised by members of the community are diminished and described as "a few local neighbors still oppose the project because the new multi-purpose building impacts their view to the ocean". This in essence characterizes the callous tone and self-righteous approach that epitomizes this effort since the very beginning.

My view will not be impacted and may even be slightly improved with the proposed project, but, the issue of the permanent loss of open space and park land remains. Other community members whose views are not impacted clearly feel the same way.

R17-2

And, I also think it is a very legitimate concern that many long time residents and property owners are going to lose their beautiful ocean view. This is unconscionable when it is in truth very easy to relocate the multi-purpose room to within the school's footprint by either reducing the proposed parking lot or repurposing and modifying the existing school district offices.

Additionally, the proposed plan will greatly increase vehicle traffic on residential streets mostly by expanding the parking lot at Montgomery Avenue. It is not needed and inappropriately located. Greater emphasis should be made to increase on-street parking instead of paving more areas of the school and park. Again, this change will not impact my street but it does represents another legitimate concern that has been dismissed.

R17-3

The assertions that the Encinitas Community Park is a suitable replacement is not accurate. The two routes to the Encinitas Community Park require walking along heavily used and narrow roads and would either be approximately 3,500 feet away or 3,650 feet away up a significant hill from George Berkich Park.

R17-4

There has been no true spirit of compromise, no attempts at mediation and in truth it has been a "take it or leave it" approach from the beginning.

There was certainly a reason why this park was protected and in a specific way that prevented it from being lost as a community resource. This

R17-5

2. Response to Comments

R17-5 CONT'D foresight and its intentional preservation should be respected.

A multi-purpose room, (though I do agree it is essential to the school), will be infrequently used and does not need to be positioned to both negatively impact views while also taking precious open park space.

R17-6 There is a better way in which all concerns can be addressed. The unnecessary conflict is in my opinion the result of bad, if not negligent, advice from a consultant who should know better. I sincerely hope the school district will reconsider this deeply flawed approach and instead be willing to compromise for the sake of all members of the community.

Sincerely,

Brett Farrow
[redacted]
Cardiff CA 92007

Cardiff School Letter 72618.pdf
353K

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:57 AM
To: [redacted]

[Quoted text hidden]

Cardiff School Letter 72618.pdf
353K

CARDIFF SCHOOL DISTRICT
inspiring a love of learning

RECEIVED
JUL 26 2018
THE CITY OF ENCINITAS
PARKS & RECREATION DEPT.

July 17, 2018

Ms. Jean Lacher, Chief
Office of Grants and Local Services
Department of Parks and Recreation
California State Parks
P.O. Box 942896
Sacramento, CA 94296-0001

RE: Cardiff School 6(f)3 Boundary Adjustment

R17-7

Dear Ms. Lacher,

The Cardiff School District has been the center of the Cardiff-by-the-Sea community since the District was founded in 1913. Cardiff-by-the-Sea, a community founded in 1911, joined with four other communities to become the City of Encinitas in 1986. Although now a part of the City of Encinitas, Cardiff maintains its own, unique identity and Cardiff School, which has been located on the same site since its founding, remains a primary hub for community activity.

Cardiff School is currently planning a major reconstruction. It was during the design process when the District learned that a portion of the school site containing the field and apparatus play areas was to be held as outdoor recreation area in perpetuity per an agreement entered into with the National Park Service (NPS) 25 years ago with both the District and the City of Encinitas as co-signatories to the agreement. The City has been the point of contact with the OGALS since the contract was signed and although we understand the OGALS has periodic communication regarding the agreement, the District never received any of these. As a result the District did not retain knowledge of the agreement and the associated conditions. The District also learned that a classroom building constructed previously is located within this outdoor recreation area, making the site currently out of compliance with the agreement. The portion of the school's site is referred to as George Berkich Park in honor of a past school Principal. It is shown in the attached exhibit entitled *Existing 6(f)3 Boundary on Proposed Site*

1888 Montgomery Avenue Cardiff by the Sea, CA 92007 760-632-5890

2. Response to Comments

Plan. Upon learning of the agreement, the District contacted your office to discuss this issue. The District wants to make certain you know that it is the District's desire to take the requisite steps to comply with the terms of the agreement.

Currently, the District needs to make improvements to portions of the site that falls within the 6(f)3 boundary. While these improvements are required due to educational program needs and to increase school security for student safety, the District and the greater Cardiff community also feel these improvements will greatly enhance the outdoor recreation area and enrich the experience of visitors to George Berkich Park. It is the District's understanding that the process described within the *PARK STEWARDSHIP: A Guide to Permanent Operation and Maintenance* provides a path for how the District can make the desired improvements to the site and achieve compliance with the agreement with the NPS. I am writing to you to explain our circumstances, the reasons for the District's request for a boundary adjustment, and ask for your assistance in navigating the process to attain and maintain compliance. I have attached a site plan entitled *Proposed 6(f)3 Boundary on Proposed Site Plan* showing both the existing 6(f)3 boundary and the District's proposed adjustment to the boundary. This letter explains the history of the site, the planning process the District is currently undertaking, and the enhancements proposed to the outdoor recreation area.

R17-7 CONT'D

In the early years following its incorporation, the City of Encinitas lacked public facilities for community use so Cardiff School District filled this void by making both Cardiff School buildings and outdoor field areas available for use by the community. In 1991 the District and the City entered into a joint-use agreement whereby the District allowed the City the use of school facilities. The District sought financial assistance from the City in order to make improvements to the recreation areas and it is believed the City sought grant funds from the NPS in 1993.

Since that time the District has been instrumental in assisting the City with developing facilities for community use. The District leased a 10-acre site to the City for use as a sports park for one dollar per year for 12 years until the City was able to afford to purchase the land. In 2002 the District and City amended their joint-use agreement to include Ada Harris School, the only other school in the District. The City has also developed numerous other facilities, including a 44-acre park that opened a few years ago approximately a half mile from Cardiff School.

Although the City has developed many community-based facilities, Cardiff School still acts as a civic hub for the Cardiff community. That is why when the District asked the community to support a bond to pay to replace the 55-65 year old school buildings and provide other upgrades to the school site, the community showed its support with over 66% favorable vote. That's especially noteworthy when you consider there are 706 students in a District with a population of almost 12,000 people.

In planning for the District's bond Measure GG, community and school workshops identified 15 areas of concern to be listed for Cardiff School. Four of those items focused on improving the

2 Cardiff School 6(f)3 Boundary Adjustment

school's outdoor recreation areas and supportive facilities and amenities. Those four bullet points state:

- Upgrade and Improve playgrounds and playfields for school and community use; preserve existing mature trees and other landscaping where possible.
- Resurface, repair, and/or replace paved surfaces, play court areas, turf, and other grounds to eliminate safety hazards and improve outside instructional areas.
- Improve handicapped accessibility by making Federal and State-mandated Americans with Disabilities Act (ADA) accessibility upgrades and as mandated by the Division of the State Architect (DSA) including site access, parking, restrooms, relocation of some electrical devices, drinking fountains, playground equipment, etc.
- Make health, safety, and security improvements, such as improving drop-off and pick-up areas, upgrade fencing, and renovate/retrofit the "brick building".

Following the passage of Measure GG in November 2016, the District began the planning process. Prior to design commencing, the District conducted community workshops. As a result, Guiding Principles were developed for the design and planning team to follow during the process. These Guiding Principles are:

- Create a safe and secure environment.
- Connect the school to the community: put active uses at the edges.
- Prioritize green space and views. Provide ample play space.
- Improve traffic flow and safety for pick-up.
- Emphasize sustainability and environmentally focused design.
- Prioritize learning spaces. Create useable outdoor learning environments, all suited to their place.

R17-7
CONT'D

In addition, specific concerns related to the outdoor recreation area and supportive elements were identified. Some of the concerns specific to community use of the recreation areas are:

- The apparatus area bifurcates the field areas limiting flexibility in the use of the fields.
- The layout of the field and apparatus areas causes safety concerns regarding supervision of children both during school and non-school hours.
- Apparatus equipment is in need of repair or replacement.
- Softball/baseball is seldom played and the skinned infield is not used because it is not a desirable play surface or due to risk of injury from falls on the hard, uneven dirt surface.
- The number of handicap parking spaces and the number of parking spaces overall located with ease of accessibility to the field and play areas needs to be increased.
- Designated drop-off/pick-up areas are inadequate, creating long lines or cause children to be dropped off curbside along San Elijo Avenue, which has a higher speed limit.

Based on the identified needs and the Guiding Principles, all developed with community input, the District moved forward with the architect and created a design that further enhanced the school and site for the benefit of the entire community. The design was presented to the community on numerous occasions, including four community/board workshops and

2. Response to Comments

modifications were made to the design based on feedback. It was during this process that the District became aware of the agreement with the NPS.

Although it wasn't until this time that the District became aware of the agreement, the fact that the proposed changes to the outdoor recreation area are viewed by the greater community as an enhancement to the outdoor recreation area and user experience shows the District's commitment to maintaining the outdoor recreation area for the benefit of the entire community and not just the school.

The proposed changes that impact the existing 6(f)3 boundary are:

- In 2002 a science and art lab building that includes restrooms was constructed within the boundary. This building is approximately 2,850 square feet. It is located in the center of the site. At the same time improvements were made to apparatus play areas. Some play equipment was relocated, along with new play equipment, to another part of the site so a vehicular drop-off/pick-up area could be added along Mozart Avenue.
- Current plans propose a new multi-purpose building consisting of an auditorium, music classroom and restrooms to be located within the boundary. This location allows for the community to be able to access the building at any time of the day without compromising the campus security and student safety. This location also provides direct access to the field areas from the multi-purpose building, as well as from the parking lot, drop-off/pick-up areas, and accessible parking. It also allows for direct supervision from the school administration building. Various locations were studied but were unable to resolve both the educational needs and concerns for student safety. This building is approximately 5,500 square feet in area. It will replace a 55-year old building that is too small and creates safety concerns when used by the public during school hours because of its location. Currently community members and organizations have the ability to use the existing multi-purpose building when the school is not using it. Non-profit organizations such as the Boy Scouts, Girl Scouts and local churches utilize the facilities. The County Registrar of Voters uses it as the neighborhood polling location. Individuals and for-profit organizations can also rent the facility for a fee. This policy will remain in place with the new facility. The multi-purpose building will also serve as support space during numerous community-based activities that occur throughout the year on the adjacent open field areas.
- Current plans propose a portion of a classroom/laboratory building to be located within the boundary. This portion of the building contains a specialty lab that needs to be located near the existing science and art lab building. This building portion is approximately 1,470 square feet.
- Current plans propose a portion of the school's new food service building and supportive outdoor space to be located within the southeastern area of the boundary. This building portion is approximately 720 square feet.

R17-7
CONT'D

In order to offset for the impact to the outdoor recreation area, the District proposes the boundary be redrawn to omit those portions of the site impacted by the building additions, add

4 Cardiff School 6(f)3 Boundary Adjustment

a new parcel of land not currently a part of the 6(f)3 boundary, and adjust the boundary based on proposed changes to the site. These proposed boundary adjustments result in the land area defined in the 6(f)3 increasing approximately 2,047 square feet from approximately 173,173 square feet to approximately 175,220 square feet.

If you reference the attached exhibit, *Proposed 6(f)3 Boundary on Proposed Site Plan*, you will notice the boundary is proposed to be adjusted in four distinct areas. Starting in the northwest corner of the site and moving in a clockwise direction, the four adjustments are described as follows:

1. A new parcel of land owned by the District with a net area of 8,350 square feet is proposed to be added to the 6(f)3 boundary. This parcel is located at the intersection of Montgomery Avenue and San Elijo Avenue, immediately adjacent to the northwest corner of the existing 6(f)3 boundary. This parcel has a gross area of 9,150 square feet. It includes an 800 square foot building that is omitted from the 6(f)3 area calculations.
2. The parking and drop-off/pick-up area located at the main entrance to the open recreation area along Montgomery Avenue is proposed to be added to the 6(f)3 boundary. This adjustment adds approximately 24,400 square feet to the boundary.
3. The boundary is adjusted to omit the multi-purpose building. This adjustment deducts approximately 6,900 square feet from the boundary.
4. The eastern edge of the boundary starting from a point near the southern end of the Outdoor Assembly area and continuing south to Mozart Avenue is proposed to be adjusted to omit the existing and proposed classroom buildings that fall within the existing boundary. This adjustment deducts approximately 25,850 square feet from the boundary.

R17-7
CONT'D

In addition to increasing the size of the 6(f)3 boundary, the proposed design enhances the outdoor recreation area and the user experience in the following ways:

- The apparatus area that bifurcates the turf fields is proposed to be relocated to the southern end of the site. This allows the fields to function as one contiguous area, providing for greater visibility and supervision and also provides more flexibility for use of the field area.
- The skinned softball/baseball infield is proposed to be covered with grass in support of soccer and other open field activities. The backstop is proposed to remain in order to accommodate softball and/or kickball activities but the infield will be grass in lieu of exposed dirt. This enhancement adds approximately 9,850 square feet of useable grass play surface to the open field areas. The primary organization using the Cardiff School fields is a soccer league for children. The leadership for this league is supportive of the new design and believes it allows more space for more games and practice and increases supervision and security. Other organized teams use the new sports parks because they have multiple fields to better accommodate the activities.
- Picnic areas are proposed to be provided in two locations. One is located north of the multi-purpose building and the other is located south of the apparatus play area.

Cardiff School 6(f)3 Boundary Adjustment 5

2. Response to Comments

- The parcel of land to be added in the northwest corner of the site is currently a school garden. It is currently fenced off from the rest of the site and used exclusively for school programs. The District proposes to make this parcel accessible to the community and establish a community-based garden program that coexists with the existing school garden program. A small 800 square foot older building located on this parcel of land is not included in the area calculations. As funds become available, future plans call for this building to support community use for the outdoor recreation area such as a gardening support or gathering/meeting space.
- The restrooms located in the classroom/laboratory building may be made available for use by community organizations reserving the use of the outdoor recreation areas.
- An approximately 3,740 square foot outdoor plaza area is provided along the eastern edge of the field areas. This type of space currently does not exist. It will provide a large plaza for group gatherings adjacent to the field and assembly seating areas.
- An approximately 1,580 square foot outdoor assembly seating is proposed to be added. It will be built into the side of the slope adjacent to the outdoor plaza area. This type of seating currently does not exist. It will provide a large area for seating either for large group functions or for viewing games in the adjacent field areas and utilizes a portion of the site that is currently not used due the slope.
- Parking for approximately 45 vehicles including handicap/van accessible spaces is proposed and will be permanently designated for use by visitors to the open recreation area during non-school hours.

R17-7
CONT'D

- Drop-off/pick-up space for approximately 10 cars is proposed on site to provide increased safety to children rather than using the adjacent San Elijo Avenue, which has a higher speed limit.
- The multi-purpose building and a portion of the parking along Montgomery Avenue utilize approximately 12,950 square feet of the flat field and sloped berm areas within the 6(f)3 boundary. The addition of the parcel of land at the northwest corner of the site, the conversion of the dirt infield to grass, and the addition of assembly seating in an unusable berm area of the site totals approximately 19,780 square feet. This results in an overall net gain in useable open space of approximately 6,830 square feet.
- A Dog Park has already been accommodated in response to a community request.

As mentioned previously, the Cardiff School District and the City of Encinitas are co-signatories on the agreement with the NPS. The District maintains close communication with City staff and they are aware the District is pursuing this process with the OGALS. The District will act to keep the City apprised of our progress.

I want to make you aware that while the greater Cardiff community has supported the District's plans from the beginning, there were some community members who expressed concerns with the initial design. The District listened to those concerns and made extensive modifications to the design over the span of many months. As a result the majority of those people now support the District's proposed plans.

6 Cardiff School 6(f)3 Boundary Adjustment

A few local neighbors still oppose the project because the new multi-purpose building impacts their view to the ocean or they've always opposed the District's bond measure. Since initially communicating their concerns about the impact to their view, they have learned that their personal views are not protected by the City of Encinitas or other agencies. Their strategy has since been to falsely state that the District is "doing away with George Berkich Park". You should expect to hear from them as they have communicated their intent to petition the OGALS to reject the District's proposal. It is important to note that the District is adhering to all City zoning and planning requirements relative to all building design and have taken extra measures to minimize impacts to views by lowering building heights and locating the multi-purpose building on a lower area of the site in order to lessen the impact to neighbors.

I hope this letter helps explain the work planned for the Cardiff School property. The District looks forward to working closely with the OGALS and the NPS in bringing about a successful resolution to this situation. I will contact you in a couple days to discuss this further.

Best,



R17-7
CONT'D

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Avenue
Cardiff by the Sea, CA 92007

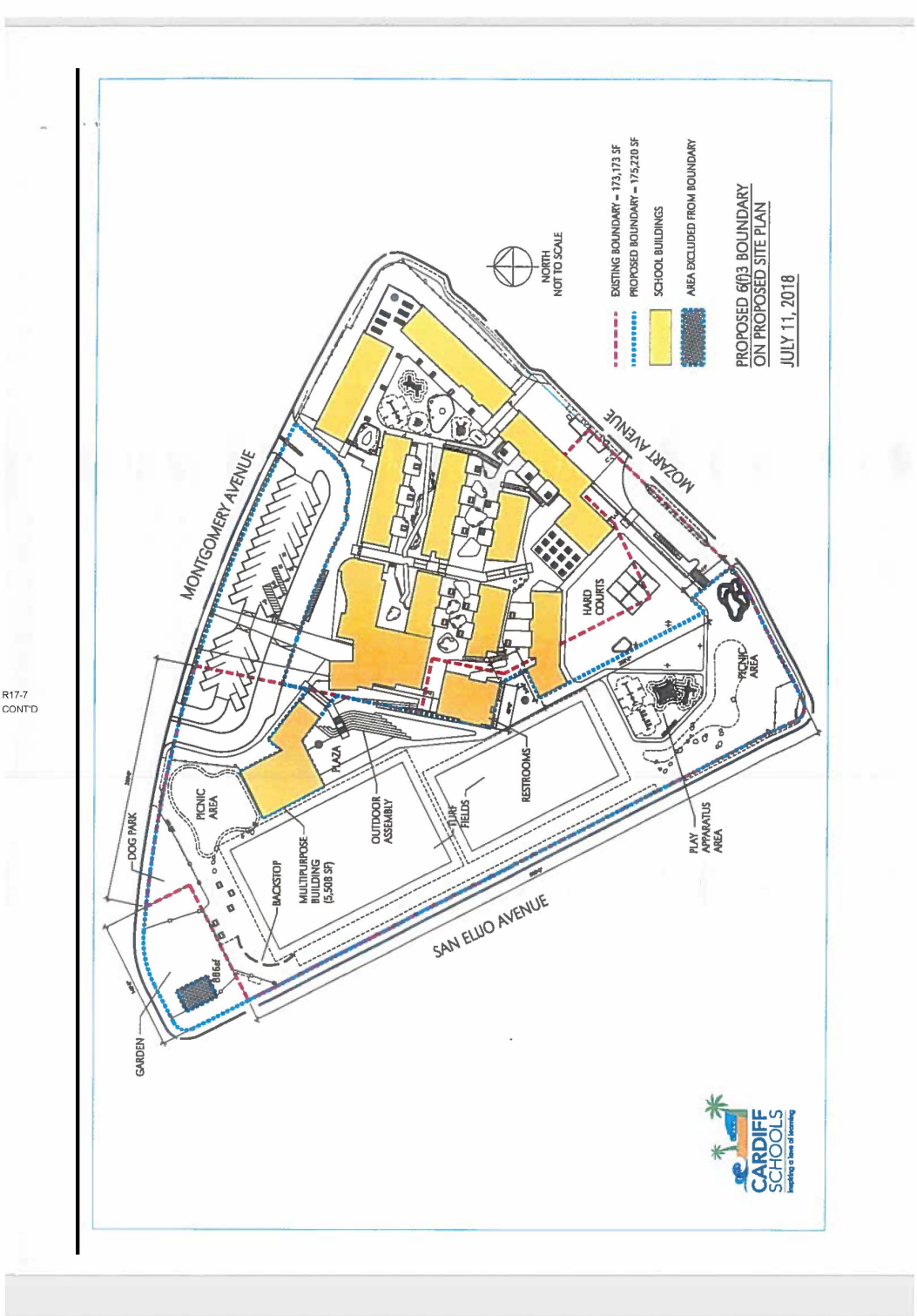
Enc: Proposed 6(f)3 Boundary on Proposed Site Plan

Cc: Jill Vinson, Cardiff School District
Siena Randall, Cardiff School District
Jennifer Campbell, City of Encinitas
Karen Brust, City of Encinitas
Barbara Baker, Office of Grants and Local Services
Lee Butterfield, Office of Grants and Local Services
Luan Aubin, Office of Grants and Local Services
Richard Rendon, Office of Grants and Local Services
Viktor Patiño, Office of Grants and Local Services

Cardiff School 6(f)3 Boundary Adjustment 7

2. Response to Comments

R17-7
CONT'D



R17. Response to Comments from Brett Farrow, dated November 16, 2018.

R17-1 The commenter describes his involvement with enhancing the school's activity areas, and states that he is disturbed that the concerns raised by community members have been described as "a few neighbors that still oppose the project due to impacts of their ocean view."

An adverse effect on scenic views enjoyed by the public is significant; however, obstruction of a private view is not a significant impact. *Ocean View Estates Homeowners Ass'n v Montecito Water Dist.* (2004) 116 CA4th 396, 402. DEIR Impact 5.1-1 adequately analyzes the project's impact on views and concludes that the proposed Project would not block public views of the ocean; existing public views of the ocean would be maintained.

The District provided opportunity to comment on the NOP and Initial Study from May 8, 2018, to June 6, 2018. These documents were available for review and comment at the Cardiff School District Office (1888 Montgomery Avenue, Cardiff CA 92007), the Cardiff-by-the-Sea Branch Library (2081 Newcastle Avenue, Cardiff CA 92007), and on the District website (https://www.cardiffschools.com). See Chapter 2 of the DEIR, *Introduction*, which identifies that 31 public comment letters were received during the review period. Table 2-2 (page 2-4 of the DEIR) summarizes the comments received and were used to assist in determining the environmental impact areas studied in the DEIR.

R17-2 The commenter states that the permanent loss of open space is an issue to the community. The commenter opines that property owners' loss of ocean views is a legitimate concern. The commenter deems that the multipurpose building could be relocated elsewhere on the school's footprint by either reducing the proposed parking lot or repurposing the existing District offices.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

See response to R17-1 for protection of public views. DEIR Impact 5.1-1 adequately analyzes the project's impact on views and concludes that the proposed Project would not block public views of the ocean; existing public views of the ocean would be maintained.

Chapter 7, *Alternatives to the Proposed Project,* analyzed four project alternatives, including Alternative 1, Maintain Multipurpose Room in Current Location. This alternative was determined to be infeasible because it did not meet 6 of the 12 project objectives. The

location for the multipurpose room was determined to be the best location based on the 6(f)(3) boundary and the other proposed improvements in order to address current educational program and/or student safety needs. The commenter does not provide a suggestion for another location for the proposed multipurpose room.

Additionally, the size of the parking lot is driven by the City of Encinitas Municipal Code requirements that warrant an increase in parking spaces to accommodate the proposed improvements; therefore, this would not impact the location of the proposed multipurpose building. Furthermore, the costs associated with retrofitting and repurposing of the existing District office to be in conformance with current building codes would not be within the District's budget. Therefore, no further response is required.

R17-3 The commenter believes that the proposed plan would greatly increase traffic by expanding the parking lot on Montgomery Avenue. The commenter states that the parking lot is not needed and it is inappropriately located. The commenter opines that emphasis should be made to increase on-street parking instead of paving more areas of the school and park.

As discussed in Section 5.10, *Transportation and Traffic*, the proposed improvements would result in less than significant impacts to traffic. According to the City of Encinitas Municipal Code Section 30.54.030, the minimum parking requirement for schools is 1.5 spaces for each classroom and 1 space for each 100 square feet of auditorium floor area. The proposed Project would require an increase in 11 parking spaces from existing conditions as a result of the increase in one classroom and 881 square feet of auditorium space (see page 5.10-42 of the DEIR); therefore, the expanded parking lot would be required to meet the parking need as a result of the proposed improvements. The comment related to providing on-street parking is not supported with evidence. Minimum on-site parking requirements are provided to ensure that adequate parking is available to meet the needs of the use, and the District should not emphasize use of public street parking; the project provides parking spaces in accordance with the City of Encinitas parking standards.

R17-4 The commenter believes that the Encinitas Community Park is not a suitable replacement, as the routes to the Encinitas Community Park would require walking on narrow roads and would be 3,500 to 3,600 feet away and up a hill from George Berkich Park.

The commenter does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

R17-5 The commenter deems that there has been no compromise, and that the preservation of the park should continue to be respected, as there is a reason why the park is protected.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The District has worked with the community and OGALS to determine the best method of meeting the needs of the community while honoring the LWCF agreement. As described in the Master Response, OGALS has concurred with the District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval.

R17-6 The commenter believes that the multipurpose building would be used infrequently and does not need to be positioned in a way that impacts views and encroaches on park land. The commenter hopes that the District will reconsider this approach and reach a compromise with the community.

The comments that the multipurpose building would be used infrequently for educational purposes are unsubstantiated. Also, the ground level of the proposed multipurpose building (referred to as Building L in Figure 4-2 of the DEIR) would be approximately 9 feet below the existing administrative building (Building E). As a result, the top of the new Building L would appear to be approximately 2 feet below the existing administrative building (see page 5.1-22 of the DEIR). See response to R17-2 for discussion of construction of the multipurpose room in a different location than proposed.

R17-7 The commenter attached a letter that the Bond Manager sent to OGALS, dated July 17, 2018.

The letter is from Randy Peterson, Bond Program Manager for the Cardiff School District, directed to Ms. Jean Lacher, Chief at Office of Grants and Local Services, and is dated July 17, 2018. The letter explains the proposed 6(f)(3) boundary adjustment that would be a part of the proposed Project. The letter supports the analysis provided in the DEIR; therefore, no further comment is necessary.

2. Response to Comments

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LETTER R18 – Karen Kavan (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff School Project
1 message

Karen Kavan <karen.kavan@cardiffschools.com> Fri, Nov 16, 2018 at 3:33 PM
To: cardiffdeir@cardiffschools.com

R18-1 The Cardiff School project is well thought-out and I support the new design. I think it will be a benefit to all the future students and families of Cardiff. The play fields will especially be much more functional for everyone and I like that the multi-purpose room will be at the front of the school and more accessible to families.

2. Response to Comments

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R18. Response to Comments from Karen Kavan, dated November 16, 2018.

R18-1 The commenter states that the proposed Project is well thought out and is supportive of the new design. The commenter believes that the proposed design would benefit community members, and that the play fields would be more functional. The commenter deems that the placement of the multipurpose building would be more accessible to families.

The District is appreciative of the positive comment. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R19 – Justine Nielsen (23 pages)

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DEL MAR HEIGHTS
LAS VEGAS
PHOENIX
SAN DIEGO
SILICON VALLEY

November 16, 2018

Cardiff School District Board of Trustees
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Re: Cardiff School Modernization Project — NEPA Required

Dear Board of Trustees:

R19-1 Our firm represents the Gerrity Family who, along with numerous other Cardiff residents, is concerned with the Cardiff School District's (the "District") proposed changes to the George Berkich Park (the "Park"). The purpose of this letter is to inform you that the proposed "modernization" of Cardiff Elementary violates the Land and Water Conservation Fund ("LWCF") project agreement (the "Agreement") the District has with National Park Services ("NPS"). A copy of the Agreement is attached as **Exhibit 1**. As a result, a boundary conversion approved by NPS is required along with environmental review pursuant to NEPA, prior to the District's review and consideration of the project.

R19-2 The agreement states that the land developed with LWCF funds (i.e. the Park) "shall not be converted to other than public outdoor recreation use but shall be maintained in public outdoor recreation in perpetuity."[1] The modernization project would encroach onto the 6(f)(3) boundary, which constitutes a conversion under the LWCF project agreement, as noted by the District in the Draft Environmental Impact Report ("DEIR") prepared for the project,[2] and thus violates the Agreement. As a result, the District must follow the proper steps in order for such a conversion to be approved by the NPS, as required by the Agreement.[3] Preparing a DEIR as required by the California Environmental Quality Act ("CEQA") skips ahead numerous steps in this process. The current environmental review must stop until the conversion process is reviewed by NPS in accordance with its policies and procedures.

[1] Agreement, II(B)
[2] DEIR, 4-18.
[3] Agreement, II(B)

2. Response to Comments

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A conversion is defined as the removal, taking, closure, or development of land within the 6(f)(3) boundary map for a purpose that conflicts with protecting the integrity of the park experience, public recreation, and/or outdoor viewshed for the benefit of future generations.[4] This proposed change in the boundary constitutes a conversion because it will take portions of the property to use for the school, which is not a public recreation purpose and may affect the park experience and outdoor viewshed. The fact that the change is a conversion is conceded in the DEIR, as noted above.[5] Has the District taken all necessary steps prior to submitting the conversion proposal? If yes, where is the documentation to support this? How has the public been involved in the conversion proposal?

R19-3

A conversion requires an amendment to the original LWCF project agreement. In order to change or amend a LWCF project agreement, the District must follow the steps outlined in NPS's Proposal Description and Environmental Screening Form ("PD/ESF"), which is attached as **Exhibit 2**. This form and its requirements, including environmental review pursuant to National Environmental Policy Act ("NEPA"), must be completed *before* the conversion proposal is submitted to NPS.[6] The NEPA process includes either obtaining a categorical exemption ("CE") recommendation, preparing an Environmental Assessment ("EA"), or preparing an Environmental Impact Report ("EIR"). There is no information in the public record to show the District has taken these steps or that a CE or EA has ever been prepared for the conversion.

R19-4

Step 3 of the PD/ESF further describes the requirements for a Conversion Proposal. The proposal, "including the required NEPA environmental Review documents (CE recommendation or an EA document) must focus on the loss of public outdoor recreation park land and recreational usefulness…not the activities precipitating the conversion or benefits thereof."[7] Furthermore, an entirely separate PD/ESF must be generated for the converted park area and each replacement site.

R19-5

Steps 5-7 require further information and assessment prior to submitting the conversion proposal including a summary of previous environmental review, completing the Environmental Screening Form, and recommending a NEPA pathway.

The proposed project would have significant environmental impacts in the categories of biological resources, cultural resources, geology and soils, and tribal cultural resources as discussed in the DEIR.[8] Such impacts would require at least an EA and possibly an EIR, depending on the results of the Environmental Screening Form.

R19-6

Furthermore, there is an existing conversion on the Park property. An entire school building, a portion of another, and the current drop-off and pick-up parking already encroach into the 6(f)(3) boundary, as shown on the map of the current and proposed boundaries.[9] The LWCF guidelines

R19-7

[4] LWCF Post Completion Park Stewardship Guide, 6.
[5] DEIR, 4-18.
[6] "The PD/ESF **must** be completed, including the appropriate NEPA document, signed by the State, and submitted with each…amendment[] for…conversions," PD/ESF Cover Page.
[7] PD/ESF, Step 3B.
[8] Notice of Availability for the Draft Environmental Impact Report Cardiff School Modernization and Reconstruction Project, October 5, 2018.
[9] DEIR, Figure 4-6 Proposed 6(f)(3) Boundary Map.

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make clear that if a State becomes aware of an existing conversion that occurred without NPS approval, it must apply for retroactive approval or face penalties.[10] Following the old adage of asking for forgiveness instead of permission has no place in the public forum and such behavior defeats the purposes and intent of NEPA and the LWCF Program.

R19-7 CONT'D

If the District fails to follow the steps required for conversions (including existing conversions), it may face penalties for failure to comply with federal laws and regulations. 43 CFR §12.83 allows NPS to (1) temporarily withhold cash payments pending correction of the deficiency by the grantee, (2) disallow (that is, deny both use of funds and matching credit for) all or part of the cost of the activity or action not in compliance, (3) wholly of partly suspend or terminate the current award for the grantee's program, (4) withhold further awards for the program, or (5) take other remedies that may be legally available.

R19-8

CEQA review should not have started because completion of NEPA review and all steps of the PD/ESF are required *before the conversion proposal may be submitted to NPS*. CEQA review and other requirements do not occur until much later in the process of a conversion proposal. Skipping these preliminary steps is a violation of federal laws and regulations and may result in penalties for the District and the LWCF project. Therefore, we urge the District to halt the current environmental review process until it complies with the requirements in the PD/ESF, including NEPA review, each for the existing conversion, proposed conversion, and replacement property.

For all of these reasons, we urge you to suspend the current project and save taxpayer resources while the boundary conversion is processed through the NPS. Please contact me at justine.nielsen@procopio.com or 619-906-5787 if you have any questions regarding this letter.

Very truly yours,

Justine K. Nielsen

cc: David Siegenthaler, National Park Service
Luan Aubin, OGALS
Barbara Baker, OGALS
Glenn Sabine, City Attorney, City of Encinitas

[10] LWCF State Assistance Program Manual, Chapter 8-11, Section 11.

2. Response to Comments

Exhibit 1

STATE OF CALIFORNIA
Department of Parks and Recreation
PROJECT AGREEMENT
Land and Water Conservation Fund Program

Project Title George Berkich Park Development

Participant City of Encinitas and Cardiff School District

Project Period 5/7/93 to 6/30/97 Project Number 06-01346

Project Scope: Development will consist of play area, open sportsfields, picnic facilities and associate facilities.

The participant agrees to submit plans and specifications for the proposed development by December 31, 1993.

Stage Covered by this Agreement Complete

Project Cost:

Amount of Total Project Costs Eligible for Federal Funding	$ 300,000	(1)
Surcharge--State Administrative Assessment 6.4 % of Line (1) (subject to adjustment, see Section III.C.2)	$ 19,200	(2)
Total Eligible Project Costs Plus Surcharge (Line 1 plus Line 2)	$ 319,200	(3)
Federal Participation--up to 50% of Line (3), or up to 50% of actual costs, whichever is the lesser, not to exceed:	$ 159,600	(4)
Estimated Payment to Participant Deduct State Administrative Assessment: [Federal Participation (Line 4) Less Surcharge (Line 2), Subject to Adjustment]	$ 140,400	(5)

R19-9

Continued on are 6 pages numbered 2 through 7 inclusively.

City of Encinitas
PARTICIPANT

By [signature]

Title Community Services Director

Date 6-23-93

And

Cardiff School District
Participant

By [signature]

Title Superintendent

STATE DEPARTMENT OF PARKS AND RECREATION

By [signature]

Date 9.7.93

2. Response to Comments

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LAND AND WATER CONSERVATION FUND
PROJECT AGREEMENT PROVISIONS

I. Definitions

A. The term "NPS" as used herein means the National Park Service, United States Department of the Interior.

B. The term "Secretary" as used herein means The Secretary of the Interior, or any representative lawfully delegated the authority to act for such Secretary.

C. The term "Director" as used herein means the Director of the National Park Service, or any representative lawfully delegated the authority to act for such Director.

D. The term "Liaison Officer" as used herein means the California Director of Parks and Recreation, or other State officer as designated by the Governor.

E. The term "Manual" as used herein means the Land and Water Conservation Fund Grants Manual.

F. The term "Project" as used herein means the project or project segment which is the subject of this agreement as defined in the Project

G. The term "Project Proposal" as used herein means the form and all supplemental attachments used to describe and estimate the cost of planning, acquisition, or development project filed with the Liaison Officer in support of an application for federal financial assistance.

H. The term "State" as used herein means the State of California, and/or its official representative, the Department of Parks and Recreation.

I. The term "Participant" as used herein means the recipient of the federal funds to be disbursed in accordance with the terms of this agreement.

J. The term "State Funds" as used herein means those moneys made available by the State or a Participant as matching money for projects under the Land and Water Conservation Fund Act of 1965, 7 8 Stat. 897 (1964).

R19-9 CONT'D

K. The term "Leased Land" or "Lease" as used herein means land leased from the Federal Government.

II. Continuing Assurances

The parties to the project agreement specifically recognized that the Land and Water Conservation Fund assistance project creates an obligation to maintain the property described in the project agreement consistent with the Land and Water Conservation Fund Act and the following requirements.

Further, it is acknowledged intent of the parties hereto that recipients of assistance will use moneys granted hereunder for the purposes of this program, and that assistance granted from the Fund will result in a net increase, commensurate at least with the State cost-share, in a participant's outdoor recreation. It is intended by both parties hereto that assistance from the Fund will be added to, rather than replace or be substituted for, State and local outdoor recreation funds.

A. The participant agrees, as recipient of this assistance, that it will meet the following specific requirements and the terms of the project agreement.

B. The participant agrees that the property described in the project agreement and the dated project boundary map made part of that agreement is being acquired or developed with Land and Water Conservation Fund assistance or is integral so such acquisition or development, and that, without the approval of the Liaison Officer, the Director, and/or the Secretary the Interior, it shall not be converted to other than public outdoor recreation use but shall be maintained in public outdoor recreation in perpetuity or for the term of the lease in the case of leased property. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at lease equal fair market value and of reasonable equivalent usefulness and location. This replacement land becomes subject to Section 6(f) (3) protection. The approval of conversion shall be at the sold discretion of the Secretary, or his designee. Prior to the completion of this project, the participant, the Liaison Officer, and the Director may mutually alter the area described in the project agreement and the dated project boundary map to provide the most satisfactory public outdoor recreation unit, except that acquired parcels are afforded Section 6(f) (3) protection as Fund reimbursement is provided.

In the event the National Park Service provides Land and Water Conservation Fund assistance for the acquisition and/or development of property subject to reversionary interests with full knowledge of those reversionary interests, conversion of said property to other than public outdoor recreation uses as a result of such reversionary interest being exercised is approved. In receipt of this approval, the participant agrees to notify the State of the conversion as soon as possible and to seek approval of replacement property in accord with the conditions set forth in these provisions. The participant further agrees to effectuate such replacement within a reasonable period of time, acceptable to the State, after the conversion of property takes place. The provisions of this paragraph are also applicable to: leased properties acquired and/or developed known and agreed to by the State; and properties subject to other outstanding rights and interests that may result in a conversion when known and agreed to by the State.

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C. The participant agrees that the benefit to be derived by the State from the full compliance by the participant with the terms of this agreement is the preservation, protection, and the net increase in the quality of public outdoor recreation facilities and resources with are available to the people of the State and of the United States, and such benefit exceeds to an immeasurable and unascertainable extent the amount of money furnished by the State by way of assistance under the terms of this agreement. The participant agrees that payment by the participant to the State of an amount equal to the amount of assistance extended under this agreement by the State would be inadequate compensation to the State for any breach by the participant of this agreement. The participant further agrees, that the appropriate remedy in the event of a breach by the participant of this agreement shall be the specific performance of this agreement.

D. The participant agrees to comply with he policies and procedures set forth in the National Park service Grants-in-Aid manual. Provisions of said manual are incorporated into and made a part of the project agreement.

E. The participant agrees that the property and facilities described in the project agreement shall be operated and maintained as prescribed by manual requirements.

F. The participant agrees that a permanent record shall be kept in the participant's public property records and available for public inspection to the effect that the property described in the scope of the project agreement, and the dated project boundary map made part of that agreement, has been acquired or developed with Land and water Conservation Fund assistance and that it cannot be converted to other than public outdoor recreation use without the written approval of the liaison Officer, the Director, and/or the Secretary of the Interior.

G. Nondiscrimination

1. The participant shall comply with Title VI of the Civil Rights Act of 1964 (P.L.88-352) and in accordance with Title VI of that Act, no person in the United States shall, on the ground of race, religion, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of any property or facility acquired or developed pursuant to the project agreement. The participant shall immediately take any measures necessary to effectuate this provision. This assurance shall be binding on the participant or any political subdivision or other appropriate public agency to which Fund assistance or property acquired or developed with Fund assistance has been transferred for public recreation purposes.

2. The participant shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d) prohibiting employment discrimination where (1) the primary purpose of a grant is to provide employment or (2) discriminatory employment practices will result in unequal treatment of persons who are or should be benefiting from the grant-aided activity.

3. The participant shall comply with the regulations and guidelines promulgated pursuant to the Civil Rights Act of 1964 by the Secretary of the Interior and the National Park Service.

4. The provisions of the first three paragraphs apply to any part of the recreation system within which the assisted facility or property exists.

5. The participant shall not discriminate against any person on the basis of residence, except to the extent that reasonable differences in admission or other fees may be maintained on the basis of residence as set forth in the manual.

R19-9 CONT'D

III. Project Assurances

A. Applicable Federal Circulars

The State shall comply with applicable regulations, policies, guidelines and requirements including 43 CFR Part 12.41-12.92, Administrative Requirements and Cost Principles for Assistance Programs, Office of Management and Budget Circulars No. A-102 (Uniform administrative requirements for grants-in-aid to State and local governments), A-87 (cost principles for State and local governments), and A-128 (audits of State and local government) as they relate to the application, acceptance and use of Federal funds for this federally assisted project.

B. Project Proposal

1. The project proposal for Federal assistance bearing the same project number as the agreement and associated documents is by this reference made a part of this agreement.

2. The participant possesses legal authority to apply for the grant, and to finance and construct the proposed facilities. A resolution, motion or similar action has been duly adopted or passed authorizing the filing of the project proposal, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the participant to act in connection with the project proposal and to provide such additional information as may be required.

3. The participant has the ability and intention to finance the non-federal share of the costs for the project. Sufficient funds will be available to assure effective operation and maintenance of the facilities acquired or developed by the project.

C. Project Execution

1. It is understood by the parties hereto that this agreement shall not obligate State of California funds for the project costs described herein. The participant hereby promises, in consideration of the promises made by the Liaison Officer herein, to execute the project stage described herein, in accordance with the terms of this agreement. Any disbursement hereunder shall not be made unless and until funds therefor are received by the Liaison Officer from the National Park Service. This item shall not apply when the participant is an agency of the State of California.

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2. Response to Comments

2. The Liaison Officer hereby promises, in consideration of the promises made by the participant herein, to accept appropriated federal funds for the purposes of the project and disburse the same to reimburse the participant up to 50 percent of the eligible project cost not to exceed 50 percent of the direct project cost shown in this agreement; except for a surcharge for administrative costs to be applied to twice the federal share of direct eligible project costs. The surcharge is to be deducted from the reimbursements received from the Federal Government applicable to this project and will be computed at the federally approved surcharge rate in effect at the time the billing is submitted to the Federal Government.

3. The project period shall begin with the date of approval of the project agreement or the effective date of a waiver of retroactivity and shall terminate at the end of the stated or amended project period unless the project is completed or terminate sooner in which event the project period shall end on the date of completion or termination. For project elements added to a consolidated project, the project period will begin on the date the project element is approved.

4. The participant will cause work on the project to be commenced within a reasonable time after receipt of notification that funds have been approved and assure that the project will be prosecuted to completion with reasonable diligence.

5. The State will require the facility to be designed to comply with the Architectural Barriers Act of 1968 (Public Law 90-480), and DOI Section 504 Regulations (43 CFR Part 17). The participant will be responsible for conducting all inspections.

6. The participant shall secure completion of the work in accordance with approved construction plans and specifications, and shall secure compliance with all applicable federal, state, local laws and regulations.

7. In the event the project covered by the project agreement, including future stages of the project, cannot be completed in accordance with the plans and specifications for the project; the participant shall bring the project to a point of recreational usefulness agreed upon by the participant and, the Director or his designee, and the Liaison Officer.

8. The participant will provide for and maintain competent and adequate architectural engineering supervision and inspection at the construction site to insure that the completed work conforms with the approved plans and specifications; that it will furnish progress reports and such other information as the NPS may require.

9. The participant will comply with the terms of Title II and Title III, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646), 94 Stat. 1894 (1970), and the applicable regulations and procedures implementing such Act for all real property acquisitions and where applicable shall assure that the Act has been complied with for property to be developed with assistance under the project agreement.

10. The participant will comply with the provisions of: Executive Order 11988, relating to evaluation of flood hazards: Executive Order 11288, relating to the prevention, control, and abatement or water pollution, and Executive Order 11920, relating to the protection of wetlands.

R19-9 CONT'D

11. The participant will comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, Public Law 93-234, 87 Stat. 975, approved December 31, 1976. Section 102(a) requires, the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any federal financial assistance for construction or acquisition purposes for use in any area that has been identified as an area having special flood hazards by the Flood Insurance Administration of the Federal Emergency Management Agency. The phrase "federal financial assistance" includes any form of loan, grant, guaranty, insurance payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect federal assistance.

12. The participant will insure that the facilities under its ownership, lease or supervision which shall be utilized in the accomplishment of the project are not listed on the Environmental Protection Agency's (EPA) list of Violating Facilities, pursuant to 40 CFR, Part 15.20 and that it will notify the State and NPS of the receipt of any Communication from the Director of the EPA Office of Federal Activities indicating that a facility to be utilized in the project is under consideration for listing by the EPA. The participant agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act of 1970. The participant further agrees to insert this clause into any contract or subcontract in excess of $100,000.

13. The participant will assist the State and NPS in its compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (16 U.S.C. 470) Executive Order 11593, and the Archeological and Historic Preservation Act of 1966 (16 U.S.C. 469a-1 et seq.) by (a) consulting with the State Historic Preservation Officer on the conduct of investigations, as necessary, to identify properties listed in or eligible for inclusion in the National Register of Historic Places that are subject to effects (see CFR Part 800.8) by the activity, and notifying the federal grantor agency of the existence of any such properties, and by (b) complying with all requirements established by the federal grantor agency to avoid or mitigate adverse effects upon such properties.

14. The participant will comply with Executive Order 12432, "Minority Business Enterprise Development as follows:

a. Place minority business firms on bidder's mailing lists.

b. Solicit these firms whenever they are potential sources of supplies, equipment, construction, or services.

c. Where feasible, divide total requirements into smaller needs, and set delivery schedules that will encourage participation by these firms.

d. For any project involving $500,000 or more in grant assistance (except for projects involving acquisition only) the participant shall submit, prior to the commencement of construction and every fiscal year quarter thereafter until project completion, reports documenting the efforts to hire minority business firms. These reports, SF 334, will be submitted one month following the end of each fiscal quarter (i.e., January 31, April 30, July 31, and October 31) to the National Park Service Regional Office in San Francisco.

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D. Construction Contracted for by the Participant Shall Meet the Following Requirements:

1. Contracts for construction in excess of $10,000 shall be awarded through a process of competitive bidding involving formal advertising, with adequate purchase description, sealed bids, and public openings. Copies of all advertisements, bids, and a copy of the contract shall be retained for inspection by the Director and the State.

2. The participant shall inform all bidders on contracts for construction that federal funds are being used to assist in construction.

3. Written change orders shall be issued for all necessary changes in the facility being constructed under contracts of $10,000 or more. Such change orders shall be made a part of the project file and should be kept available or audit.

4. Contracts for construction shall include a provision for compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented by Department of Labor regulations (29 CFR, Part 3).

5. The participant will comply with other procurement standards of OMB Circular A-102, Attachment O, except for provisions related to compliance with Davis Bacon Act requirements (unless required by a program providing supplemental funding). Should supplemental funding be provided which requires compliance with Davis Bacon Act requirements, all construction contracts awarded by the grantee and subgrantee in excess of $2,000 shall include a provision for compliance with such Act (40 U.S.C. 276a to a-7) and as supplemented by Department of Labor regulations (29 CFR, Part 5).

6. The participant shall incorporate, or cause to be incorporated, into all construction contracts exceeding $10,000 (ten-thousand), the following provisions:

"During the performance of this contract the contractor agrees as follows:

"(1) The contractor will not discriminate any employee or applicant for employment because of race, religion, color, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color or national origin. Such action shall include, but not be limited to, the following: Employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

"(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, or national origin.

"(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 as amended (3CFR 169 (1974), and shall post copies of notices in conspicuous places available to employees and applicants for employment.

R19-9 CONT'D

"(4) The contractor will comply with all provision of Executive Order No. 11246, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor.

"(5) The contractor will furnish all information and reports required by Executive Order No. 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, record, and accounts by the contracting agency, the State, and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

"(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order No. 11246, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246, as amended, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.

"(7) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

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2. Response to Comments

7. The participant shall (1) comply with the above provisions in construction work carried out by itself, (2) assist and cooperate actively with the Secretary of the Interior and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the above contract provisions and with the rules, regulations, and relevant orders of the Secretary of Labor, (3) obtain and furnish to the Secretary of the Interior and to the Secretary of Labor such information as they may require for the supervision of such compliance, (4) enforce the obligation of contractors and subcontractors under such provisions, rules, regulations, and orders, (5) carry out sanctions and penalties for violation of such obligations imposed upon contractors imposed upon contractors and subcontractors by the State, or the Secretary of Labor, or the Secretary of the Interior pursuant to Part II, Subpart D, of Executive Order No. 11246, as amended and (6) refrain form entering into any contract with a contractor debarred from government contracts under Part II, Subpart D, of Executive Order No. 11246, as amended. In addition, the participant agrees that if it fails or refuses to comply with these undertakings, the NPS may take any or all of the following actions: Chance, terminate, or suspend in whole or in part this grant; refrain from extending any further assistance to the applicant under the program with respect to which the failure or refusal occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the department of Justice for appropriate legal proceedings.

E. Conflict of Interests

1. No official or employee of the participant, State, or Federal Government who is authorized in his official capacity to negotiate, make, accept, or approve, or take part in such decisions regarding a contract or subcontract in connection with this project shall have any financial or other personal interest in any such contract or subcontract.

2. No person performing services for the participant in connection with this project shall have a financial or other personal interest other than his employment or retention by the participant, in any contract or subcontract in connection with this project. No officer or employee of such person retained by the participant shall have any financial or other personal interest in any real property acquired for this project unless such interest is openly disclosed upon the public records of the participant, and such officer, employee or person has not participated in the acquisition for or on behalf of the participant.

3. No member of or delegate to Congress shall be admitted to any share or part of this agreement, or to any benefit to arise hereupon, unless such benefit shall be in the form of an agreement made with a corporation for its general benefit.

4. The participant, State, and the Director shall be responsible for enforcing the above conflict of interest provisions.

F. Hatch Act

The participant will comply with the provisions of the Hatch Act which provides that no officer or employee of the participant whose principal employment is in connection with any activity which is financed in whole or in part pursuant to this agreement shall take part in any of the political activity prescribed in the Hatch Political Activity Act, 5 U.S.C. Sec. 118k (1964), with the exceptions therein enumerated.

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CONT'D

G. Project Administration

1. Project costs eligible for assistance shall be determined upon the basis of the criteria set forth in the manual and OMB Circular A-87.

2. The agreement may include the use of the indirect cost rate currently approved, in accordance with A-87, for the participant that is a party to this agreement.

H. Project Administration

1. The participant shall promptly submit such reports and documentation as the Director or Liaison Officer may request.

2. Any moneys advanced to the participant are "public moneys" and shall be deposited in a bank with FDIC insurance coverage and the balances exceeding the FDIC coverage shall be collaterally secured as provided for in 12 U.S.C. 265.

3. The participant shall use any funds received by way of advance payment from the State under the terms of this agreement solely for the project or project stage described in the agreement.

4. Properties and facilities acquired or developed with Fund assistance shall be available for inspection by the State or the NPS at such intervals as the Liaison Officer or the Director shall require.

I. Audit, Retention and Custodial Requirements for Records

1. Financial records, supporting documents, statistical records, and all other records pertinent to this grant shall be retained for a period of three years in accordance with 43 CFR Part 12.41-1292; except the records shall be retained beyond the three-year period if audit findings have not been resolved.

2. The retention periods starts from the date of the final expenditure report for the project or the consolidated project element.

3. State and local governments are authorized to substitute microfilm copies in lieu of original records.

4. The Liaison Officer, Secretary of the Interior, and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the participant and their subgrantees which are pertinent to a specific project for the purpose of making audit, examination, excerpts and transcripts.

5. The participant will comply with the provisions of OMB Circular A-28 (as provided under the Single Audit Act of 1984) establishing audit requirements for state and local governments that receive federal assistance.

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J. Project Termination

1. The Liaison Officer or the Director may temporarily suspend State assistance under the project pending corrective action by the participant or pending a decision to terminate the grant by the NPS or the State.

2. The participant may unilaterally terminate the project or consolidated project element at any time prior to the first payment on the project or consolidated project element. After the initial payment, the project may be terminated, modified, or amended by the participant only by mutual agreement.

3. The Liaison Officer or the Director may terminate the project in whole, or in part, at any time before the date of completion, whenever it is determined that the grantee has failed to comply with the conditions of the grant. The Liaison Officer or Director will promptly notify the participant in writing of the determination and the reasons for the termination, together with the effective date. Payments made to the participant or recoveries by the State under projects terminated for cause shall be in accord with the legal rights and liabilities of the parties.

4. The Director, State, or participant, may terminate grants in whole, or in part at any time before the date of completion, when both parties agree that the continuation of the project would not produce beneficial results commensurates with the further expenditure of funds. The two parties shall agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated. The participant shall not incur new obligations for the terminated portion after the effective date, and shall cancel as many outstanding obligations as possible. The NPS may allow full credit to the participant for the Federal share of the noncancelable obligations, properly incurred by the grantee prior to termination.

5. Termination either for cause or for convenience requires that the project in question be brought to a state of recreational usefulness agreed upon by the participant, the Liaison Officer, and the Director, or that all funds provided by the National Park Service be returned.

K. Fund Acknowledgment

The participant will permanently display in a conspicuous place a bronze plaque which acknowledges Land and Water Conservation Fund assistance. The plaque will be provided by the State Department of Parks and Recreation and its installation by the participant will be required upon initial development of the property.

L. Hold Harmless

R19-9
CONT'D

The participant shall indemnify the State of California and its officers, agents and employees against and hold the same free and harmless from any and all claims, demands, damages, losses, costs, and/or expenses of liability due to, or arising out of, either in whole or in part, whether directly or indirectly, the organization, development, construction, operation, or maintenance of the project.

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PROPOSAL DESCRIPTION AND ENVIRONMENTAL SCREENING FORM
Land and Water Conservation Fund

The purpose of this Proposal Description and Environmental Screening Form (PD/ESF) is to provide descriptive and environmental information about a variety of Land and Water Conservation Fund (LWCF) state assistance proposals submitted for National Park Service (NPS) review and decision. The completed PD/ESF becomes part of the "federal administrative record" in accordance with the National Environmental Policy Act (NEPA) and its implementing regulations. The PD portion of the form captures administrative and descriptive details enabling the NPS to understand the proposal. The ESF portion is designed for States and/or project sponsors to use while the LWCF proposal is under development. Upon completion, the ESF will indicate the resources that could be impacted by the proposal enabling States and/or project sponsors to more accurately follow an appropriate pathway for NEPA analysis: 1) a recommendation for a Categorical Exclusion (CE), 2) production of an Environmental Assessment (EA), or 3) production of an Environmental Impact Statement (EIS). The ESF should also be used to document any previously conducted yet still viable environmental analysis if used for this federal proposal. The completed PD/ESF must be submitted as part of the State's LWCF proposal to NPS.

Except for the proposals listed below, the PD/ESF **must** be completed, including the appropriate NEPA document, signed by the State, and submitted with each new federal application for LWCF assistance and amendments for: scope changes that alter or add facilities and/or acres; conversions; public facility exceptions; sheltering outdoor facilities; and changing the original intended use of an area from that which was approved in an earlier LWCF agreement. Consult the LWCF Program Manual (www.nps.gov/lwcf) for detailed guidance for your type of proposal and on how to comply with NEPA.

For the following types of proposals only this Cover Page is required because these types of proposals are administrative in nature and are categorically excluded from further NEPA environmental analysis. NPS will complete the NEPA CE Form. Simply check the applicable box below, and complete and submit only this **Cover Page** to NPS along with the other items required for your type of proposal as instructed in the LWCF Program Manual.

- ☐ SCORP planning proposal
- ☐ Time extension with no change in project scope or with a reduction in project scope
- ☐ To delete work and no other work is added back into the project scope
- ☐ To change project cost with no change in project scope or with a reduction in project scope
- ☐ To make an administrative change that does not change project scope

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Name of LWCF Proposal:			**Date Submitted to NPS:**	
LWCF Project Number:	**Prior LWCF Project Number(s) and Park Name(s) Associated with the Assisted Site(s):**			
Local or State Project Sponsoring Agency *(recipient, or sub-recipient in case of pass-through grants)*				
Name of Local or State Sponsor Contact:		**Title**		
Address		**City**	**State**	**Zip Code**
Phone	**Fax**	**Email Address**		

RECORDS RETENTION - Permanent. Transfer all permanent records to NARA 15 years after closure. (NPS Records Schedule, National Assistance Programs (Item 8.A.2) (N1-79-08-7))

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Using a separate sheet for narrative descriptions and explanations, address each item and question in the order it is presented, and identify each response with its item number such as Step 1-A1, A2; Step 3-B1; Step 6-A1, A29; etc.

Step 1. Type of LWCF Proposal

New Project Application
☐ **Acquisition** *Go to Step A* ☐ **Development** *Go to Step 2B* ☐ **Combination (Acquisition and *Development*** *Go to Step 2C*

New Project Application
☐ **Increase in scope or change in scope from original agreement.** *Complete Steps 3A, and 5 through 7.*
☐ **6(f) conversion proposal.** *Complete Steps 3B, and 5 through 7.*
☐ **Request for public facility in a Section 6(f) area.** *Complete Steps 3C, and 5 through 7.*

Request for temporary non-conforming use in a Section 6(f) area. *Complete Steps 4A, and 5 through 7.*

Request for significant change in use/intent of original LWCF application. *Complete Steps 4B, and 5 through 7.*

Request to shelter existing/new facility within a Section 6(f) area regardless of funding source. *Complete Steps 4C, and 5 through 7.*

Step 2. New Project Application (See LWCF Manual for guidance)

A. For an Acquisition Project

1. Provide a brief narrative about the proposal that provides the reasons for the acquisition, the number of acres to be acquired with LWCF assistance, and a description of the property. Describe and quantify the types of existing resources and features on the site (for example, 50 acres wetland, 2,000 feet beachfront, 200 acres forest, scenic views, 100 acres riparian, vacant lot, special habitat, any unique or special features, recreation amenities, historic/cultural resources, hazardous materials/ contamination history, restrictions, institutional controls, easements, rights-of-way, above ground/underground utilities, including wires, towers, etc.).
2. How and when will the site be made open and accessible for public outdoor recreation use (signage, entries, parking, site improvements, allowable activities, etc.)?

R19-9 CONT'D

3. Describe development plans for the proposal for the site(s) for public outdoor recreation use within the next three (3) years.
4. SLO must complete the State Appraisal/Waiver Valuation Review form in Step 7 certifying that the appraisal(s) has been reviewed and meets the "Uniform Appraisal Standards for Federal Land Acquisitions" or a waiver valuation was approved per 49 CFR 24.102(c)(2)(ii). State should retain copies of the appraisals and make them available if needed.
5. Address each item in "D" below.

B. For a Development Project

1. Describe the physical improvements and/or facilities that will be developed with federal LWCF assistance, including a site sketch depicting improvements, where and how the public will access the site, parking, etc. Indicate entrances on 6(f) map. Indicate to what extent the project involves new development, rehabilitation, and/or replacement of existing facilities.
2. When will the project be completed and open for public outdoor recreation use?
3. Address each item in "D" below.

C. For a Combination Project

1. For the acquisition part of the proposal:
   a. Provide a brief narrative about the proposal that provides the reasons for the acquisition, number of acres to be acquired with LWCF assistance, and describes the property. Describe and quantify the types of existing resources and features on the site (for example, 50 acres wetland, 2,000 feet beachfront, 200 acres forest, scenic views, 100 acres riparian, vacant lot, special habitat, any unique or special features, recreation amenities, historic/cultural resources, hazardous materials/ contamination history, restrictions, institutional controls, easements, rights-of-way, above ground/underground utilities, including wires, towers, etc.)
   b. How and when will the site be made open and accessible for public outdoor recreation use (signage, entries, parking, site improvements, allowable activities, etc.)?
   c. Describe development plans for the proposed for the site(s) for public outdoor recreation use within the next three (3) years.
   d. SLO must complete the State Appraisal/Waiver Valuation Review form in Step 7 certifying that the appraisal(s) has been reviewed and meets the "Uniform Appraisal Standards for Federal Land Acquisitions" or a waiver valuation was approved per 49 CFR 24.102(c)(2)(ii). State should retain copies of the appraisals and make them available if needed.
2. For the development part of the proposal:

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a. Describe the physical improvements and/or facilities that will be developed with federal LWCF assistance, including a site sketch depicting improvements, where and how the public will access the site, parking, etc. Indicate entrances on 6(f) map. Indicate to what extent the project involves new development, rehabilitation, and/or replacement of existing facilities.

b. When will the project be completed and open for public outdoor recreation use?

3. Address each item in "D" below.

D. For a Combination Project

1. Will this proposal create a new public park/recreation area where none previously existed and is not an addition to an existing public park/recreation area? Yes ☐ (go to #3) No ☐ (go to #2)

2. a. What is the name of the pre-existing public area that this new site will be added to?

b. Is the pre-existing public park/recreation area already protected under Section 6(f)? Yes ☐ No ☐
If no, will it now be included in the 6(f) boundary? Yes ☐ No ☐

3. What will be the name of this new public park/recreation area?

4. a. Who will hold title to the property assisted by LWCF? Who will manage and operate the site(s)?

b. What is the sponsor's type of ownership and control of the property?

_____ Fee simple ownership
_____ Less than fee simple. Explain:
_____ Lease. Describe lease terms including renewable clauses, # of years remaining on lease, etc.
Who will lease area? Submit copy of lease with this PD/ESF. (See LWCF Manual for **program restrictions** for leases and further guidance)

5. Describe the nature of any rights-of-way, easements, reversionary interests, etc. to the Section 6(f) park area? Indicate the location on 6(f) map. Do parties understand that a Section 6(f) conversion may occur if private or non-recreation activities occur on any pre-existing right-of-way, easement, leased area?

R19-9 CONT'D

6. Are overhead utility lines present, and if so, explain how they will be treated per LWCF Manual.

7. As a result of this project, describe **new** types of outdoor recreation opportunities and capacities, and short and long term public benefits.

8. Explain any existing non-recreation and non-public uses that will continue on the site(s) and/or proposed for the future within the 6(f) boundary.

9. Describe the planning process that led to the development of this proposal. Your narrative should address:

a. How was the interested and affected public notified and provided opportunity to be involved in planning for and developing your LWCF proposal? Who was involved and how were they able to review the **completed** proposal, including any state, local, federal agency professionals, subject matter experts, members of the public and Indian Tribes. Describe any public meetings held and/or formal public comment periods, including dates and length of time provided for the public to participate in the planning process and/or to provide comments on the completed proposal.

b. What information was made available to the public for review and comment? Did the sponsor provide written responses addressing the comments? If so, include responses with this PD/ESF submission.

10. How does this proposal implement statewide outdoor recreation goals as presented in the Statewide Comprehensive Outdoor Recreation Plan (SCORP) (include references), and explain why this proposal was selected using the State's Open Project Selection Process (OPSP).

11. List all source(s) and amounts of financial match to the LWCF federal share of the project. The value of the match can consist of cash, donation, and in-kind contributions. The federal LWCF share and financial matches must result in a viable outdoor recreation area and not rely on other funding not mentioned here. Other federal resources may be used as a match if specifically authorized by law.

Source	Type of Match	Amount

12. Is this LWCF project scope part of a larger effort not reflected on the SF-424 (Application for Federal Assistance) and grant agreement? If so, briefly describe the larger effort, funding amount(s) and source(s). This will capture information about partnerships and how LWCF plays a role in leveraging funding for projects beyond the scope of this federal grant.

13. List all required federal, state, and local permits/approvals needed for the proposal and explain their purpose and status.

Proceed to Steps 5 through 7

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Step 3. Project Amendment (See LWCF Manual for guidance)

A. Increase/Change in Project Scope

1. **For Acquisition Projects:** To acquire additional property that was not described in the original project proposal and NEPA documentation, follow Step 2A-Acquisition Project and 2D.
2. **For Development Projects:** To change the project scope for a development project that alters work from the original project scope by adding elements or enlarging facilities, follow Step 2B-Development Project and 2D.
3. **For Combination Projects:** Follow Step 2C as appropriate.

B. Section 6(f)(3) Conversion Proposal

Prior to developing your Section 6(f)(3) conversion proposal, you must consult the LWCF Manual and 36 CFR 59.3 for complete guidance on conversions. Local sponsors must consult early with the State LWCF manager when a conversion is under consideration or has been discovered. States must consult with their NPS-LWCF manager as early as possible in the conversion process for guidance and to sort out and discuss details of the conversion proposal to avoid mid-course corrections and unnecessary delays. **A critical first step is for the State and NPS to agree on the size of the Section 6(f) park land impacted by any non-recreation, non-public use, especially prior to any appraisal activity.** Any previous LWCF project agreements and actions must be identified and understood to determine the actual Section 6(f) boundary.

The Section 6(f)(3) conversion proposal including the required NEPA environmental review documents (CE recommendation or an EA document) must focus on the loss of public outdoor recreation park land and recreational usefulness, and its replacement per 36 CFR 59, and not the activities precipitating the conversion or benefits thereof, such as the impacts of constructing a new school to relieve overcrowding or constructing a hotel/restaurant facility to stimulate the local economy. Rather, the environmental review must: 1) focus on "resource impacts" as indicated on the ESF (Step 6), including the loss of public park land and recreation opportunities (ESF A-15), and 2) the impacts of creating new replacement park land and replacement recreation opportunities. A separate ESF must be generated for the converted park area and each replacement site. Section 6(f)(3) conversions always have more than minor impacts to outdoor recreation (ESF A-15) as a result of loss of parkland requiring an EA, except for "small" conversions as defined in the LWCF Manual Chapter 8.

For NPS review and decision, the following elements are required to be included in the State's completed conversion proposal to be submitted to NPS:

1. A letter of transmittal from the SLO recommending the proposal.

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2. A detailed explanation of the sponsor's need to convert the Section 6(f) parkland including all efforts to consider other practical alternatives to this conversion, how they were evaluated, and the reasons they were not pursued.
3. An explanation of how the conversion is in accord with the State Comprehensive Outdoor Recreation Plan (SCORP).
4. Completed "State Appraisal/Waiver Valuation Review form in Step 7 for each of the converted and replacement parcels certifying that the appraisals meet the "Uniform Appraisal Standards for Federal Land Acquisitions." States must retain copies of the appraisals/waiver valuations and make them available for review upon request.
5. For the park land proposed for conversion, a detailed description including the following:
   a. Specific geographic location on a map, 9-digit zip code, and name of park or recreation area proposed for conversion.
   b. Description of the area proposed for the conversion including the acreage to be converted and any acreage remaining. For determining the size of the conversion, consider not only the physical footprint of the activity precipitating the conversion, but how the precipitating activity will impact the entire 6(f) park area. In many cases the size of the converted area is larger than the physical footprint. Include a description of the recreation resources, facilities, and recreation opportunities that will be impacted, displaced or lost by the proposed conversion. For proposals to partially convert a Section 6(f) park area, the remaining 6(f) park land must remain recreationally viable and not be impacted by the activities that are precipitating the conversion. If it is anticipated that the precipitating activities impact the remaining Section 6(f) area, the proposed area for the conversion should be expanded to encompass all impacted park land.
   c. Description of the community and population served by the park, including users of the park and uses.
   d. For partial conversions, a revised 6(f) map clearly indicating both the portion that is being converted and the portion remaining intact under Section 6(f).
6. For each proposed replacement site:
   a. Specific geographic location on a map, 9-digit zip code, and geographical relationship of converted and replacement sites. If site will be added to an existing public park/outdoor recreation area, indicate on map.
   b. Description of the site's physical characteristics and resource attributes with number and types of resources and features on the site, for example, 15 acres wetland, 2,000 feet beachfront, 50 acres forest, scenic views, 75 acres riparian, vacant lot, special habitat, any unique or special features, structures, recreation amenities, historic/cultural resources, hazardous materials/contamination history, restrictions, institutional controls, easements, rights-of-way, overhead/underground utilities including overhead wires, towers, etc.
   c. Identification of the owner of the replacement site and its recent history of use/function up to the present.

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d. Detailed explanation of how the proposed replacement site is of reasonably equivalent usefulness and location as the property being converted, including a description of the recreation needs that will be met by the new replacement parks, populations to be served, and new outdoor recreation resources, facilities, and opportunities to be provided.

e. Identification of owner and manager of the new replacement park?

f. Name of the new replacement park. If the replacement park is added to an existing public park area, will the existing area be included within the 6(f) boundary? What is the name of the existing public park area?

g. Timeframe for completing the new outdoor recreation area(s) to replace the recreation opportunity lost per the terms of conversion approval and the date replacement park(s) will be open to the public.

h. New Section 6(f) map for the new replacement park.

7. NEPA environmental review, including NHPA Section 106 review, for both the converted and replacement sites in the same document to analyze how the converted park land and recreational usefulness will be replaced. Except for "small" conversions (see LWCF Manual Chapter 8), conversions usually require an EA.

Proceed to Steps 5 through 7

C. Proposal for a Public Facility in a Section 6(f) Area

Prior to developing this proposal, you must consult the LWCF Manual for complete guidance. In summary, NPS must review and decide on requests to construct a public indoor and/or non-recreation facility within a Section 6(f) area. In certain cases NPS may approve the construction of public facilities within a Section 6(f) area where it can be shown that there will be a net gain in **outdoor recreation** benefits and enhancements for the entire park. In most cases, development of a non-recreation public facility within a Section 6(f) area constitutes a conversion. For NPS review, the State/sponsor must submit a proposal to NPS under a letter of transmittal from the SLO that:

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1. Describes the purpose and all proposed uses of the public facility such as types of programming, recreation activities, and special events including intended users of the new facility and any agency, organization, or other party to occupy the facility. Describe the interior and exterior of the facility, such as office space, meeting rooms, food/beverage area, residential/lodging area, classrooms, gyms, etc. Explain how the facility will be compatible with the outdoor recreation area. Explain how the facility and associated uses will significantly support and enhance existing and planned outdoor recreation resources and uses of the site, and how outdoor recreation use will remain the primary function of the site. (The public's outdoor recreation use must continue to be greater than that expected for any indoor use, unless the site is a single facility, such as a swimming pool, which virtually occupies the entire site.)
2. Indicates the exact location of the proposed public facility and associated activities on the site's Section 6(f) map. Explain the design and location alternatives considered for the public facility and why they were not pursued.
3. Explains who will own and/or operate and maintain the facility? Attach any 3rd party leases and operation and management agreements. When will the facility be open to the public? Will the facility ever be used for private functions and closed to the public? Explain any user or other fees that will be instituted, including the fee structure.
4. Includes required documents as a result of a completed NEPA process (Steps 5 – 7).

Proceed to Steps 5 through 7

Step 4. Proposals for Temporary Non-Conforming Use, Significant Change in Use, and Sheltering Facilities
(See LWCF Manual for guidance)

A. Proposal for Temporary Non-Conforming Use

Prior to developing this proposal, you must consult the LWCF Manual for complete guidance. NPS must review and decided on requests for temporary uses that do not meet the requirements of allowable activities within a Section 6(f) area. A temporary non-conforming use is limited to a period of six months (180 days) or less. Continued use beyond six-months will not be considered temporary, and may result in a Section 6(f)(3) conversion of use requiring the replacement of converted parkland. For NPS review, describe the temporary non-conforming use (activities other than public outdoor recreation) in detail including the following information:

1. A letter of transmittal from the SLO recommending the proposal.
2. Describe in detail the proposed temporary non-conforming use and all associated activities, why it is needed, and alternative locations that were considered and why they were not pursued.
3. Explain length of time needed for the temporary non-conforming use and why.
4. Describe the size of the Section 6(f) area affected by the temporary non-conforming use activities and expected impacts to public outdoor recreation areas, facilities and opportunities. Explain efforts to keep the size of the area impacted to a minimum. Indicate the location of the non-conforming use on the site's 6(f) map.
5. Describe any anticipated temporary/permanent impacts to the Section 6(f) area and how the sponsor will mitigate them during and after the non-conforming use ceases.
6. Consult the LWCF Manual for additional requirements and guidelines before developing the proposal.

Proceed to Steps 5 through 7

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B. Proposal for Significant Change in Use

Prior to developing the proposal, you must consult the LWCF Manual for complete guidance. NPS approval must be obtained prior to any change from one eligible use to another when the proposed use would significantly contravene the original plans or intent for the area outlined in the original LWCF application for federal assistance. Consult with NPS for early determination on the need for a formal review. NPS approval is only required for proposals that will significantly change the use of a LWCF-assisted site (e.g., from passive to active recreation). The proposal must include and address the following items:

1. A letter of transmittal from the SLO recommending the proposal.
2. Description of the proposed changes and how they significantly contravene the original plans or intent of LWCF agreements.
3. Explanation of the need for change in use and how the change is consistent with local plans and the SCORP.
4. Consult the LWCF Manual for additional requirements and guidelines before developing the proposal.

Proceed to Steps 5 through 7

C. Proposal for Sheltering Facilities

Prior to developing this proposal, you must consult the LWCF Manual for complete guidance. NPS must review and decide on all proposals to shelter an existing outdoor recreation facility or construct a new sheltered recreation facility within a Section 6(f) area regardless of funding source. The proposal must demonstrate that there is an increased benefit to public recreation opportunity. Describe the sheltering proposal in detail, including the following:

1. A letter of transmittal from the SLO recommending the proposal.
2. Describe the proposed sheltered facility, how it would operate, how the sheltered facility will include recreation uses that could typically occur outdoors, and how the primary purpose of the sheltered facility is recreation.
3. Explain how the sheltered facility would not substantially diminish the outdoor recreation values of the site including how the sheltered facility will be compatible and significantly supportive of the outdoor recreation resources present and/or planned.
4. Explain how the sheltered facility will benefit the total park's outdoor recreation use.
5. Describe efforts provided to the public to review the proposal to shelter the facility and has local support.
6. Document that the sheltered facility will be under the control and tenure of the public agency which sponsors and administers the original park area.

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CONT'D

7. Consult the LWCF Manual for additional requirements and guidelines before developing the proposal.

Proceed to Steps 5 through 7

Step 5. Summary of Previous Environmental Review (including E.O. 12372 - Intergovernmental Review)

To avoid duplication of effort and unnecessary delays, describe any prior environmental review undertaken at any time and still viable for this proposal or related efforts that could be useful for understanding potential environmental impacts. Consider previous local, state, federal (e.g. HUD, EPA, USFWS, FHWA, DOT) and any other environmental reviews. At a minimum, address the following:

1. Date of environmental review(s), purpose for the environmental review(s) and for whom they were conducted.
2. Description of the proposed action and alternatives.
3. Who was involved in identifying resource impact issues and developing the proposal including the interested and affected public, government agencies, and Indian tribes?
4. Environmental resources analyzed and determination of impacts for proposed actions and alternatives.
5. Any mitigation measures to be part of the proposed action.
6. Intergovernmental Review Process (Executive Order 12372):
   Does the State have an Intergovernmental Review Process? Yes ☐ No ☐. If "Yes", has the LWCF Program been selected for review under the State Intergovernmental Review Process? Yes ☐ No ☐. If "Yes", was this proposal reviewed by the appropriate State, metropolitan, regional and local agencies, and if so, attach any information and comments received about this proposal. If proposal was not reviewed, explain why not.
7. Public comment periods (how long, when in the process, who was invited to comment) and agency response.
8. Any formal decision and supporting reasons regarding degree of potential impacts to the human environment.
9. Was this proposed LWCF federal action and/or any other federal actions analyzed/reviewed in any of the previous environmental reviews? If so, what was analyzed and what impacts were identified? Provide specific environmental review document references.

Use resource impact information generated during previous environmental reviews described above and from recently conducted site inspections to complete the Environmental Screening Form (ESF) portion of this PD/ESF under Step 6. Your ESF responses should indicate your proposal's potential for impacting each resource as determined in the previous environmental review(s), and include a reference to where the analysis can be found in an earlier environmental review document. If the previous environmental review documents contain proposed actions to mitigate impacts, briefly summarize the mitigation for each resource as appropriate. The appropriate references for previous environmental review document(s) must be documented on the ESF, and the actual document(s)

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along with this PD/ESF must be included in the submission for NPS review.

Proceed to Steps 6 through 7

Step 6. Environmental Screening Form (ESF)

This portion of the PD/ESF is a working tool used to identify the level of environmental documentation which must accompany the proposal submission to the NPS. By completing the ESF, the project sponsor is providing support for its recommendation in Step 7 that the proposal either:

1. meets criteria to be categorically excluded (CE) from further NEPA review and no additional environmental documentation is necessary; or

2. requires further analysis through an environmental assessment (EA) or an environmental impact statement (EIS).

An ESF alone does not constitute adequate environmental documentation unless a CE is recommended. If an EA is required, the EA process and resulting documents must be included in the proposal submission to the NPS. If an EIS may be required, the State must request NPS guidance on how to proceed.

The scope of the required environmental analysis will vary according to the type of LWCF proposal. For example, the scope for a new LWCF project will differ from the scope for a conversion. Consult the LWCF Manual for guidance on defining the scope or extent of environmental analysis needed for your LWCF proposal. As early as possible in your planning process, consider how your proposal/project may have direct, indirect and cumulative impacts on the human environment for your type of LWCF action so planners have an opportunity to design alternatives to lessen impacts on resources, if appropriate. When used as a planning tool in this way, the ESF responses may change as the proposal is revised until it is ready for submission for federal review. Initiating or completing environmental analysis after a decision has been made is contrary to both the spirit and letter of the law of the NEPA.

The ESF should be completed with input from resource experts and in consultation with relevant local, state, tribal and federal governments, as applicable. The interested and affected public should be notified of the proposal and be invited to participate in scoping out the proposal (see LWCF Manual Chapter 4). At a minimum, a site inspection of the affected area must be conducted by individuals who are familiar with the type of affected resources, possess the ability to identify potential resource impacts, and to know when to seek additional data when needed.

R19-9 CONT'D

At the time of proposal submission to NPS for federal review, the completed ESF must justify the NEPA pathway that was followed: CE recommendation, production of an EA, or production of an EIS. The resource topics and issues identified on the ESF for this proposal must be presented and analyzed in an attached EA/EIS. Consult the LWCF Manual for further guidance on LWCF and NEPA.
The ESF contains two parts that must be completed:

Part A. Environmental Resources **Part B. Mandatory Criteria**

Part A: For each environmental resource topic, choose an impact estimate level (none, negligible, minor, exceeds minor) that describes the degree of potential negative impact for each listed resource that may occur directly, indirectly and cumulatively as a result of federal approval of your proposal. For each impacted resource provide a brief explanation of how the resource might be affected, how the impact level was determined, and why the chosen impact level is appropriate. If an environmental review has already been conducted on your proposal and is still viable, include the citation including any planned mitigation for each applicable resource, and choose an impact level as mitigated. If the resource does not apply to your proposal, mark NA in the first column. Add any relevant resources (see A.24 on the ESF) if not included in the list.

Use a separate sheet to briefly clarify how each resource could be adversely impacted; any direct, indirect, and cumulative impacts that may occur; and any additional data that still needs to be determined. Also explain any planned mitigation already addressed in previous environmental reviews.

Part B: This is a list of mandatory impact criteria that preclude the use of categorical exclusions. If you answer "yes" or "maybe" for any of the mandatory criteria, you must develop an EA or EIS regardless of your answers in Part A. Explain all "yes" and "maybe" answers on a separate sheet.

Page **7** of **11**

2. Response to Comments

NPS Form 10-904 (Rev. 09/2016)
National Park Service

OMB Control No. 1024-0031
Expiration Date 01/31/2020

A. ENVIRONMENTAL RESOURCES Indicate potential for adverse impacts. Use a separate sheet to clarify responses per instructions for Part A on page 9.	**Not Applicable -** Resource does not exist	**No/Negligible Impacts -** Exists but no or negligible impacts	**Minor Impacts**	**Impacts Exceed Minor** EA/EIS required	**More Data Needed to Determine Degree of Impact** EA/EIS required
1. Geological resources: soils, bedrock, slopes, streambeds, landforms, etc.					
2. Air quality					
3. Sound (noise impacts)					
4. Water quality/quantity					
5. Stream flow characteristics					
6. Marine/estuarine					
7. Floodplains/wetlands					
8. Land use/ownership patterns; property values; community livability					
9. Circulation, transportation					
10. Plant/animal/fish species of special concern and habitat; state/federal listed or proposed for listing					
11. Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.					
12. Unique or important wildlife/ wildlife habitat					
13. Unique or important fish/habitat					
14. Introduce or promote invasive species (plant or animal)					
15. Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc. *Most conversions exceed minor impacts. See Step 3.B*					
16. Accessibility for populations with disabilities					
17. Overall aesthetics, special characteristics/ features					
18. Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc. Attach SHPO/THPO determination.					
19. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure					
20. Minority and low-income populations					
21. Energy resources (geothermal, fossil fuels, etc.)					
22. Other agency or tribal land use plans or policies					
23. Land/structures with history of contamination/hazardous materials even if remediated					
24. Other important environmental resources to address.					

R19-9 CONT'D

Page 8 of 11

NPS Form 10-904 (Rev. 09/2016)
National Park Service

OMB Control No. 1024-0031
Expiration Date 01/31/2020

B. Mandatory Criterial *If your LWCF proposal is approved, would it…*	Yes	No	To Be Determined
1. Have significant impacts on public health or safety?			
2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands, wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (E.O. 11990); floodplains (E.O 11988); and other ecologically significant or critical areas.			
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)]?			
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?			
5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?			
6. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?			
7. Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office. (Attach SHPO/THPO Comments)			
8. Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.			
9. Violate a federal law, or a state, local, or tribal law or requirement imposed for the protection of the environment?			
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898)?			
11. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007)?			
12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area, or actions that may promote the introduction, growth, or expansion of the range of			

R19-9 CONT'D

Environmental Reviewers
The following individual(s) provided input in the completion of the environmental screening form. List all reviewers including name, title, agency, field of expertise. Keep all environmental review records and data on this proposal in state compliance file for any future program review and/or audit. The ESF may be completed as part of a LWCF pre-award site inspection if conducted in time to contribute to the environmental review process for the proposal.
1. 2. 3. **The following individuals conducted a site inspection to verify field conditions.** *List name of inspector(s), title, agency, and date(s) of inspection.* 1. 2. 3. **State may require signature of LWCF sub-recipient applicant here:** _____ **Date:** _____

Step 7. Recommended NEPA Pathway and State Appraisal/Waiver Valuation
First, consult the NPS list of Categorical Exclusions (CEs). If you find your action in the CE list and you have determined in Step 6A that impacts will be minor or less for each applicable environmental resource on the ESF and you answered "no" to all of the "Mandatory Criteria" questions in Step 6B, the proposal qualifies for a CE. Complete the following "State LWCF Environmental Recommendations" box indicating the CE recommendation. If you find your action in the CE list and you have determined in Step 6A that impacts will be greater than minor or that more data is needed for any of the resources and you answered "no" to all of the "Mandatory Criteria" questions, your environmental review team may choose to do additional analysis to determine the context, duration, and intensity of the impacts of your project or may wish to revise the proposal to minimize impacts to meet the CE criteria. If impacts remain at the greater than minor level, the State/sponsor must prepare an EA for the proposal. Complete the following "State Environmental Recommendations" box indicating the need for an EA.

Page **9** of **11**

2. Response to Comments

NPS Form 10-904 (Rev. 09/2016)
National Park Service

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If you do not find your action in the CE list, regardless of your answers in Step 6, you must prepare an EA or EIS. Complete the following "State Environmental Recommendations" box indicating the need for an EA or EIS.

State NEPA Pathway Recommendation

☐ *I certify that a site inspection was conducted for each site involved in this proposal and to the best of my knowledge, the information provided in this LWCF Proposal Description and Environmental Screening Form (PD/ESF) is accurate based on available resource data. All resulting notes, reports and inspector signatures are stored in the state's NEPA file for this proposal and are available upon request. On the basis of the environmental impact information for this LWCF proposal as documented in this LWCF PD/ESF with which I am familiar, I recommend the following LWCF NEPA pathway:*

☐ This proposal qualifies for a Categorical Exclusion (CE).

- CE Item #:
- Explanation:

☐ This proposal requires an Environmental Assessment (EA) which is attached and has been produced by the State/sponsor in accordance with the LWCF Program Manual.

☐ This proposal may require an Environmental Impact Statement (EIS). NPS guidance is requested per the LWCF Program Manual.

Reproduce this certificate as necessary. Complete for each LWCF appraisal or waiver valuation.

State Appraisal/Waiver Valuation Review

Property Address: $

Date of appraisal transmittal letter/waiver:

Real property value:

Effective date of value:

R19-9 CONT'D

I certify that:

☐ *A State-certified Review Appraiser has reviewed the appraisal and has determined that it was prepared in conformity with the Uniform Appraisal Standards for Federal Land Acquisitions.*

OR

☐ *The State has reviewed and approved a waiver valuation for this property per 49 CFR 24.102(c)(2)(ii).*

SLO/ASLO Original Signature: _____ Date: _____

Typed Name | Title | Agency

Page **10** of **11**

NPS Form 10-904 (Rev. 09/2016)
National Park Service

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Expiration Date 01/31/2020

NOTICES

Paperwork Reduction Act Statement

In accordance with the Paperwork Reduction Act (44 U.S.C. 3501), please note the following. This information collection is authorized by the Land and Water Conservation Fund Act of 1965 (54 U.S.C. 2003 et seq.). Your response is required to obtain or retain a benefit. We use this information to obtain descriptive and environmental information about the proposal. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid Office of Management and Budget control number. OMB has assigned control number 1024-0031 to this collection.

Estimated Burden Statement

Completion times vary widely depending on the use of the form, from approximately 30 minutes to complete the cover page only to 500 hours for a difficult conversion of use. We estimate that the average completion time for this form is 8 hours for an application, 2 hours for an amendment, and 112 hours for a conversion of use, including the time necessary to review instructions gather data and review the form. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information Collection Officer, National Park Service, 12201 Sunrise Valley Drive, MS-242 Rm. 2C114, Reston, VA 20192. Please do not send your completed form to this address; but rather to the address at the top of the form.

R19-9
CONT'D

Page **11** of **11**

2. Response to Comments

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R19. Response to Comments from Justine Nielsen, dated November 19, 2018.

R19-1 The commenter states that the proposed Project violates the LWCF Agreement, and that a NEPA review is required prior to the District's review and consideration of the proposed Project.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

For the purposes of analyzing project consistency with the National Parks System Proposal Description and Environmental Screening Form requirements and determining the level of NEPA analysis that would be required as part of the proposed conversion, the project improvements were compared to parts A and B of the Environmental Screening Form, as shown in Tables 5.8-3 and 5.8-4 in Section 5.8 of the DEIR. As provided, with implementation of mitigation measures (as identified in their respective sections of the DEIR), the project would result in less than significant impacts. The proposed improvements would not exceed "minor impacts" or require further studies to determine their significance, and preparation of an EIS or EA would not be required. OGALS has stated that the project would qualify for a Categorical Exclusion, and NPS reinforced this position in their preliminary review, meaning the project would not require a full NEPA process.

R19-2 The commenter states that the proposed Project would encroach onto the 6(f)(3) boundary, which constitutes a conversion, thereby violating the LWCF Agreement. The commenter states that current environmental review must stop until the conversion process is reviewed by the National Park Service.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes. Additionally, OGALS has stated the project would qualify for a Categorical Exclusion, and NPS reinforced this position in their preliminary review, meaning the project would not require a full NEPA process.

R19-3 The commenter asks if the District has taken all necessary steps prior to submitting the conversion, and if so, where the documentation is. The commenter also asks if the public was involved in the conversion proposal.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the

project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes. In addition, the District underwent a lengthy design development process with numerous public meeting and opportunities for public input, as further described in Section 2.2 and Attachment 1 of this FEIR. See also response to comment R19-1.

R19-4 The commenter states that there is no public record that the District has completed the requirements or steps outlined in the Proposal Description and Environmental Screening Form (PD/ESF), or that a categorical exemption or Environmental Assessment, under NEPA, have been prepared before the conversion.

See response to comment R19-1. The project improvements were reviewed for their consistency with the PD/ESF form, and preparation of an EA or EIS would not be required.

R19-5 The commenter highlights Steps 3, 5-7 of the PD/ESF, stating that an entirely separate PD/ESF must be generated for the converted park area and each replacement site, and that further information and assessment prior to submitting the conversion proposal is required.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. See also response to comment R19-1.

R19-6 The commenter states that the proposed Project would have significant environmental impacts on biological resources, cultural resources, geology and soils, and tribal cultural resources, and that these impacts would require an Environmental Assessment and possibly an EIS, depending on the results of the Environmental Screening Form.

See Impact 5.8-2 of the DEIR, which determined that preparation of an Environmental Assessment or Environmental Impact Statement would not be required. With implementation of mitigation measures as described throughout the DEIR, the project would result in less than significant impacts to biological resources, cultural resources, geology and soils, and tribal cultural resources.

R19-7 The commenter states that there is an existing conversion on the park property, and that, according to the LWCF Guidelines, the District must either apply for retroactive approval or face penalties.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

As discussed in Chapter 5.8 of the DEIR, the District has worked closely with the Office of Grant and Local Services to prepare a proposal for a "conversion" in order to

regain and maintain compliance with the Land and Water Conservation Fund Agreement and 6(f)(3) boundary on behalf of both the District and the City.

R19-8 The commenter states that CEQA review should not have commenced because the completion of a NEPA review and all the steps in the PD/ESF are required before the conversion proposal can be submitted to the National Park Service, and that skipping the NEPA review and PD/ESF steps is a violation of federal laws.

Please see Master Response in Section 2.1 of this FEIR, which explains the role of NEPA for this project.

R19-9 The commenter attached a copy of the LWCF Agreement and the PD/ESF.

The commenter attached the original Land and Water Conservation Fund Program as Exhibit 1 (pages 4 to 11 of the commenters letter), and the Proposal Description and Environmental Screening Form as Exhibit 2 (pages 12 to 23 of the commenters letter). No comment was provided in addition to these attachments; therefore, no comment is necessary.

2. Response to Comments

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LETTER R20 – Greta Ott (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Comments of Rebuild of Cardiff School.
1 message

Greta Ott [redacted] Fri, Nov 16, 2018 at 8:09 PM
To: CardiffDEIR@cardiffschools.com

To whom it may concern,

As a Cardiff resident of 14 years, as well as an extremely involved parent of three kids who attended Cardiff School, I enthusiastically support the plan to rebuild Cardiff Elementary School.

The rebuild is what this community needs. The current campus is outdated, aging and inadequate.

R20-1 The plan as presented by the Cardiff school board will serve the needs of the Cardiff community today and in the future. The plan balances the educational and safety needs of students.

I applaud the relocation of the multi purpose room, reworked traffic flow and new classrooms. I also am excited about the new longer fields and relocated play area. Incan begin to express how great the reworked outdoor space will be for our community.

My only hope is that one day my future grandchildren can enjoy the new and well designed Cardiff School!

Thank you,
Greta Ott

2. Response to Comments

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R20. Response to Comments from Greta Ott, dated November 16, 2018.

R20-1 The commenter is supportive of the proposed Project, and believes that the reconstruction is needed as the current campus is outdated. The commenter states that the design proposed by the District meets the educational and safety needs of the students, and would benefit the community in the future. The commenter supports the relocation of the multipurpose building, new classrooms, and enhanced traffic flow.

The District appreciates the positive comment and support for the project. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R21 – Julie Parker (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

EIR Comments

2 messages

Julie Parker [redacted] Fri, Nov 16, 2018 at 10:58 AM
To: cardiffdeir@cardiffschools.com

R21-1 As Principal of Cardiff School for over 23 years, I am intimately involved in the daily functioning of the school campus. I fully support all the changes proposed in the rebuild project. The relocation of the multi-purpose room and the redesigned drop-off/pick-up zone and parking lot will increase the safety and security of our students. The reconfiguration of the school play fields, equipment area and blacktop will greatly enhance the daily play experiences of students as well as improve student supervision during recess.

The students, staff, families and community of Cardiff deserve the positive impact this rebuild will have.

Sincerely,

Julie Parker
Cardiff School Principal

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:58 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R21. Response to Comments from Julie Parker, dated November 16, 2018.

R21-1 The commenter supports the proposed Project, and states that the relocation of the multipurpose building and the redesign drop-off/pick-up zone and parking lot would increase safety. The commenter also states that the reconfiguration of the school play fields, equipment area, and blacktop would enhance the students' play experience while improving student supervision during recess.

The District appreciates the positive comment and support for the project. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R22 – Carolyn Van Lear (1 page)



Cardiff DEIR <cardiffdeir@cardiffschools.com>

(no subject)
2 messages

Carolyn Van Lear [redacted] Fri, Nov 16, 2018 at 3:15 PM
To: cardiffdeir@cardiffschools.com

R22-1 I think the Cardiff School project is an exceptional one, designed to benefit so many community members. Families, clubs, organizations, and sport teams will be able to enjoy and utilize the big field with the adjacent assembly steps. Thank you, Cardiff School, for considering the community's use when you designed the school.

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:57 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R22. Response to Comments from Carolyn Van Lear, dated November 16, 2018.

R22-1 The commenter supports the proposed Project, and states that the proposed design benefits community members, families, clubs, organizations, and sporting teams. The commenter appreciates the District for considering the community's use in the proposed design.

The District appreciates the positive comment and support for the project. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R23 – Jill Vinson (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Letter of support

2 messages

Jill Vinson <jill.vinson@cardiffschools.com> Fri, Nov 16, 2018 at 3:41 PM
To: Cardiff DEIR <cardiffdeir@cardiffschools.com>

I am writing this in support of Cardiff School District's plan to rebuild Cardiff School. This final plan was developed with a great deal of input from all stakeholders. The final design plan takes many of the original community concerns into consideration, yet holds firmly to the District's primary responsibility to prioritize student safety and program needs.

In the proposed plan, the administration building, built in 2002, will remain in place and serve as a central core to the rest of the site plan. The new multi-purpose building needs to be placed next to the administration building at the front of the school, adjacent to designated parking, in order to keep the interior of the campus secure when school and community events bring the public to campus during school hours. The size of the building will accommodate the entire student body at one time, whereas the current, undersized multipurpose building cannot. The location of the building, adjacent to the grassy fields, also provides an indoor/outdoor space for the monthly assemblies, which are a hallmark of the Cardiff School culture, and a space for families to watch their children play the many organized sports that take place all year long after hours on the school's play fields, known as George Berkich Park. Creating one long, contiguous grassy area rather than two areas separated by a play apparatus will give the children twice as much play area during the school day. Currently the north field is unable to be used during school hours as it is not feasible to supervise children in its current layout. R23-1

The layout of the new design provides for a more functional relationship between the program spaces on the Cardiff School campus. Indoor/outdoor learning spaces are prioritized and, along with new, operable windows, take advantage of the mild coastal climate. The new kindergarten courtyard provides a cohesive, protected instructional and play area for our youngest students. The new parking lot and drop-off/pick-up area will provide a much safer designated off-street space for the loading and unloading of students.

The Land and Water Conservation Fund grant that was signed by the City of Encinitas and the Cardiff School District in 1993 calls for a certain amount of the school's play fields (aka George Berkich Park), to remain as outdoor recreation space in perpetuity. The fields and adjacent play area are the property of the Cardiff School District. The Office of Grants and Local Services (OGALS), the State agency responsible for overseeing the grant, has published an eighteen page stewardship guide outlining a standard process for amendments to the agreement. The District has followed the direction of OGALS in developing a proposal that enhances the outdoor recreation area while addressing student safety and accommodating the school's educational program needs. R23-2

I am excited for the new school to be built. The 55-65+ year-old Cardiff School is surrounded by a beautiful community, full of lovely homes and businesses. Described as the "heart of our community", the students of Cardiff School deserve a safe, modern, new learning environment that is a reflection of the high standards and values that our community holds dearly.

--

Jill Vinson
Superintendent
Cardiff School District
jill.vinson@cardiffschools.com
[redacted]
[redacted]

Lifelong Learners | Contributing Citizens | Educational Excellence

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:57 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R23. Response to Comments from Jill Vinson, dated November 16, 2018.

R23-1 The commenter is supportive of the proposed Project, and states that the design was developed based on stakeholders' input. The commenter describes how the proposed buildings and relocation of buildings would create functionality, safety, and enhance the programs at the school.

The District appreciates the positive comment and support for the project. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

R23-2 The commenter states that the LWCF grant that was signed by the City of Encinitas and the District requires that a certain amount of George Berkich Park, the school's play fields, remain as outdoor recreation space. The commenter states that the fields and adjacent play area are the District's property. The commenter states that the District has followed the direction of OGALS in developing the proposal for the enhanced outdoor recreation area.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes. Additionally, as described in the Master Response, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval.

2. Response to Comments

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LETTER R24 – Mark Whitehouse (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Draft EIR Comments
2 messages

Mark Whitehouse [redacted] Fri, Nov 16, 2018 at 7:35 PM
To: CardiffDEIR@cardiffschools.com

To whom it may concern,

I have been involved in the Measure GG rebuild process from the outset. As a Cardiff resident of 21 years, a parent of children who attended the schools, and school board member, I fully support the current plan to rebuild Cardiff Elementary School.

R24-1 As a school board, we have long recognized that the current campus is aging and no longer adequately serves the evolving educational and safety needs of students.

The current plan has evolved over the years, starting with positive community input on the original idea and then winning 66% support in election for Measure GG. After Measure GG was overwhelmingly passed, the school board and district worked with the community to develop a concrete plan.

Today after many iterations and compromises, I am 100% convinced we have a plan that will serve the needs of the Cardiff community going forward and fulfills the wish of the voters to modernize Cardiff Schools.. The plan balances the educational and safety needs of students along with the role of the school as a community resource.

Specifically:
- The school retains approximately the same footprint, is low profile and maintains much of the open space of the original campus.
R24-2 - The parking and traffic congestion will be much improved with a new expanded drop off area
- The Muti-purpose room will now accommodate the entire student body and is located close to the entrance (enabling safe community use).
- The 1960's era classrooms will be rebuilt to provide modern new educational facilities

In summary, the school board, school district, parents, and a vast majority of the community fully supports this plan. The plan is a great plan that has been carefully developed over time with community input and serves the needs of Cardiff and its students.

Mark Whitehouse
[redacted]

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:56 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R24. Response to Comments from Mark Whitehouse, dated November 16, 2018.

R24-1 The commenter is supportive of the proposed Project, and states that the design has evolved. The commenter states that the District and School Board have worked with community to develop the design.

The District is appreciative of the positive comment and support for the project. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

R24-2 The commenter states that the design meets the educational and safety needs of the students, while also being a community resource. The commenter states that the design would improve parking and traffic, modernize the classrooms, provide a multipurpose building that accommodates the entire student body, and retains approximately the same footprint of the school. The commenter states that the plan is supported by the School Board, District, parents, and a vast majority of the community.

The District is appreciative of the positive comment and support for the project. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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Letter R25 – J Barry (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff School Rebuild
2 messages

J Barry [redacted] Sat, Nov 17, 2018 at 5:50 PM
To: "cardiffDEIR@cardiffschools.com" <cardiffDEIR@cardiffschools.com>

R25-1 *I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for* ***parkland to be exchanged for a parking lot****! This change will have a negative impact on ALL of Cardiff. All this negative impact for a school with a student population that is less than HALF the student population of an average elementary school!* **Read your research people***… the students need* **more** *space to move and be active in order to learn, not less!*

Sent from Mail for Windows 10

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:54 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R25. Response to Comments from J Barry, dated November 17, 2018.

R25-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot. The commenter states that the conversion of the park land to a parking lot would negatively impact the student population, as students need more space to be active and learn, not less.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R26 – Dave Clark (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff Elementary
2 messages

Dave Clark [redacted] Sat, Nov 17, 2018 at 6:50 PM
To: cardiffdeir@cardiffschools.com

R26-1 I am very excited about the upcoming improvements and redesign to Cardiff Elementary. The district has worked closely with the community to come up with an excellent design that creates new and modern learning spaces for students, improves safety, reduces traffic congestion during drop and pick up, and preserves open space for community use.

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:54 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R26. Response to Comments from Dave Clark, dated November 17, 2018.

R26-1 The commenter is supportive of the proposed Project and believes that the District has worked closely with the community to create a design that is modern, enhances learning spaces, improves safety, reduces traffic, and preserves open space for community use.

The District is appreciative of the positive comment and support for the project. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R27 – Russell Davis (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

ILLEGAL TAKING OF PARKLAND FROM GEORGE BERKICH PARK

2 messages

Russell A. Davis [redacted] Sat, Nov 17, 2018 at 4:42 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

To Whom It May Concern,

R27-1 I am a resident of the city of Cardiff-By-The-Sea, and I am strongly opposed to the Cardiff School Districts attempt to illegally take and destroy our open space parkland. Specifically, the Cardiff School District, through its Draft EIR, intends to convey the impression that it is not taking open park space, yet its proposed new boundaries includes more than 35,000 square feet of pavement. Perhaps someone within the school district perceives this as parkland, and would have their children playing upon it, however, the Draft EIR connotes that space as being set aside for parking. So its clear that the Cardiff School District can't have it both ways.

R27-2 Additionally, it is imperative that the Cardiff School District not be permitted to cast aside the agreements it made with the Berkich family AND the Land and Water Conservation Fund, and the National Park Service. The grant of this space was intended to be maintained as open park space, and not taken for other purposes-even though education is an important public purpose. A central tenant of this reasoning also hues to the school districts own admission that it does not

R27-3 anticipate growth in enrollment at the Cardiff Elementary School, and the schools success over the past 50-70 years provides ample evidence that taking additional parkland won't enhance the education of our students.

R27-4 As someone who has listened to hours and hours of rationalization from the school district as to why the land is needed, I cannot abide by their reasoning.(Oh, and contrary to the district's assertion, my views will not be impacted in anyway by this decision). Clearly refurbishing the existing facility, on the existing footprint will be sufficient to educate our grade school age children for another 50-70 years WITHOUT TAKING AWAY OUTDOOR PLAY SPACE. Even the suggestion that a larger space is needed to support our community elections is false, when you consider that most people in our community mail their ballots in, and we have a public library space that has been used for elections for many, many years.

R27-5 In sum, I am fully opposed to the Cardiff School Districts Draft EIR, which I believe is manipulative, unrealistic, and a sham. I also believe that the districts attempts to circumvent the districts duties with respect to the Berkich family, the Land and Water Conservation Fund and the National Park Service is illegal. Please stop this nonsense now before it continues to escalate and cost all of the taxpayers, and community members who will sue the district to stop this mess, whilst creating unnecessary animosity among neighbors.

Sincerely,

Russell Davis

Russell Davis
SanDiegoBusinessLaw
[redacted]
Cardiff, CA 92007
[redacted]
www.sandiegobusinesslaw.com

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:55 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R27. Response to Comments from Russell Davis, dated November 17, 2018.

R27-1 The commenter is opposed to the District illegally taking park land, and states that the DEIR proposes that the new park boundary would include over 35,000 square feet of pavement, which would be set aside for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R27-2 The commenter states that the LWCF grant was intended to maintain the park as open space, and that the District should not be permitted to set aside this agreement.

Please see Master Response in Section 2.1 of this FEIR.

R27-3 The commenter states that the District does not anticipate growth in enrollment at Cardiff School, and the school's success provides evidence that taking park land would not enhance students' education.

See Section 3.3.1.3, *Operations*, on page 3-2 of the DEIR. The commenter is correct in that over a 10-year enrollment period (from 2008 to 2018) the Cardiff School has had an average enrollment of 367 students and a capacity of 418 students (based on a classroom count of 19 with the District's loading factor of 22 students per classroom). Although the project would result in an increase in one classroom and a new capacity of 440 students, reduced class sizes are beneficial for student achievement[3] . Therefore, the increase in seating capacity at Cardiff School would result in a beneficial impact for student education as well as provide for increased capacity for future population growth in the area.

The commenter is correct in that taking park land would not be correlated to enhancing student education. However, the proposed Project does not propose taking park land, and the proposed play space would be adequate to accommodate the needs of Cardiff School students, in accordance with the California Department of Education.

R27-4 The commenter states that refurbishing the existing buildings within the current footprint of the school would suffice, and states that the enlarged multipurpose building that would be used to support community elections does not take into consideration that most community members mail their ballots or that voting can take place at the public library.

[3] California Teachers Association. *Class Size Does Matter*. January 2009. https://www.cta.org/issues-and-action/ongoing-issues/class-size-reduction/csr-research.aspx

2. Response to Comments

The multipurpose building is being increased to accommodate the school's educational program. The current size is not large enough nor does it function adequately for the needs of the student programs. In addition, the location of this building within the secured perimeter places student safety at risk when used by the public during school hours and adequate security of the classrooms cannot be accomplished with the current configuration. Additionally, refurbishing existing buildings would not meet the following project objectives: improving traffic flow and safety for pick-up; emphasize sustainability and environmentally focused design; prioritize learning spaces and create usable outdoor learning environments; replace portable classrooms with permanent classroom facilities; maximize use of limited District funds; maximize use of District-owned property; and regain and maintain compliance with the Land and Water Conservation Fund agreement on behalf of both the District and the City.

The proposed multipurpose building would be available for public use via the Civic Center Act, and it could be made available for voting during election periods. However, the primary use of the facility is intended to be for the Cardiff School program and its students; support for elections is in addition to the primary use by the District.

R27-5 The commenter opposed the DEIR, and states that it is manipulative and unrealistic. The commenter believes that the District's attempt to avoid the duties with respect to the Berkich family, LWCF, and the National Park Service is illegal.

The commenter does not specify how the DEIR is "manipulative" and "unrealistic." As discussed in Chapter 5.8 of the DEIR, the District has worked closely with the Office of Grant and Local Services to prepare a proposal for a "conversion" in order to regain and maintain compliance with the Land and Water Conservation Fund Agreement and 6(f)(3) boundary on behalf of both the District and the City. Further discussion is provided in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act lands on the project site.

LETTER R28 – Ryan Garrett (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

George Berkich Park
2 messages

Ryan Garrett [redacted] Sat, Nov 17, 2018 at 4:53 PM
To: "cardiffDEIR@cardiffschools.com" <cardiffDEIR@cardiffschools.com>

R28-1 *I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.*

Ryan Garrett, Cardiff Resident

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:55 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R28. Response to Comments from Ryan Garrett, dated November 17, 2018.

R28-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R29 – Kari Hamilton (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

public comment for the Draft EIR
2 messages

Kari Hamilton [redacted] Sat, Nov 17, 2018 at 1:05 PM
To: cardiffDEIR@cardiffschools.com

R29-1 *I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.*

Sincerely,
Kari Hamilton

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:56 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R29. Response to Comments from Kari Hamilton, dated November 17, 2018.

R29-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R30 – Eleanor Musick (31 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Comments on Cardiff School DEIR
1 message

eleanor musick [redacted] Sat, Nov 17, 2018 at 9:00 AM
To: CardiffDEIR@cardiffschools.com

Please see the attached letter with exhibits regarding the Cardiff School DEIR dated October 5, 2018.

Cordially,
Eleanor Musick

Comments on DEIR w exhibits 11-17-18.pdf
3045K

2. Response to Comments

November 17, 2018

VIA E-MAIL: CardiffDEIR@cardiffschools.com

Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

RE: Comments on Cardiff School Draft EIR

Dear Cardiff School District,

I am writing in reference to the draft EIR ("DEIR") dated October 5, 2018. While there are numerous assertions in the DEIR with which I take exception in terms of accuracy or completeness, for the sake of brevity, my comments below focus on four highly significant issues for which erroneous conclusions are made in the DEIR based on incorrect or missing facts and data. These points are listed below, not in any particular order of priority or importance:

R30-1

- Scope of the DEIR
- Environmental Analysis: Land Use and Planning
- Project Objectives
- Air Quality

The following discussion addresses each of the listed items, leading to the reasoned conclusion that the DEIR is incomplete and significant additional analysis is required before any certification can properly occur.

1. Scope of the DEIR

The scope of the DEIR as laid out in Section 2.4 divides the analysis into three separate impact categories: less than significant, potentially significant, and unavoidable. From the outset, the DEIR makes it clear that the District seeks to avoid addressing the true impact of the most contentious aspect of the project – the conversion of federally-protected recreation area to non-park use.

R30-2

Subsection 2.4.1 includes the following preamble: "[d]uring preparation of the Initial Study, the District determined that seven environmental impact categories were not significantly affected by … [the] Project. These categories are not discussed in detail in this DEIR." Item 6 on the list is "Recreation".

The Initial Study conducted a CEQA analysis only, asking the two questions specified in Appendix G of the CEQA Guidelines for determining significance with regard to recreational projects:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

These same questions are repeated in Table 8-1 of the DEIR, which lists Impacts Found Not to Be Significant.

R30-2 CONT'D

By adopting conclusions of an Initial Study that applied only CEQA standards, the District has failed to comply with the express requirements for an LWCF conversion application of *both* CEQA *and* NEPA analyses, making the DEIR incomplete and inadequate for purposes of determining LWCF grant compliance. This failure was pointed out to the District in my letter dated June 5, 2018, a copy of which is included as pages 145-146 of Appendix 2-1 of the DEIR. As explained in that letter, under NEPA regulations "evaluations of significance [are required to] consider both an impact's context and intensity." The Initial Study addresses neither context nor intensity – it asks only two questions that are completely irrelevant to the facts. Instead, the District is attempting to do an end-run around the most controversial aspect of this project by simply claiming that the recreational impact of the project has already been deemed insignificant, ignoring the fact that this determination was made using an incomplete analysis.

R30-3

A review of the Public Comments in Table 2-2 of the DEIR, and the numerous public letters in Appendix 2-1, makes it clear that the project's recreational impact under NEPA standards is anything but insignificant – the recreational impact on Berkich Park, i.e., the conversion of outdoor recreational space to a non-recreational purpose, is the foremost basis for opposition to the project. Neither the DEIR nor the Initial Study consider the context (geographic, social, and environmental contexts within which the project may have effects) or the severity of the potential impact on the Park. In fact, the only places in the DEIR in which "NEPA review" is mentioned are in Public Comments asserting that a NEPA review is mandatory, and the description in Section 5 of what analysis would be required as part of the proposed LWCF conversion.

In view of the complete failure of the DEIR to address the primary impact of the project on federally-protected recreational space according to NEPA requirements, the DEIR cannot be considered complete or acceptable for certification.

2. Environmental Analysis: Land Use and Planning

R30-4

The DEIR incorporates points and positions asserted in the District's preliminary submission to the California Office of Grants and Local Services (OGALS) in which it advocates for approval of its application for conversion of Section 6(f)(3)-protected park land. In Section 5 of the DEIR, the second paragraph under Subsection Impact 5.8-2 reads:

2. Response to Comments

> The proposed project is driven by a desire to enhance the outdoor recreation area for the benefit of the communication in addition to the need to provide for increased safety and security of student and current educational program at Cardiff School….The proposed improvements would not conflict with the integrity of the existing public recreation uses. Instead, they would enhance the existing outdoor recreational space and student and community use of it.

R30-4 CONT'D

This statement is a combination of self-serving opinion and alternative facts, offered to justify the proposed substitution of a parking lot for actively-used turf athletic fields. The District's project is in no way "*driven* by a desire to enhance the outdoor recreation area." Rather, it is motivated solely by the desire to expand the school's footprint at the expense of park land and community character. It's frankly hard to imagine how putting a building on an athletic field "would not conflict with the integrity" of the public's recreational use of that field. "Improvements" and "enhancements" are non-objective criteria. Rather, they are opinions offered by the District in an attempt to convince everyone that, for recreational usage, a parking lot is just as good as an athletic field.

Preliminary information requested in the LWCF conversion application is:

> (c) Why is this proposed change needed? Is this proposed change driven by the GRANTEE and/or public to improve or increase the park's public outdoor recreation use capacity, or driven by non-park reasons that are contrary to the primary purpose of improving the park for the public's recreation experience?

The District's submission to OGALS goes on at length about the school bond measure (Prop. GG), the approval of which has provided the District with funding to completely replace the majority of the school buildings. Fourteen projects were listed in the text of the proposition. Only the final two items on that list relate to outdoor recreational space:

R30-5

> Upgrade and improve playgrounds and playfields for school and community use; preserve existing mature trees and other landscaping where possible.
>
> Resurface, repair, and/or replace paved surfaces, play court areas, turf, and other grounds to eliminate safety hazards and improve outside instructional areas.

The District's letter to OGALS places these items first and second on its list, as if they were important priorities, but fails to mention that neither of these two items on their faces would require a change to the 6(f)(3) park boundary that reduces the total outdoor recreational space. The only reasonable conclusion then is that the District's desire to change the park boundary is *driven by non-park reasons* that are contrary to the primary purpose of improving the park for the public's recreation experience. Indeed, the primary school improvements that are proposed for location within the existing 6(f)(3) boundary are designed exclusively to benefit the school: a multi-purpose building intended to replace the existing multi-purpose building located near the south-

Cardiff School District

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R30-5 CONT'D

east side of the school, and a significantly-enlarged paved area that includes a parking lot and an extended pick-up/drop-off lane on the north side of the school.

DEIR Subsection "Impact 5.8-2" includes a list of seven bullet points of alleged "improvements" that would be implemented by allowing it to move forward with the proposed conversion of LWCF-protected park land. Inexplicably, however, the majority of these alleged improvements would not require any modification to the existing 6(f)(3) boundary map:

- The existing softball/baseball infield can be covered with grass and the back-stop removed without modifying the boundary.
- The playground apparatus that bifurcates the two grass fields can to be relocated without impacting the boundary.
- The proposed terraced seating area built into the side of the slope adjacent to the field is within the boundary; there is no need to modify the boundary.
- Picnic areas are already present within the boundary and can be moved, and new equipment can be added, if needed, without changing the boundary.
- The restrooms located in the classroom/laboratory building (part of the 2002 conversion) are already available for use by visitors when school is not operating.

R30-6

The seventh bullet point alleging improvement of drainage is highly suspect given that the proposed conversion trades a large turf area with natural drainage for impervious pavement that will produce increased run-off of contaminated water into the street and, ultimately, into the ocean.

The sixth bullet point directed to "improved parking that would serve visitors when not used by the school" hints of bad faith. The truth is that the "enhancements" arising from a parking lot with a small increase in the number of parking spaces and a drop-off/pick up lane inure solely to the school's benefit. There is absolutely no enhancement to the "outdoor recreation area and the user experience" that would result from the District's proposed swap of turf fields within the existing 6(f)(3) boundary for a large parking lot and drop-off/pick-up lane. A parking lot is *not* an outdoor recreation area.

R30-7

The District asserts that park users would benefit from the enlarged parking lot, however, like the drop-off/pick-up lane, this is also a false improvement from the standpoint of park visitors. Apart from occasional organized athletic activities, the majority of Berkich Park users arrive on foot or by bicycle. On typical weekend days, there are at most a half-dozen cars in the lot. Even if the lot is full during organized team events, there is ample street parking around the park. The District's proposed shift of its parking lot onto park land does nothing to improve park accessibility. Rather, the proposed swap of public recreational area for a parking lot exclusively benefits the school. To suggest anything else is disingenuous.

R30-8

The District's suggestion that " any square foot will do" in a trade of turf field park area for parking lot is highly cynical. The LWCF Act provides, among other things, that "the property proposed for replacement is of reasonably *equivalent usefulness* and location as that being converted." 36

2. Response to Comments

Cardiff School District

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R30-8 CONT'D

CFR 59.3(b)(3) (*emphasis added*). Paragraph (i) of this subsection goes on to state that "property to be converted must be evaluated in order to determine what recreation needs are being fulfilled by the facilities that exist and the types of outdoor recreation resources and opportunities available." Granted, the proposed location is reasonably equivalent. On the point of *equivalent usefulness*, however, it could not be further from the truth.

R30-9

The District offers to trade a parking lot, expanded solely for its own benefit with no recreational use whatsoever, for turf fields currently used for myriad athletic and other outdoor recreational activities. The fact that the District is offering a larger total area of parking lot in exchange of a relatively smaller area of turf field is no consolation. No one plays soccer, lacrosse, or football on a parking lot. The proposed trade fails miserably under the provisions of the LWCF. From a NEPA perspective, the social and environmental context along with the intensity of the recreational impact weigh heavily against such a modification, clearly demonstrating the inadequacy of the DEIR's analysis of this issue.

3. Project Objectives:

The District has made it clear throughout this process that it would have gone ahead with the conversion of Berkich Park land without a second thought but for resistance by community members. DEIR Section 7.1.1, item 1 lists the "District's Guiding Principles" for implementing the facility improvements. Item 1c on the list reads "[p]rioritize green space and public views; provide ample play space." The listing of this objective as a priority can, at best, be deemed "insincere" given the Public Comments in Table 2-2 of the DEIR, which indicate that the alleged goal of preserving green space and public views has not been perceived by the community as being either a priority or even of interest to the District.

R30-10

The neighborhoods surrounding Cardiff School and Berkich Park are commonly known as the "Walking and Composer Districts." The community is an eclectic mix of older homes and newer homes build on the sites of older homes. Typical community residents are physically active, ranging from relative newcomers (5 years or less) to fifth generation Cardiff residents. Walking and biking are popular forms of transportation, not only for the sake of activity itself, but to reach a destination. This is one reason why the District's proposal to swap park land for parking lot is so ludicrous – there isn't a need for more public parking in the immediate area. The local market, coffee shops, post office, boutiques, and many restaurants are all within walking distance of the neighborhood. At any given time, one can see young parents pushing strollers, adults of all ages walking to the market or to grab a coffee, often with one or two dogs in tow, and teenagers on skateboards on their way to play basketball, soccer, or to just hang out. The neighborhood is also within walking distance of several good surfing beaches, and on a typical day, surfers can be seen walking past the school on their way to or from a surfing session.

The character of the community is enhanced by its embrace of this outdoor lifestyle. The resulting reduced reliance on cars for transportation conveys the added benefit of greater social interaction among community members – neighbors see each other while walking or riding, taking time to

R30-10 CONT'D

stop and chat, or simply say "hello." Preservation of this community character is an important motivation behind the broad community push to save Berkich Park. This would also be a key factor in a NEPA analysis, had such an analysis been conducted in conjunction with the DEIR.

R30-11

The openness of Berkich Park in terms of the ability to look into the park from Montgomery Avenue contributes to the recreational benefits and the social connectivity of the community. The LWCF Park Stewardship Guide specifies the criteria for proposing a conversion. Subsection (d) of Step 1 of a proposal reads:

> How will the proposed change affect the public's park experience, public outdoor recreation, and VIEWSHED?

The Guide defines VIEWSHED as "a particular scenic outdoor natural area deemed worthy of preservation against development." The District admits that the views of several homes will be impacted by the proposed two-story tall multi-purpose building, which in the District's plan is positioned to take advantage of probably the best ocean view on the property. The individuals who live in the affected homes are understandably unhappy about the loss of their views and the possible resulting impact on their home values. (I note that the DEIR in Table 5.8-3 suggests, without providing any factual support, that the proposed school improvements would increase property value of surrounding residences. This is oddly inconsistent with the fact that many are losing ocean views.) Nonetheless, the potential view loss for these homes pales in comparison to the impact on the overall openness provided by the vistas from the street, an example of which is shown in Exhibit A.[1]

R30-12

Scores of people, both residents and visitors, walk along Montgomery Avenue every day. At any given time, individuals walking, biking, or even driving along this street can easily look through the fence into Berkich Park to observe activities ranging from organized soccer games or practices, families with children running and playing on the field, children and their parents riding bikes or scooters on the sidewalks around the field, senior citizens taking the opportunity to walk at a comfortable pace in a protected area, even people flying kites or radio controlled aircraft. Given the close-knit character of the community, it is not uncommon that a passer-by will see friends or neighbors in the park. They may simply wave in recognition, call out a greeting, or detour from their walk to join their friends in the park. This openness is an important element of the "Cardiff vibe" that connects the community's residents in a way that no longer exists in most urban and suburban areas. Sadly, this connection, and its important role in the community's character, would be damaged if the District moves forward with its plan to construct the multi-purpose building and parking lot within the protected park area. Instead of an open vista across the park, passersby will only see a parking lot and the backside of a windowless building (see Exhibit B). Park visitors

[1] The photographs selected for inclusion in the DEIR as representing the views from Montgomery Avenue (Figures 5.1-5) show only the school buildings and current parking lot, suggesting that little will be lost in terms of aesthetics by blocking the views with buildings. These photos fail to show the expansive views available to residents and passers-by on Montgomery a few yards to the west of the second photo. This is the view represented in Exhibit A.

2. Response to Comments

will be hidden from view, and passers-by will just keep on walking. The park's existing "open invitation" for personal engagement and participation in impromptu gatherings are aspects of "social context" that cannot simply be dismissed.

R30-12 CONT'D

The loss of viewshed, and the negative impact on community character, are important elements of the context and intensity question that would have been considered had a proper NEPA review been conducted. Since NEPA analysis was not conducted, the DEIR is incomplete and cannot be certified.

4. Air Quality

Subsection 5.2.2.5 of the DEIR recognizes the presence of air pollutants that would be produced by school construction and operation, and that certain population groups, including children, are considered more sensitive to such pollution. The DEIR recites various CEQA and County guidelines for thresholds of significance and provides a table (Table 5.2-4) listing Daily Emissions Inventory associated with the existing elementary school. These values were generated using the California Emissions Estimator Model (CalEEMod) and are not based on actual on-site measurements but rather are based on default data from regional sources.

R30-13

Impact conclusions under this section address air quality impacts by construction activity and on-going operation. The operations-based impacts on air quality are described in Subsections "Impact 5.2-2" and "Impact 5.2-4" of the DEIR, with each analysis concluding that impact to the air quality associated with operation of the school would be "less than significant." These conclusions are derived from incomplete analyses and are, therefore, not to be trusted.

California regulates the idling of vehicles 10,000 lbs. or greater (trucks, buses), but does not regulate the idling of passenger cars, SUVs and pick-up trucks. It is common practice for parents to allow their engines to run while waiting in lines to drop off or pick up students. Regardless of the lack of regulation of idling vehicles, passenger vehicles are well-known to be major pollution contributors, producing significant amounts of nitrogen oxides, carbon monoxide, and other pollution. Monitoring at schools has shown elevated levels of benzene, formaldehyde, acetaldehyde, and other air toxics during the hours coinciding with parents dropping off or picking up their children. A 2017 study by University of Toronto researchers found that students who linger around school pick-up zones breathe elevated levels of pollution from cars, exacerbating existing conditions such as asthma and allergies, and setting them up for health problems later in life, including respiratory and cardiac impairment.[2]

R30-14

The DEIR conclusion of "less than significant impact" from air pollution associated with operation of the school does not consider actual measurements under specific conditions that exist during drop-off and pick-up of students. It further fails to take into account the drastically modified air

[2] M.D. Adams and W.J. Requia, "How private vehicle use increases ambient air pollution concentrations at schools during morning drop-off of children", *Atmospheric Environment* 165 (2017) 264-273.

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R30-14 CONT'D

flow patterns that will result from combining the proposed building layout and enlarged parking lot and drop-off/pick-up lane with the anticipated increase in vehicle emissions in front of the school. I raised concerns about increased vehicle emissions from the extended drop-off/pick-up lane to the District during a regular board meeting several months ago, suggesting that a study was needed. My concern was apparently not shared by the Board since nothing in the DEIR even suggests that it could be an issue.

The current layout of the school includes reduced drop-off/pick-up capacity off of Montgomery Avenue relative to the proposed design. While cars are permitted to idle, and the pollution inhaled by children in the vicinity of the pick-up area is increased relative to ambient conditions, the current layout of the parking lot, open on its north, west and east sides, permits natural air flow that will clear out the residual gases fairly quickly. In contrast, looking at the proposed project layout shown in Exhibit C, air flow patterns will be significantly modified. Classroom A is moved north, closer to the street, relative to the existing classroom building. Multi-purpose Building L sits on the west side of the parking lot, where no structures currently exist. These buildings, combined with Administration/Library E on the south, form a "box canyon" that partially encloses the enlarged parking lot on three sides. Within this "canyon" structure, air flow is restricted, allowing pollutants to collect and persist for longer periods of time. Add on top of that the fact that a long caravan of cars will be sitting, or creeping slowly, within that canyon, continuously releasing fumes that will be inhaled by the children who are arriving at or standing near the drop-off area.

R30-15

By including an extended drop-off/pick-up lane in the proposed design, the District is facilitating the practice of forming caravans of idling vehicles. Instead of parking their cars and walking with their children as often occurs with the current layout, parents are being encouraged to join the caravan, leading to increased exhaust emissions to which children will be exposed at least once daily on school days. Parents are simultaneously being discouraged from parking and walking to the entrance due by the reduction in on-street parking resulting from the formation of wide driveway entrances to the drop-off and parking areas. Thus, by its proposed design, the District is creating conditions that will directly and adversely impact students' health.

If you doubt the potency of the exhaust fumes that these children will be inhaling on a daily, or twice daily, basis, I invite you to stand between 8:00 and 8:25 on any school morning in the patio area in front of my house along Stafford Avenue. As the long line of cars inches its way down the hill to the school, exhaust fumes are trapped in the patio area by the house's front wall. The choking exhaust lingers for a while, then dissipates with the help of the air flow along the length of the patio. As bad as this can be, the school design is much worse: my patio has only one wall; the other three sides are shrubs and trees. The three nearly-continuous walls of the school's building "canyon" will retain exhaust fumes much longer due to the restricted air flow. I can avoid being in my patio area at that time of day to limit my exposure to the fumes. The children at Cardiff School don't have that luxury -- they are required to be there.

2. Response to Comments

Cardiff School District

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R30-15 CONT'D

Nothing in the DEIR comes close to recognizing the significant health and environmental hazards from vehicle exhaust that would be created by the proposed project design. The planned extended drop-off/pick-up lane, offered for the convenience of parents without thought to the added health risks for their children, combined with placement of a large building on the park area to the west, is ill-conceived and dangerous. Failure to consider this important health impact is a serious omission from the DEIR that must be remedied before any certification occurs.

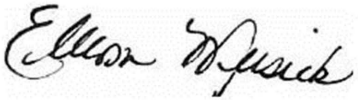
R30-16

With regard to the four issues detailed above, it is clear that the DEIR is inadequate and incomplete. Additional issues of concern relative to the adequacy of the DEIR are identified in my letter of July 26, 2018 to OGALS. OGALS forwarded a copy of this letter to the District, however, it was not included in Appendix 2-1 of the DEIR as a public statement of opposition to the project. To ensure that a copy is included, another copy, including exhibits, is attached hereto as Exhibit D.

In conclusion, the lack of NEPA analysis and failure to consider actual air pollution hazards that arise directly from the project design cause the DEIR to be glaringly incomplete. Further analyses at least addressed to the issues identified above must be conducted before any EIR can be considered to meet the criteria for certification.

Thank you for considering these comments.

Sincerely,



Eleanor Musick

[redacted]
Cardiff-by-the-Sea, CA 92007
[redacted]

Enclosures: Exhibits A-D

MONTGOMERY AVENUE STREET VIEW INTO BERKICH PARK - EXISTING
(from Google maps)

R30-17



EXHIBIT A

2. Response to Comments

AERIAL VIEW LOOKING NORTH OVER BERKICH PARK
(from District plan drawings)



MONTGOMERY AVENUE STREET VIEW INTO BERKICH PARK
(based on District plan drawings)

R30-17 CONT'D

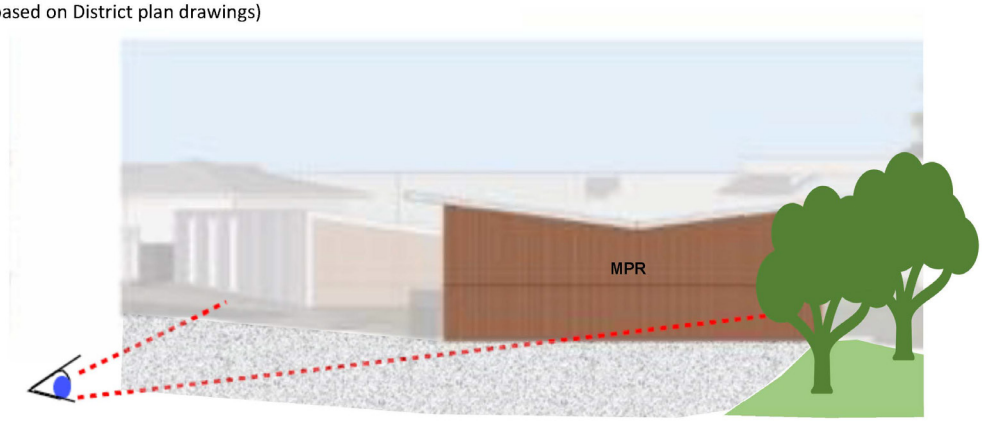
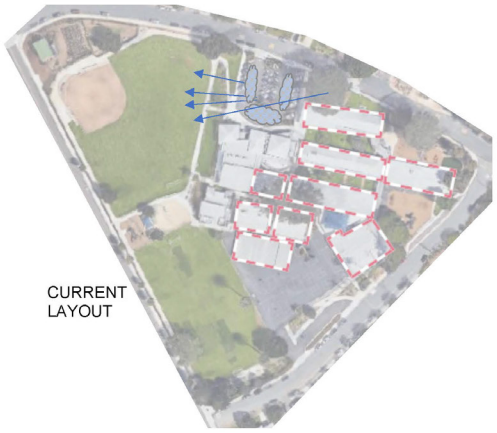


EXHIBIT B

R30-17
CONT'D





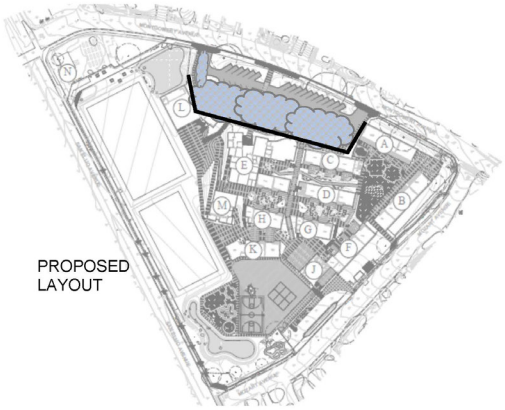


EXHIBIT C

2. Response to Comments

July 26, 2018

Ms. Jean Lacher
Chief
Office of Grants and Local Services
Department of Parks and Recreation
California State Parks
State of California
P.O. Box 942896
Sacramento, CA 94296-0001

RE: Proposed Conversion of LWCF Project No. 06—1346 : George Berkich Park

Dear Ms. Lacher,

R30-17 CONT'D

I am writing in reference to the draft letter dated July 5, 2018 that was sent to your office by Randy Peterson on behalf of Cardiff School District (the "District"). It appears that Mr. Peterson's letter is intended to be the District's Step 1 submission in the three-step process for proposing a conversion under the LWCF Park Stewardship requirements, however, the letter fails to address several elements specified in Section III of the Stewardship Guide ('the "Guide"). In addition, the letter misrepresents key facts that are expressly required to be disclosed in the preliminary information. The purpose of this letter is to rebut these misrepresentations and to provide facts relevant to the missing information. The letter is arranged in two portions: (1) a discussion of points raised in Mr. Peterson's letter, and (2) additional factors relevant to the opposition by members of the community to the proposed conversion.

1. The District's Letter:

First addressing one of the most troubling assertions in the letter, Mr. Peterson accuses individuals who oppose the current proposed plan of attempting "to stop the District from making any improvements to the school." *This statement is patently false*. Most individuals with whom I have discussed the school renovation voted in favor of the bond measure and have no objection to the renovation *per se*. The few people I know who voted against it accept that the bond was approved and that the renovation project is going forward. Contrary to the District's claim, the overwhelming basis for opposition to the current plan is the District's express intention to expand the school's footprint onto open space of a popular community park, George Berkich Park, which happens to be protected under the LWCF Act. This fact has been expressed repeatedly to the District by numerous community members, many of whom have taken time to attend multiple school board meetings and to request and participate in personal meetings with school board members as well as with city council members for the City of Encinitas (the "City"), which is a party to the LWCF grant agreement. Mr. Peterson's assertion that "the vast majority of the community has supported the District's plans from the beginning" relies on the vote approving the

EXHIBIT D

Ms. Jean Lacher

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bond measure. There have been no subsequent surveys since the District's plans were published that could possibly gauge overall community opinion. On the other hand, there is an ongoing petition published on-line at www.cardiffpreservationsociety.com that has collected more than 250 signatures, including entries as recent as June 2018, well after the District modified its original plan to consume an even larger area of the park, expressing opposition to the District's plan to expand the school onto the park. As you may also be aware, a letter signed by more than 30 Cardiff residents was recently forwarded to your office urging protection and preservation of George Berkich Park in its current form.

The preceding paragraph provides more accurate and complete information responsive to subsection (e) of Step 1 of the LWCF Stewardship Change Proposal than was provided in the District's letter. While that letter acknowledges the existence of opposition, it mispresents the facts and motivations, and neglects to provide any information responsive to the last sentence of the subsection:

R30-17
CONT'D

> If there is controversy or opposition, explain why the proposed change cannot be located somewhere else.

There have, in fact, been alternative plans presented and proposed, but the District insists that the currently proposed plan is the *only* plan they will consider. When I first informed the District of the existence of the LWCF grant protections of Berkich Park in April 2018, the hope was that the District would revise its plan to avoid use of park land, and thus obviate the present controversy. Instead, the District dug in its heels, insisting initially that it was not obligated to maintain the park because it owned the land[1], and then, more recently, suggesting that their plan was a big improvement that warranted taking park land and reducing the total recreation area. As one example of alternative plans, attached as Exhibit A is a copy of a drawing circulated by the District prior to the bond vote in 2016 with the 6(f)(3) boundary overlaid. Labeled "Cardiff School Master Plan," this drawing was published as an example of how the school would be rebuilt if the bond measure passed. The plan indicated an optional parking lot that would encroach on park land, but the overall school building footprint remained the same. This was the image in the minds of many voters when they approved the bond measure. This was certainly the image I had in mind when I urged my friends and neighbors to support the measure after having participated in community focus group meetings in development of the bond proposal. After the bond was approved, the District dismissed this plan as impractical for less-than-clear reasons.

A few months ago, an architect and community member who also opposes the proposed plan to expand the school onto park land offered a revised plan that would minimally encroach onto the park. A copy of the drawing is attached as Exhibit B. The District dismissed this proposal out of hand, refusing to even consider it.

[1] One school board trustee actually told two community members that he could reduce the park down to the size of a postage stamp and still call it "Berkich Park."

2. Response to Comments

Ms. Jean Lacher

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Given the District's refusal to consider other options, it is not surprising that Mr. Peterson's letter omitted information responsive to this section.

Another questionable assertion made in Mr. Peterson's letter is that the District innocently converted an area of the protected park area in 2002 without knowledge of its existing obligation to maintain the park area as open recreational space. In 1992, the District's authorized representative, Superintendent Joseph Fazio, signed the LWCF grant agreement with the unanimous approval of the then-board trustees. At that time, the board also unanimously approved a resolution stating that the terms of the LWCF grant agreement were consistent with the Cardiff School Master Plan. The District's school board consists of five trustees. In 1994, prior to completion of the park renovation, the board trustees, including two members who had approved the grant agreement in 1992, approved an amendment to the joint use agreement with the City that the park was to be maintained as a public outdoor recreation area in perpetuity. Although not expressly stated in the amendment, this term was unquestionably intended to comply with the requirements of the LWCF grant. In 2001, only six years after the completion of the LWCF grant project, the school board unanimously approved construction of new school buildings and a school drop-off/pick up zone that resulted in the unauthorized conversion to non-park use of nearly 10% of the renovated Berkich Park within the 6(f)(3) boundary. While the superintendent and some board members had changed since 1994, in 2001, two trustees who had been involved in both the park renovation approval and amendment to the joint use agreement remained on the board. These same trustees, one of whom continues even now to serve as a trustee, had been members of the City of Encinitas Parks and Recreation Commission concurrently with portions of their board terms. While there are undoubtedly many diverse issues addressed by a school board over a period of a few years, in a small district consisting of only two elementary schools, it is difficult to imagine that a significant obligation accepted in conjunction with a major park renovation project would be so easily forgotten by two-fifths of the board members when those two board members were also particularly active in park-related issues on behalf of the City. Given this history, and other points to be raised in the following paragraphs, the sincerity of the District's "desire to take the requisite steps to comply with the terms of the agreement" is not entirely convincing.

R30-17
CONT'D

Mr. Peterson's letter states that "the District *needs* to make improvements to portions of the site that falls within the 6(f)3 boundary" (*emphasis added*), presumably in response to Step 1, subsection (c) of the preliminary information requirement. However, the described changes and the explanation of why they are "needed" do not fully answer the question of:

> (c) Why is this proposed change needed? Is this proposed change driven by the GRANTEE and/or public to improve or increase the park's public outdoor recreation use capacity, or driven by non-park reasons that are contrary to the primary purpose of improving the park for the public's recreation experience?

The letter goes on at length about the school bond measure (Prop. GG), the approval of which has provided the District with funding to completely replace the majority of the school buildings.

Ms. Jean Lacher

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Fourteen projects were listed in the text of the proposition. Only the final two items on that list relate to outdoor recreational space:

> Upgrade and improve playgrounds and playfields for school and community use; preserve existing mature trees and other landscaping where possible.
>
> Resurface, repair, and/or replace paved surfaces, play court areas, turf, and other grounds to eliminate safety hazards and improve outside instructional areas.

Interestingly, Mr. Peterson's letter places these items first and second on his list, as if they were an important priority, but fails to mention that neither of these two projects on their face would require a change to the 6(f)(3) park boundary that reduces the total outdoor recreational space. The only reasonable conclusion then is that the District's desire to change the park boundary is *driven by non-park reasons* that are contrary to the primary purpose of improving the park for the public's recreation experience. Indeed, the primary school improvements that are proposed for location within the existing 6(f)(3) boundary are designed exclusively to benefit the school: a multi-purpose building intended to replace the existing multi-purpose building located near the south-east side of the school, and a significantly-enlarged paved area that includes a parking lot and an extended pick-up/drop-off lane on the north side of the school.

R30-17
CONT'D

The letter goes on to explain that there are 729 students in the District, however, it does not provide further information about the school at the center of this issue. Cardiff School has an enrollment of approximately 340 kindergarten through 3rd grade students. The proposed reconstruction is not intended to accommodate a projected increase in enrollment of 5 to 9 year-old children – minimal additional classroom capacity, if any, is included in the plan. Absent anticipated growth, it seems reasonable to expect that reconstruction of the school for the same number of students would not require expansion of its existing footprint onto Berkich Park. Thus, it appears that the District's proposed change that involves expansion of the school into the 6(f)(3) boundary is not so much "needed" as it is "wanted," and it is solely intended to benefit the school, without regard to whether it impacts the park's public outdoor recreation use capacity or the public's recreation experience.

The District's letter lists the proposed changes that impact the outdoor recreation area as shown on the existing 6(f)3 boundary as:

- A building consisting of a science lab and an art lab and restrooms that was constructed in 2002 within the boundary.
- A new multi-purpose building consisting of an auditorium, music classroom and restrooms is located within the boundary.
- A portion of a classroom building that contains a specialty lab that needs to be located near the existing science and art labs.

2. Response to Comments

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- A portion of the school's food service building and supportive outdoor space.

While the District admits that the 2002 construction was a conversion of protected park area, the list ignores the approximately 10,000 square foot playground area at the southeast edge of the 6(f)(3) boundary that was converted in 2002 to a drive-through drop-off/pick-up lane, exclusively for the school's benefit (indicated in blue in Exhibit C). It also fails to mention the significantly expanded parking lot and drive-through lane at the north edge of the school that consumes at least another 5,000 square feet of park area.

The District's letter recites "Guiding Principles" that were developed for the school's design and planning team. These principles are an admirable approach to deciding what is good for the school. On the other hand, the relevance of school design principles to protected public outdoor recreation park land is not a given, and not something that can be as easily glossed over as Mr. Peterson implies by focusing on how much these changes benefit the school.

R30-17
CONT'D

The letter appears to offer information responsive to subsection (d) of Step 1 in the form of a list of ten bullet points of alleged "enhancements" that would be implemented by allowing it to move forward with its proposed plans. Inexplicably, however, the majority of these alleged improvements would not require any modification to the existing 6(f)(3) boundary map:

- The apparatus area that bifurcates the turf fields can to be relocated without impacting the boundary.
- The skinned softball/baseball infield can be covered with grass and the back-stop removed without modifying the boundary.
- Picnic areas are already present within the boundary and can be moved, if needed, without changing the boundary.
- The restrooms located in the classroom/laboratory building (part of the 2002 conversion) are already available for use by the community.
- There is existing blacktop area at the south side of the park within the boundary. No community demand has been indicated for a larger concrete plaza for group gatherings that are most likely unrelated to outdoor public recreation activity.
- The proposed outdoor assembly seating area built into the side of the slope adjacent to the field is within the boundary; there is no need to modify the boundary.
- The community dog park is already within the boundary; there is no need for modification of the boundary.

Looking at these suggested enhancements, it isn't clear how approval of the proposed conversion of protected park land would in any way further the LWCF's goals of improving the public's outdoor recreation experience.

The remaining suggested "enhancements" to the "outdoor recreation area and the user experience" actually serve to demonstrate the District's desperation to try anything to allow it to move forward with its current construction plan.

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With regard to the parcel of land in the northwest corner of the site that is proposed to be added, this is admittedly school-owned property that is not included within the 6(f)(3) boundary. This area is indicated with the letter "N" in the upper left corner of Exhibit D. Currently, the fenced area protects a school garden that is managed and funded by a small non-profit organization, Scrumptious Schoolyards, which was founded about 7 or 8 years ago by a couple of teachers at the school. A number of community members, including myself, serve on the Scrumptious Schoolyard board and frequently volunteer and enlist the assistance of friends and neighbors for various maintenance activities. A part-time teacher (funded at least partially by the organization) and a few full-time teachers conduct classes in the garden for students during school hours, providing learning experiences ranging from healthy eating to good bugs/bad bugs to journal writing. Physical activities engaged in by the children include planting and cultivating seeds and seedlings in 15 raised bed boxes, pulling weeds, watering, harvesting fruits and vegetables, and nature scavenger hunts. In its proposal, the District indicates that it will turn this parcel into a community garden that will be open to the public. If this occurs, the popular school garden program will become unsustainable because the teachers and volunteers will be unable to control access to the garden, and the structures and equipment donated and maintained by the organization for student use will become available to the public without the capacity or infrastructure to manage it. Plants and the resulting produce that have been nurtured by the children will become vulnerable to theft or destruction. The ability to make a lasting impression on children who witness the seeds they planted in their own little "plots" grow into healthy edibles will end. The District's lack of consideration of the devastating impact of the proposal on the school garden program is evidenced by the fact that it completely neglected to discuss, much less provide notice of, this proposal to the teachers or to the organization that built, funded and has maintained the garden for years.

R30-7
CONT'D

The District's proposed exchange of recreation park land for a parking lot is disingenuous at best. At worst, it hints of bad faith. The truth is that the "enhancements" arising from a parking lot with an increased number of parking spaces and a drop-off/pick up lane for 10 cars inure solely to the school's benefit. Benefit to the outdoor park user's experience is non-existent.

There are three approximately 20-minute periods on school days when traffic around the school becomes a major bottleneck: 8:00– 8:20 am, 11:50 – 12:10 p.m., and 2:50 – 3:10 pm. This is because many parents who drive their children to and from school want to drop off or pick-up their children directly at the entrance instead of parking on the street and walking with their child to or from the entrance. It is for this reason that the first drop-off/pick-up area on the south side of the school was built in 2002 (the first conversion), and a second, much larger drop-off/pick-up lane is proposed on the north side of the school. These lanes are not used at any other time of the day -- and not on weekends or at other times during which the public would be using the park. It has been suggested by some members of the community that revised traffic patterns could alleviate some of the congestion during the specified hours, but there has been no apparent action on the part of the District to investigate or implement such proposals. Instead, the extended drop-off/pick-up lanes are treated as a necessity – one that exclusively benefits the school. There is absolutely no enhancement to the "outdoor recreation area and the user experience" that would

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result from the District's proposed swap of turf fields within the existing 6(f)(3) boundary for a large parking lot and drop-off/pick-up lane. A parking lot is *not* an outdoor recreation area.

The District asserts that park users would benefit from the enlarged parking lot, however, like the drop-off/pick-up lane, this is also a false improvement from the standpoint of park users. Apart from occasional organized athletic activities, the majority of Berkich Park users arrive on foot or by bicycle. On typical weekend days, there are at most a half-dozen cars in the lot. Even if the lot is full during organized team events, there is ample street parking around the park. The District's proposed shift of its parking lot onto park land does nothing to improve park accessibility. Rather, the proposed swap of public recreational area for a parking lot exclusively benefits the school. To suggest anything else is disingenuous.

Returning to Mr. Peterson's assertion that "the District wants to make certain you know that it is the District's desire to take the requisite steps to comply with the terms of the agreement," the District's suggestion that " any square foot will do" in a trade of turf field park area for parking lot is highly cynical. The LWCF Act provides, among other things, that "the property proposed for replacement is of reasonably *equivalent usefulness* and location as that being converted." 36 CFR 59.3(b)(3) (*emphasis added*). Paragraph (i) of this subsection goes on to state that "property to be converted must be evaluated in order to determine what recreation needs are being fulfilled by the facilities that exist and the types of outdoor recreation resources and opportunities available." Granted, the proposed location is reasonably equivalent. On the point of *equivalent usefulness*, however, it could not be further from the truth.

R30-17
CONT'D

The District offers to trade a parking lot, expanded solely for its own benefit with no recreational use whatsoever, for turf fields currently used for myriad athletic and other outdoor recreational activities. The District's suggestion that this would be a reasonable trade that comports with the language and spirit of the LWCF Act is so far off the mark that it hints at desperation and resentment, not a good faith effort to comply with the terms of the agreement.

There is yet another question to be directed to the sincerity of the District's proposal. Mr. Peterson's letter asserts: "The District maintains close communication with City staff and they are aware the District is pursuing this process with OGALS. The District will act to keep the City apprised of our progress." Inconsistent with the expressed sentiment, the cc listing of the end of the letter paints a very different picture: no one at the City was copied on this letter, nor was the City aware of the proposals stated in the letter or that a letter with a proposed 6(f)(3) revision had even been forwarded to OGALS. This can be contrasted with the rambling letter sent last month by the District's board president to the Mayor of Encinitas, which was copied to every city council member, the city manager, the city attorney, every District trustee, the District superintendent, and the District's outside legal counsel. This accusatory letter strongly criticizes the Mayor's request to place the school project on the city council's agenda for monitoring to ensure that the City's interests were protected given that it was a co-signer to the LWCF grant agreement. In separate communications with District representatives, requests by community members and City officials for information about the substitute land that was to be proposed have been rebuffed without any

Ms. Jean Lacher

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information provided, with the not-so-subtle message of "mind your own business." Thus, the District's communications in this matter have been limited and often grudging, contrary to its professed good intentions.

As a final point on the sincerity of the District's desire to comply with its obligations under the LWCF agreement, the sign now posted at Berkich Park (Exhibit E) is eerily symbolic of the apparent attitude toward the park's LWCF grant protections. Stated in words, if we wait long enough, maybe they, too, will just fade away.

2. Additional Factors

The neighborhoods surrounding Cardiff School and Berkich Park are commonly known as the "Walking and Composer Districts." The community is an eclectic mix of older homes and newer homes build on the sites of older homes. Typical community residents are physically active, ranging from relative newcomers (5 years or less) to fifth generation Cardiff residents. Walking and biking are popular forms of transportation, not only for the sake of activity itself, but to reach a destination. This is one reason why the District's proposal to swap park land for parking lot is so ludicrous – there isn't a need for more public parking in the immediate area. The local market, coffee shops, post office, boutiques, and many restaurants are all within walking distance of the neighborhood. At any given time, one can see young parents pushing strollers, adults of all ages walking to the market or to grab a coffee, often with one or two dogs in tow, and teenagers on skateboards on their way to play basketball, soccer, or to just hang out. The neighborhood is also within walking distance of several good surfing beaches, and on a typical day, surfers can be seen walking past the school on their way to or from a surfing session.

R30-17
CONT'D

The character of the community is enhanced by its embrace of this outdoor lifestyle. The resulting reduced reliance on cars for transportation conveys the added benefit of greater social interaction among community members – neighbors see each other while walking or riding, taking time to stop and chat, or simply say "hello." Preservation of this community character is an important motivation behind the broad community push to save Berkich Park.

The openness of Berkich Park in terms of the ability to look into the park from Montgomery Avenue contributes to the recreational benefits and the social connectivity of the community. Subsection (d) of Step 1 reads:

> How will the proposed change affect the public's park experience, public outdoor recreation, and VIEWSHED?

The Guide defines VIEWSHED as "a particular scenic outdoor natural area deemed worthy of preservation against development." The District admits that the views of several homes will be impacted by the proposed two-story tall multi-purpose building, which in the District's plan is positioned to take advantage of probably the best ocean view on the property. The individuals who live in the affected homes are understandably unhappy about the loss of their views and the

2. Response to Comments

possible resulting impact on their home values.[2] Nonetheless, the potential view loss for these homes pales in comparison to the impact on the overall openness provided by the vistas from the street, an example of which is shown in Exhibit F. Scores of people, both residents and visitors, walk along Montgomery Avenue every day. At any given time, individuals walking, biking, or even driving along this street can easily look through the fence into Berkich Park to observe activities ranging from organized soccer games or practices, families with children running and playing on the field, children and their parents riding bikes or scooters on the sidewalks around the field, senior citizens taking the opportunity to walk at a comfortable pace in a protected area, even people flying kites or radio controlled aircraft. Given the close-knit character of the community, it is not uncommon that a passer-by will see friends or neighbors in the park. They may simply wave in recognition, call out a greeting, or detour from their walk to join their friends in the park. This openness is an important element of the "Cardiff vibe" that connects the community's residents in a way that no longer exists in most urban and suburban areas. Sadly, this connection, and its important role in the community's character, would be damaged if the District moves forward with its plan to construct the multi-purpose building and parking lot within the protected park area. Instead of an open vista across the park, passersby will only see the backside of a windowless building (see Exhibit G). Park visitors will be hidden from view, and passersby will just keep on walking. The park's existing "open invitation" for personal engagement and participation in impromptu gatherings will give way to pre-arranged meetings reliant on electronic devices and calendar availability. This loss would be especially regrettable because it does not have to happen.

R30-17
CONT'D

Another point that is worth mention is that the proposed multi-purpose building (the "MPR") in the current site plan is located directly abutting the athletic field – to take advantage of the ocean view. The MPR does not house classrooms or other educational areas designed for student use on a regular basis. Rather, it will be used occasionally for group assemblies, amounting possibly to a few hours a week during the school year. Use by the public outside of school hours is even less frequent. Currently, the school conducts Friday morning assemblies outdoors in a stepped concrete bleacher area on the south side of the schoolgrounds. In the pleasant coastal climate of Cardiff, this is an ideal opportunity for the children to get out of the classrooms to enjoy the outdoors while still engaging in school-organized activities. The District's proposed site plan includes an amphitheater on the hillside within the park boundary adjacent the turf field, which would serve the same purpose as the existing concrete bleachers. Thus, the need for interior student assembly area is limited, making the MPR's location within the existing 6(f)(3) boundary not so much a "need" as a "want."

The current building design plan includes several tall windows on the side of the MPR facing the athletic field (see Exhibit H) where group activities including soccer, lacrosse, football and baseball frequently occur. These are active, sometimes fast-paced, sports and it is quite common for balls to escape from the field of play, even flying over the fence from the existing fields and

[2] The view from my own home would not be affected, and may even be improved when several tall (rare) Torrey Pine trees are cut down as planned for construction.

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July 26, 2018
Page 10 of 10

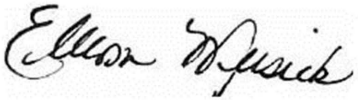
into the street. It does not require great prescience to foresee that the windows of the MPR are going to be hit and broken by stray balls coming off of the fields, or even intentionally targeted by mischievous individuals who are tempted by the close proximity to the field. It is also not difficult to imagine that the District's response to repeated damage to the MPR will be closure of, or restricted activity on, the turf field adjacent to the building. This predictable action would result in even further loss of useable outdoor recreation area, in contravention of the goals of the LWCF Act. This eventuality would not be a risk if the MPR were to be located within the school's existing footprint, away from protected park land.

In conclusion, contrary to Mr. Peterson's claims, I and the many other individuals who oppose the District's proposed plan are in no way attempting to block the school renovation project from going forward. I agree that improvements are needed to the aging school, however, I disagree with the District's carving away at a treasured community asset and believe it is essential that Berkich Park be protected from further conversion. For the reasons explained above, I, along with other community members who oppose the conversion of Berkich Park's land, strongly urge OGALS to hold the District to the terms of the LWCF grant agreement and allow Berkich Park to be preserved in perpetuity.

R30-17
CONT'D

Thank you for considering these comments.

Sincerely,



Eleanor Musick

[redacted]
Cardiff-by-the-Sea, CA 92007
[redacted]

Enclosures: Exhibits A-H

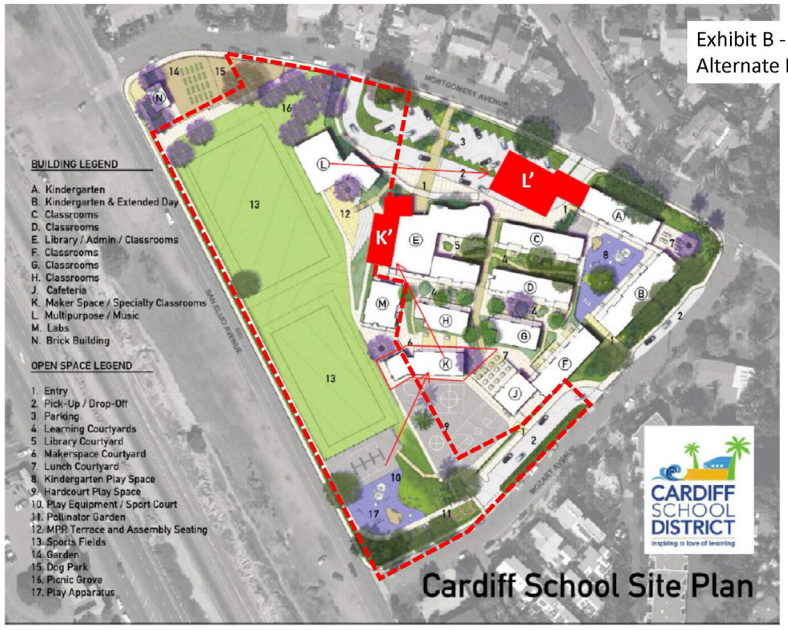
Barbara Baker, Office of Grants and Local Services
Lee Butterfield, Office of Grants and Local Services
Luan Aubin, Office of Grants and Local Services
Richard Rendon, Office of Grants and Local Services
Viktor Patiño, Office of Grants and Local Services
Catherine Blakespear, Mayor, City of Encinitas

2. Response to Comments



6(f)(3) boundary overlaid onto alternative Layout proposed by architect/community member B. Farrow (5/31/18)

Prime (') indicates proposed relocation from school's layout



R30-17
CONT'D

2. Response to Comments

6(f)(3) boundary overlaid onto satellite image of existing Cardiff School layout

2002 conversion
(~10,300 + 4,800 = 15,100 sq. ft.) = 9.9%



Exhibit C -
Existing School Layout

R30-17
CONT'D

2. Response to Comments

Berkich Park:
LWCF Section 6(f)(3) boundary overlaid onto current plan

Total area within 6(f)(3) boundary (est.): 95,200 + 33,125 + 19,300 + 4,000 = 151,625 sq. ft. (3.48 acres*)

Proposed new conversion (~21,000 sq. ft.) = 13.8%

2002 conversion (~10,300 + 4,800 = 15,100 sq. ft.) = 9.9%

Total conversion = ~0.82 acre

* Some descriptions of the park give an area of "about 4 acres", so this number may be a bit low.



Exhibit D -
Proposed School Layout w/ Conversions

R30-17 CONT'D

2. Response to Comments

R30-17
CONT'D

LWCF GRANT SIGN AT BERKICH PARK



Exhibit E

R30-17
CONT'D

MONTGOMERY AVENUE STREET VIEW INTO BERKICH PARK - EXISTING
(from Google maps)



Exhibit F

2. Response to Comments

R30-17
CONT'D

AERIAL VIEW LOOKING NORTH OVER BERKICH PARK
(from District plan drawings)



MONTGOMERY AVENUE STREET VIEW INTO BERKICH PARK
(based on District plan drawings)

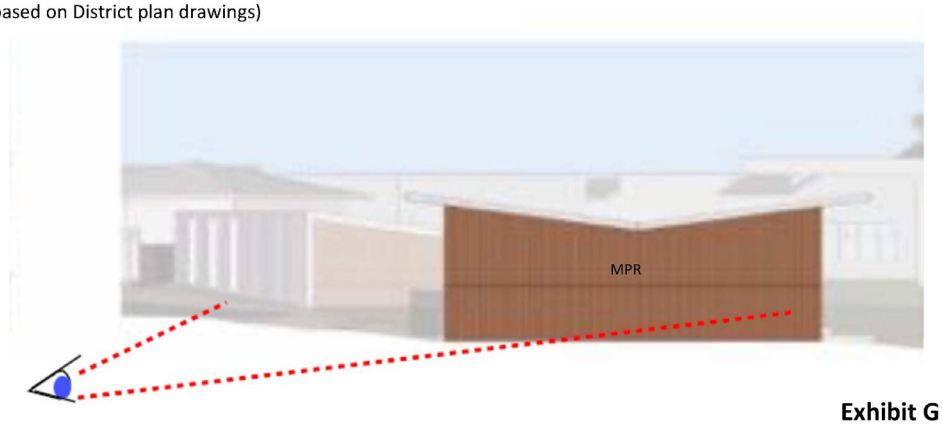


Exhibit G

R30-17
CONT'D

MULTI-PURPOSE ROOM DIRECTLY ABUTTING TURF AREA
(based on District plan drawings)



Exhibit H

2. Response to Comments

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R30. Response to Comments from Eleanor Musick, dated November 17, 2018.

R30-1 The commenter states that the conclusions made in the following sections of the DEIR are incorrect or are missing facts: Scope of DEIR, Land Use and Planning, Project Objectives, and Air Quality. The commenter states that additional analysis is required before certification.

The comment does not address a specific issue or point out missing data with the identified CEQA topic discussions, and does not provide reasoning as to why additional analysis is required. Therefore, no further response is required.

R30-2 The commenter deems that the District attempts to avoid discussing the conversion of the federally protected recreation area to nonpark use, in the Scope of the DEIR. The commenter references subsection 2.4.1 of the DEIR, which indicates that the Recreation chapter would not be discussed in detail in the DEIR, as the findings indicated that impacts were found not to be significant. The commenter states that the District has failed to comply with the requirements of LWCF by adopting the conclusions that only apply to CEQA standards. The commenter states that the DEIR is incomplete because a NEPA analysis was not conducted, and that the Initial Study does not address context or intensity.

The Initial Study correctly identified that the project would not result in significant impacts to recreation (see Appendix 1-1 of the DEIR). The project would continue to provide sufficient recreational space for the Cardiff School program and public, and would not cause an increase in the use of existing neighborhood or regional facilities such that a deterioration of their facilities would occur, and would not construct or require construction or expansion of recreational facilities which may have an adverse physical effect on the environment.

The project impacts to the LWCF conversion are addressed in Impact 5.8-2 of the DEIR, which determined that preparation of an Environmental Assessment or Environmental Impact Statement would not be required and a less than significant impact would occur. OGALS has stated that the project would qualify for a Categorical Exclusion, and NPS reinforced this position in their preliminary review, meaning the project would not require a full NEPA process. The DEIR evaluated the comments provided during the Notice of Preparation, including those provided by the commenter on June 5, 2018. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R30-3 The commenter states that based on the public comments, the proposed Project's recreational impacts, under NEPA standards, is a significant impact that is of concern to

the public, as the conversion of the park would result in non-recreational space. The commenter states that neither the Initial Study nor the DEIR considered the social, geographic, or environmental contexts or potential impacts on the park. The commenter states that the DEIR fails to address the impact of the proposed Project on the park, in accordance with NEPA, thereby making the DEIR incomplete.

Please see response to R30-2, above, and Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act lands and the projects' compliance with NEPA. The District recognizes that NEPA compliance is required. However, the Draft EIR document and this FEIR were prepared to satisfy the requirements of the California Environmental Quality Act.

R30-4 The commenter references Impact 5.8-2 of the DEIR, which states that the proposed Project would enhance outdoor recreation, safety, and educational programs at Cardiff School, and states that this statement is insincere; the commenter opines that the District's proposed Project does not enhance the outdoor recreation area. The commenter deems that the District's desire is to expand the school's footprint.

The commenter is entitled to their own opinion; however, not providing enhancements to the outdoor recreation area, which are, in fact, the school's outdoor play fields, would be in direct opposition to the school's goal of providing the best facilities for their students. The multipurpose building, at approximately 5,500 square feet, minimally impacts the outdoor recreation area, which is proposed to be greater than 175,000 square feet. Furthermore, the location of this building is driven by the educational program and to increase the safety and security of students. This building and the adjacent concrete plaza and assembly seating area are enhancements to the outdoor recreation area.

The proposed recreational improvements at the project site would be conducted as follows (see Chapter 4, *Project Description*, of the DEIR): the existing baseball field would be removed, and two natural turf soccer fields would be installed along San Elijo Avenue; a new paved hardcourt play area would be constructed near the existing hardcourt along Mozart Avenue with markings for a full basketball court and various hardcourt games; the existing play structure that bisects the two fields and restricts supervision of the fields would be relocated to the south side of the site, near the intersection of San Elijo Avenue and Mozart Avenue, and would include a jungle gym and other play equipment; and kindergarten play structures at the eastern corner of the site—near the intersection of Montgomery and Mozart Avenue—would be replaced with new facilities, constructed between Buildings A and B (see Figure 4-2, *Site Plan*, of the DEIR).

R30-5 The commenter states that in the District's submission to OGALS, in regard to subsection c) of the LWCF application, the District describes Measure GG and lists 14

areas the proposed Project would improve, two of which pertain to outdoor recreation. The commenter states that these two items do not mention that a 6(f)(3) park boundary change would reduce the total outdoor recreational space. The commenter opines that the 6(f)(3) boundary change proposed by the District would exclusively benefit the school.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval. Furthermore, as described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The section of the application that the commenter is referring to is page 8 of "Park Stewardship: A Guide to Permanent Operation and Maintenance," under "Step 1: Preliminary Information for All Proposals" (CSP 2016). This section of the submittal for the "LWCF stewardship change" does not require the applicant to provide square footage of park space, and only requires an explanation of need and how it would improve or increase the park's public outdoor recreation use capacity. The proposed 6(f)(3) boundary conversion would improve the site's play fields and hardcourt areas with new facilities, as well as construct new classroom and multipurpose facilities for the District, which would be available for public use via the Civic Center Act.

R30-6 The commenter states that Impact 5.8-2 of the DEIR lists seven bullet points of the proposed improvements to the park, and the seventh bullet point indicates that drainage would be improved. However, the commenter believes otherwise, because the amount impervious surfaces would increase. The commenter states that the sixth bullet point, which states that parking would be improved, would result in a small increase in the number of parking spaces. The commenter states that no enhancements to the outdoor recreation area would occur if the parking lot and drop-off/pick-up area are enlarged.

See Section 5.6, *Hydrology and Water Quality*, of the DEIR for discussion of project impacts to drainage. Although the project would result in an increase in impervious surfaces, the proposed biofiltration basins would detain and treat stormwater such that runoff flow rates discharged from the basins would be lower than existing rates. Post-project runoff rates discharged from the basins are compared to existing rates in Table 5.7-2 of the DEIR (page 5.7-15). Project development would not increase runoff rates discharged into off-site storm drainage systems, and impacts would be less than significant.

The project would result in an increase in 17 parking spaces from existing conditions. The proposed improvements to the grass and hardcourt play space and play equipment

would be feasible in conjunction with the expansion of the parking lot and loading area (see Figure 4-2, *Site Plan*, of the DEIR). See Section 2.1 of this FEIR, which addresses the square footage of usable park and paved area as well as compliance with the LWCF conversion process.

R30-7 The commenter opines that the District's statement that park users would benefit from the enlarged parking lot is false, as most park users arrive on foot or by bicycle. The commenter states that there is ample street parking, and that the proposed parking lot would not improve park accessibility.

The commenter's statement that most park users arrive on foot or by bicycle is speculative. By providing more on-site parking space, the District would ensure that there would be an increase in available parking for public users of the outdoor recreational areas when not in use by the school, and could also increase the numbers of users by providing parking for users who require the use of a vehicle. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R30-8 The commenter states that the LWCF Act requires that the property proposed for replacement is of reasonably equivalent usefulness; however, the commenter states that this is not the case with the District's proposal.

See Section 2.1 of this FEIR, which addresses the equivalent usefulness of converted land.

R30-9 The commenter states that the District's proposal for an enlarged parking lot benefits the District and does not offer recreational uses. The commenter states that trading park land for a parking lot does not fulfill the LWCF provisions and does not address the social and environmental contexts from the standpoint of NEPA.

See Section 2.1 of this FEIR, which addresses the equivalent usefulness of converted land.

R30-10 The commenter references Section 7.1.1, item 1c) of the DEIR, which states that the District would prioritize green space and public views; however, the commenter opines that this is insincere given that the community does not believe the District has made this a priority. The commenter states that most community members walk or ride bicycles, as most uses are within walking distance. The commenter states that the community embraces an outdoor lifestyle, which is the reason why preserving the park is important. The commenter states that this would be a key factor of a NEPA analysis, had one been conducted.

See Section 2.1 of this FEIR, which addresses the equivalent usefulness of converted land and a comparison of existing open space compared to the proposed Projects. CEQA Guidelines Sections 15064(e) and 15382 provide that economic and social changes may not be treated as significant effects on the environment, as they alone do not typically cause changes in physical conditions. Please see Master Response in Section 2.1 of this FEIR, which explains the role of NEPA for this project. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R30-11 The commenter states that subsection d) of the LWCF Park Stewardship Guide asks how the proposed change would impact the public's viewshed. The commenter states that the proposed multipurpose building would impact views of several homes, and that the District suggests that the proposed school improvements would increase property values; however, the commenter does not believe so.

See response to R17-1. Although private views are not protected, the project would not result in a significant impact to public views of scenic vistas, including the Pacific Ocean (see pages 5.1-15 through 5.1-21 of the DEIR). The ground level of the proposed multipurpose building (referred to as Building L in Figure 4-2 of the DEIR) would be approximately 9 feet below the existing administrative building (Building E). As a result, the top of the new Building L would appear to be approximately 2 feet below the existing administrative building (see page 5.1-22 of the DEIR).

The DEIR also does not analyze the potential change of property value. CEQA requires the analysis of the physical environmental conditions. CEQA Guidelines Sections 15064(e) and 15382 provide that economic and social changes may not be treated as significant effects on the environment, as they alone do not typically cause changes in physical conditions.

R30-12 The commenter states that the close-knit community character would be impacted if the District constructs the proposed multipurpose building and parking lots, as this would block views of the park and the vista across the park. The commenter states that the loss of viewshed would adversely impact the community character, and these are important elements of "context and intensity" that would have been considered in a NEPA analysis.

See response to R17-1. Also see Impact 5.1-2 of the DEIR (pages 5.1-21 through 5.1-23). Although the visual qualities of the project site during construction would not appear better than the existing condition of the property, the construction worksite would be partially hidden by a construction barrier that would be removed once construction is completed. Because the finished project would include landscaping and planting of trees, new buildings with siding, paint, and windows, and the remodel of

existing buildings to match the new construction, this temporary impact will be eliminated with completion of the project.

Once constructed, the proposed design, including the heights and exterior finishes, of the new campus and buildings would blend in with the design of the surrounding structures and coastal neighborhood. Moreover, the locations of the buildings result in a campus similar to the existing school and would not significantly change the aesthetic of the site. Please see Master Response in Section 2.1 of this FEIR, which explains the role of NEPA for this project. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R30-13 The commenter references Table 5.2-4, of the DEIR, and states that the values for the Daily Emissions Inventory were calculated using CalEEMod as opposed to actual onsite measurements. The commenter opines that the conclusions of Impacts 5.2-2 and 5.2-4, of the DEIR, are derived from incomplete analyses.

The San Diego Air Pollution Control District (SDAPCD) recommends use of CalEEMod to quantify emissions for development projects. Thus, the air quality analysis in using CalEEMod is consistent with the methodology recommended by SDAPCD (https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/ceqa.html).

R30-14 The commenter states that the less than significant conclusion for air quality impacts related to the operation of the school does not consider actual measurements under specific conditions, such as idling cars of parents waiting to pick-up/drop-off students and modified air flow patterns that would result from combining the proposed building layout and enlarged parking lot and pick-up/drop-off lane.

See Impact 5.2-2 (pages 5.2-17–18 of DEIR) for discussion of operation-related impacts to regional air quality and Impact 5.2-4 (pages 5.2-19–20 of DEIR) for impacts to localized air quality. The installation and operation of the new facilities would improve current programs at the campus and would increase student enrollment capacity by approximately 73 students, which could result in up to 117 new vehicle trips (see DEIR Section 5.10, *Transportation and Traffic*). As shown in Table 5.2-8 of the DEIR, *Regional Operational Emissions*, emissions would not exceed the County of San Diego regional operation-phase significance thresholds or result in a cumulatively considerable net increase in criteria pollutants. Additionally, pursuant to the County of San Diego's Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality, projects whose stationary source emissions do not exceed or can be mitigated to less than the SDAPCD trigger level would not be considered to violate an air quality standard or contribute substantially to an existing or projected air quality violation. Projects that exceed these thresholds would be required to conduct an air quality impact analysis to determine the concentrations of stationary emissions at nearby

sensitive receptors. As identified in Table 5.2-8 of the DEIR, on-site emissions would be substantially below the County's thresholds; therefore, localized emissions are also less than significant.

R30-15 The commenter states that the proposed Project design would significantly modify air flow patterns, which would create a "box canyon," that would cause students to inhale fumes. The commenter opines that extending the drop-off/pick-up lane would cause more cars to idle, thereby creating conditions that would adversely impact students' health and creating environmental hazards from vehicle exhaust. In addition, parents are being discouraged from parking and walking due to a reduction in street parking resulting from the expanded loading area. The commenter states that this health issue needed to be addressed before the DEIR can be certified.

Per the County of San Diego "Guidelines for Determining Significance and Report Format and Content Requirements," the "two primary emissions of concern regarding health effects for land development projects are diesel-fired particulates and carbon monoxide"[4]. Regarding carbon monoxide (CO), the potential for CO hotspot impacts is discussed under Impact 5.2-4. As discussed, the proposed Project is projected to generate up to 38 peak hour trips and up to 117 net daily trips, which would be substantially below the number of peak hour trips that would likely be required to potentially cause a CO hotspot impact. As for health-related impacts associated with diesel particulate matter (DPM), potential sources of DPM would be from permitted stationary equipment and diesel-fueled vehicles, primarily trucks. However, due to the nature of the project—a school renovation—it is not anticipated to generate truck trips. While the increase in student capacity is anticipated to increase vehicle trips up to a net of 117 average daily trips, these trips would be passenger vehicle trips associated with parents dropping off and picking up their child. Some of these passenger vehicles could potentially be diesel-fueled vehicles; however, it is not expected that their presence would result in significant health risk impacts. As a reference, per the California Air Resources Board (CARB) sensitive land use siting recommendations, CARB recommends to avoid siting sensitive land uses within 1,000 feet of distribution center that accommodates more than 100 trucks per day, more than 40 trucks with transport refrigeration units (TRU), or where TRUs operation more than 300 hours per week. Furthermore, CARB also recommends not siting new sensitive land uses within 500 feet of a freeway or urban road with 100,000 vehicles per day or rural roads with 50,000 vehicles per day[5] . Based on these CARB recommendations and the nature of the project, it is not anticipated that implementation of the project would result in significant health risk impacts.

[4] San Diego County. 2007. Guidelines for Determining Significance and Report Format and Content Requirements: Air Quality. https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf

[5] California Air Resources Board. 2005, April. Air Quality and Land Use Handbook: A Community Health Perspective.

2. Response to Comments

The commenter's assertion that the design of the proposed improvements would directly channel vehicle emissions to the students is unsubstantiated. See response to R30-14, above, which addresses idling of vehicles. Localized emission increases as a result of project-related increase in vehicles would be less than significant.

The project would not result in a significant impact to street parking (see page 5.10-43 of the DEIR). The eastern portion of San Elijo Avenue provides approximately 705 feet of parking space, and there is approximately 1,585 feet of available curb parking space on Montgomery and Mozart Avenues. Assuming a standard vehicle space of 22 feet, there are approximately 104 on-street parking spaces available along the eastern portion of San Elijo Avenue, Montgomery Avenue, and Mozart Avenue. The improvements to the parking lot and driveways on Montgomery Avenue would result in a loss of 2 on-street parking spaces. The loss of 2 on-street spaces would be accommodated by the project increase of 17 parking spaces, and would result in a negligible difference in on-street parking availability compared to existing conditions.

R30-16 The commenter states that the DEIR is inadequate and incomplete. The commenter sent a letter to OGALS, which was then forwarded to the District. The commenter states that the letter was not included in Appendix 2-1 of the DEIR. The commenter states that the lack of NEPA analysis and failure to consider actual air quality hazards render the DEIR incomplete. See response to comments R30-1 through R30-15 for discussion of the issues identified in comment letter R30.

The commenter submitted the referenced letter to OGALS on July 26, 2018. This was outside the public comment period for the Initial Study and Notice of Preparation (May 8, 2018, to June 6, 2018). See Section 2.1 of this FEIR, which addresses the project's compliance with NEPA. See response to R30-15, above, for discussion of project-related air quality impacts.

R30-17 The commenter attached several exhibits, which include images and renderings of views into the park, design layout, and a letter to OGALS dated July 26, 2018.

The Exhibits are provided as follows:

Page 11: Exhibit A, Montgomery Avenue street view into Berkich Park, existing

Page 12: Exhibit B, Aerial View Looking North over Berkich Park (from District Plan drawings) and Montgomery Avenue street view into Berkich Park (based on District plan drawings)

Page 13: Exhibit C, Rendering of Current Layout and Proposed Layout, with rendering of the "Front of School"

Pages 14–27: Exhibit D, Letter from Eleanor Musick to Ms. Jean Lacher of the Office of Grants and Local Services on July 26, 2018, "RE: Proposed Conversion of LWCF Project No. 06–1346: George Berkich Park"

Page 28: Exhibit E, LWCF Grant Sign at Berkich Park

Page 29: Exhibit F, Montgomery Avenue street view into Berkick Park, Existing

Page 30: Exhibit G, Rendering of Aerial View Looking North Over Berkich Park and Montgomery Avenue Street view into Berkich Park

Page 31: Exhibit H, Rendering of Multipurpose Room directly abutting turf area (based on District plan drawings)

2. Response to Comments

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LETTER R31 – Joy Newcomer (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff School - George Berkich Park
2 messages

Joy Newcomer [redacted] Sat, Nov 17, 2018 at 7:36 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

To: cardiffDEIR@cardiffschools.com

Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

R31-1 **I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.**

Joy Newcomer

[redacted]

Cardiff-by-the-Sea CA 92007

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:54 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R31. Response to Comments from Joy Newcomer, dated November 17, 2018.

R31-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R32 – Ann and Nick Stahl (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Preserve the Parkland
2 messages

Nick Stahl [redacted] Sat, Nov 17, 2018 at 8:41 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

We are strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building on. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.

R32-1

My wife and I live on Rubenstein Drive just a block from the school. We love having the school close by and hearing the children at play. They need green space. Our community needs green space. We want it protected, not turned into a parking lot.

Please do what is right for our wonderful community.

Sincerely, Nick and Ann Stahl

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:54 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R32. Response to Comments from Ann and Nick Stahl, dated November 17, 2018.

R32-1 The commenters are opposed to the modification of George Berkich Park. The commenters state that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenters state that the Park boundary should not be exchanged for a parking lot. The commenters opine that the community needs green space, and that it should be protected and not converted into a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R33 – Christa Stone (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Redesign of Cardiff/Berkich Park Fields
2 messages

Christa Stone [redacted] Sat, Nov 17, 2018 at 4:27 PM
To: cardiffdeir@cardiffschools.com

R33-1 I support the redesign of the school play fields, known as George Berkich Park. Having grown up playing soccer on these fields, I initially felt a little bittersweet about the changes. As a current teacher at the school, I think having one contiguous field will benefit students and allow for better supervision during recess. I like the idea of having the assembly steps adjacent to the field and facing west, so students and families can take advantage of our beautiful ocean view during school assemblies as well as provide a place for families to sit and watch weekend soccer games.

--
CARDIFF SCHOOL DISTRICT
Inspiring a love of learning
Christa Stone
Kindergarten Teacher
760-632-5892 x104

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:55 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R33. Response to Comments from Christa Stone, dated November 17, 2018.

R33-1 The commenter supports the redesign of the school fields (George Berkich Park), and believes that one contiguous field would benefit students and allow for better supervision. The commenter also states that they like having the assembly steps adjacent to the field and facing west so students can take advantage of the ocean view for assemblies and provide a place for families to watch soccer games on the fields.

The District is appreciative of the supportive comments and agrees that by providing a contiguous field that supervision of students during recess would be improved. The assembly area was designed to provide seating for viewing of field activities as well as to provide a view of the ocean.

2. Response to Comments

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LETTER R34 – Daniel Littrell (7 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Comments on Cardiff School Draft EIR
1 message

Daniel Littrell [redacted] Sun, Nov 18, 2018 at 12:10 PM
To: cardiffDEIR@cardiffschools.com
Cc: council@encinitasca.gov, "Siegenthaler, David" <david_siegenthaler@nps.gov>

Please see attached letter.

Thank you,
Daniel Littrell

Littrell_DEIR_Letter.pdf
297K

2. Response to Comments

November 17, 2018

VIA E-MAIL: cardiffDEIR@cardiffschools.com

RE: Comments on Cardiff School Draft EIR

To Whom It May Concern:

I am writing in reference to the Draft EIR ("DEIR") dated October 5, 2018. The DEIR is incomplete, inaccurate and misleading. Therefore the DEIR should be revised, rewritten and recirculated in order for the public and decision-makers to fully appreciate the true consequences of the Project. This letter is complied as a list of issues to be addressed in a revised DEIR.

R34-1 Issue 1

Table 2-2 of the DEIR shows a bulleted list of public comments but this is not a sufficient replacement for the actual written statements and letters submitted to the District. Many of the sentences in Table 2-2 are supported by documents submitted to the District from community members via email or hard-copy. To omit these letters and to instead paraphrase and abbreviate the comments misrepresents the depth of opposition. All written public comments should be attached to the DEIR in their entirety.

Issue 2

Section 5.8 of the DEIR is meant to address the Land and Water Conservation Fund ("LWCF") restrictions that govern a section of the project site under a 6(f)(3) boundary map. Among other things, the District is attempting to convert roughly 35,000 square feet of current park into a parking lot. In order to justify this conversion of park land, the DEIR attempts to dismiss the strength of the LWCF Agreement. Page 5.8-1 in the DEIR reads:

> The law is firm but flexible. It recognizes the likelihood that changes in land use or development may make some assisted areas obsolete over time, particularly in rapidly changing urban areas.

R34-2 This interpretation of the law is misleading, inaccurate and intentionally biased. The entire purpose of the LWCF Agreement and the LWCF Program in general is to protect at-risk park land. One needs to look no further than to the National Park Service's own LWCF document the Proposal Description and Environmental Screening Form ("PD/ESF") that must be completed in order to convert LWCF protected land. The PD/ESF reads (emphasis added):

> The Section 6(f)(3) conversion proposal including the required NEPA environmental review documents (CE recommendation or an EA document) must focus on the loss of public outdoor recreation park land and recreational usefulness, and its replacement per 36 CFR 59, and not the activities precipitating the conversion or benefits thereof, **such as the impacts of constructing a new school to relieve overcrowding** or constructing a hotel/restaurant facility to stimulate the local economy. Rather, the environmental review must: 1) focus on "resource impacts" as indicated on the ESF (Step 6), including the loss of public park land and recreation opportunities (ESF A-15), and 2) the impacts of creating new replacement park land and replacement recreation opportunities. A separate ESF must be generated for the converted park area and each replacement site. Section 6(f)(3) conversions always have more than minor impacts to outdoor recreation (ESF A-15) as a result of loss of parkland requiring an EA, except for "small" conversions as defined in the LWCF Manual Chapter 8.

R34-2 CONT'D

As can be seen by the PD/ESF, it is clear a "rapidly changing urban area" does not provide an excuse or exception to an LWCF Agreement. Therefore, the DEIR should be revised and resubmitted for public review with a focus on loss of park land.

Furthermore, the conversion requested by the District cannot be consider a "small conversion" as it does not satisfy the requirements as defined in the LWCF State Assistance Program Manual:

> Small conversions are composed of small portions of Section 6(f)(3) protected areas that amount to no more than 10 percent of the 6(f) protected area or five acres, whichever is less. States should consult with NPS prior to developing the small conversion proposal. Because small conversion proposals are less complex, NPS review and decision can be facilitated when:
> a. Minor or no environmental impacts would occur on resources being removed from Section 6(f)(3) protection, on the remaining Section 6(f)(3) area, and on the contiguous new replacement parkland by placing it under Section 6(f)(3) protection per the environmental screening form. This includes consideration of impacts to historic resources per the Section 106 process of the National Historic Preservation Act. The entire conversion proposal is categorically excluded from further environmental review under NEPA (see Chapter 4).
> b. The proposed conversion is not controversial.
> c. The replacement property is contiguous to the original Section 6(f)(3) area.

R34-3

The DEIR outlines a boundary adjustment that affects more that 10% of the protected area and is controversial.

Issue 3

Page 5.8-3 describes the area encompassed by the LWCF 6(f)(3) boundary in a manner that misleads it's usefulness to the community:

> The affected boundary, required to remain as outdoor recreation area in perpetuity, is shown in Figure 3-6, *Existing 6(f)(3) Boundary Map.* As shown in the figure, the following uses are within the 6(f)(3) boundary: an underutilized baseball/multipurpose field, soccer field, dog park, playground apparatus, pollinator garden, passenger loading area, and an entire school classroom building and a pick-up/parking area that were constructed in the early 2000s.

R34-4

The description of the baseball/multipurpose field as "underutilized" is not based on data or on any study and is a simply an attempt meant to downplay the importance of this piece of protected land. Why isn't the soccer field described as "highly utilized" or the dog park as "essential"? It is also fair to point out that to repurpose the baseball field for another outdoor recreational activity may be a good idea, but to downplay the importance of the field is distortionary. This language should be removed and the DEIR recirculated for public review.

Issue 4

Page 5.8-10 reads:

R34-5

> The proposed project is driven by a desire to enhance the outdoor recreation area for the benefit of the community in addition to the need to provide for increased safety and security of students and current educational program at Cardiff School.

2. Response to Comments

This statement is completely untrue to the point of absurdity. The District created the proposed plan well before the District, the Bond Program Manager or the School Board knew that the land they were building upon was within an LWCF 6(f)(3) protected boundary. This can be seen by reviewing the School Board Meeting Presentations and the original plan which proposed destruction of even more land. These documents are available to view on the Cardiff School website. Also, within the DEIR itself on page 5.8-11:

R34-5 CONT'D

> Since learning of the agreement in 2018 and recognizing the District and City were out of compliance with the LWCF agreement, the District has worked closely with OGALS to prepare a proposal for a "conversion" in order to regain and maintain compliance. This "conversion" proposes an adjustment to the 6(f)3 boundary.

Instead of this project being "driven by a desire to enhance the outdoor recreational area", the DEIR outlines an LWCF conversion proposal which simply "retrofits" a new 6(f)(3) boundary around an already "finalized" construction plan. To suggest anything else is completely misleading and untrue.

R34-6

Also, what data does the District provide that supports the claim that recreational opportunities will be enhanced? The proposed boundary adjustment replaces roughly 35,000 square feet of park land with an unneeded parking lot and creates narrow, chopped up spaces of park around large glass buildings. How is this an improvement to the park?

Issue 5

Page 5.8-10 contains a bulleted list of site improvements that the project would provide. It can easily be seen that most of these bullets can be accomplished without adjusting the 6(f)(3) boundary:

- The existing baseball field is underutilized and would be converted to a soccer/multi-use field.
- The playground apparatus currently bifurcates the two grass fields and makes security and supervision difficult. The playground would be relocated to the southwest corner of the site to improve safety.
- The project proposes new terraced seating west of the proposed multipurpose building for spectator viewing of events at the sports fields and the ocean.
- The project proposes a new picnic area near Montgomery Avenue, west of the parking lot, for public gathering.
- The project includes a new restroom facility with access from the fields that could be used by visitors when the school is not operating.

R34-7

- The project would improve parking that would serve visitors when not used by the school.
- The project would improve drainage to further reduce offsite runoff.

The point that the project improves parking is not relevant or genuine. There is ample street parking around the park and when school is not in session, the current on-site parking lot is almost always empty. The desire for a larger parking area is driven solely by the school's desire for more faculty parking.

Therefore, this statement is untrue (emphasis added):

> Because the proposed improvements would encroach on the existing 6(f)(3) boundary and includes uses that are not related to outdoor recreation, i.e., school building, and because there are existing school buildings—constructed in the 2000s—that also encroach on the 6(f)(3) boundary, **the project would require an adjustment to the existing 6(f)(3) boundary** called a "conversion."

R34-7 CONT'D

As stated earlier, the boundary adjustment is not being requested in order to improve the park. To suggest otherwise can only be interpreted as an attempt to deceive decision-makers. These statements should be removed or revised and the DEIR resubmitted for public review.

Issue 6

Table 5.8-3 Environmental Screening Form contains inaccuracies that must be corrected. Row #15 is:

> Recreation No resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc. *Most conversions exceed minor impacts. See Step 3.B*

R34-8

The DEIR classifies this category as "No/Negligible Impact" although the text clearly states that "*most conversions exceed minor impacts*". The statement in the table reads:

> The LWCF boundary would increase by 2,047 square feet from existing conditions and existing buildings within the boundary area would be removed, thereby increasing available recreational space.

This is a distortion of the truth at best. The new boundary would contain a 35,000 square foot parking lot whereas the original boundary is all open park land. At a minimum, the DEIR should properly reclassify the impacts to Recreation and resubmit the DEIR for public review.

Issue 7

Table 5.8-4 Environmental Screening Form is inaccurate and must be corrected. The following rows are all marked with an answer of "No" when in fact the answers should be "Yes" or at the very least "To Be Determined":

R34-9

> 3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)]?
>
> 5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?
>
> 6. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?

Table 5.8-4 should therefore be corrected and the DEIR resubmitted for review.

Issue 8

R34-10

Chapter 7 "Alternatives to the Proposed Project" does not provide true alternatives and must be

2. Response to Comments

R34-10 CONT'D

rewritten to allow decision-makers to comply with CEQA's mandate that significant environmental damage be avoided or substantially lessened where feasible. It is important to note that the current site already houses an award-winning school so it is clearly feasible that a construction project can be completed without encroaching on LWCF protected land. This is especially true considering the proposed project does not significantly increase classroom space.

R34-11

Before passing Measure GG (the measure that allowed bonds to be sold in order to fund this project) voters were shown a plan that did not encroach on the park. The plan was labeled as "Scenario C" and is attached at the end of this letter for reference. This plan was the only detailed plan that voters were shown. Shortly after Measure GG was approved, Scenario C was described by the District as not feasible even though architects were never funded to explore this design. Why does Chapter 7 of the DEIR not explore Scenario C or any similar design? Instead of deeply exploring a design which remains in the boundary, Chapter 7 instead showcases Figure 7-1 "Scheme B". Scheme B should not be considered an alternative because it more significantly violates the LWCF Agreement. If the main focus of the Alternatives Section should be to discuss alternatives that **lessen** environmental impact, why would the DEIR contains alternatives that instead **increase** impact? Because the District did not provide true project alternatives, the DEIR should be considered incomplete and should be revised and recirculated.

R34-12

Conclusion

As significant problems and issues are apparent in the DEIR, the document should be considered incomplete and inadequate. Therefore, the District should revise and recirculate the EIR for public review and comment.

Thank you for considering these comments.

Daniel Littrell

[redacted]

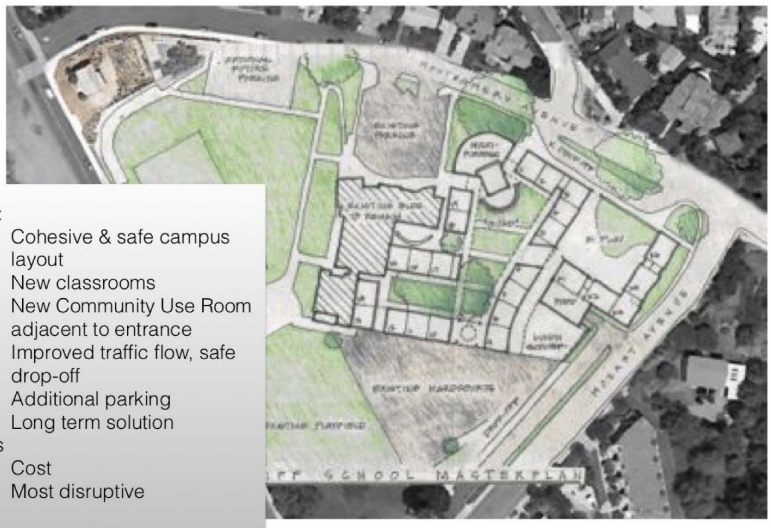
Cardiff-by-the-Sea, CA 92007

R34-13

Looking to the Future

Cardiff School - Possible Scenario C

CARDIFF SCHOOL DISTRICT



Pros:

- Cohesive & safe campus layout
- New classrooms
- New Community Use Room adjacent to entrance
- Improved traffic flow, safe drop-off
- Additional parking
- Long term solution

Cons

- Cost
- Most disruptive

Cost = approx $22m

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2. Response to Comments

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R34. Response to Comments from Daniel Littrell, dated November 18, 2018.

R34-1 The commenter states that the DEIR is incomplete and inaccurate, and that it should be revised and recirculated. The commenter references Table 2-2, of the DEIR, and states that omitting letters from the public and paraphrasing the comments misrepresent the depth of opposition. The commenter states that all public comments should be attached to the DEIR in their entirety.

Table 2-2 of the DEIR is intended to provide a summary of public comments that address CEQA issues related to the proposed Project. As noted in Chapter 2 of the DEIR, the full comment letters were included in Appendix 2-2 of the DEIR.

R34-2 The commenter references Section 5.8 of the DEIR and states that this section should address the LWCF restrictions. The commenter quotes a passage from the DEIR, page 5.8-1, and states that it is misleading and inaccurate, stating that the purpose of LWCF is to protect at-risk park land. The commenter references the LWCF Proposal Description and Environmental Screening Form (PD/ESF), and states that a rapidly changing urban area does not provide an exception to the LWCF Agreement.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The commenter cites and bolds a portion of the LWCF PD/ESF, "The Section 6(f)(3) conversion proposal including the required NEPA environmental review documents (CE recommendation or an EA document) must focus on the loss of public outdoor recreation park land and recreational usefulness, and its replacement per 36 CFR 59, and not the activities precipitating the conversion of benefits thereof, **such as the impacts of construction a new school to relieve overcrowding…**." The proposed Project would not be constructing a new school, but rather would result in the reconstruction of a portion of an existing school. Furthermore, the project is not proposed to relieve overcrowding. In addition, the project impacts to the LWCF conversion are addressed in Impact 5.8-2 of the DEIR, which determined that preparation of an Environmental Assessment or Environmental Impact Statement would not be required and a less than significant impact would occur.

The commenter states that a "rapidly changing urban area" does not provide an excuse or exception to the LWCF agreement. The project site is fully developed as a school and would continue to operate as such post-construction. The site and surrounding vicinity are mostly developed and would not be considered to be a "rapidly changing urban area." As stated in Impact 5.8-2, the project would comply with the LWCF and requirements of the 6(f)(3) boundary conversion.

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R34-3 The commenter states that the District's conversion request cannot be considered a small conversion because it does not meet the requirements, as defined by the LWCF State Assistance Program Manual, because the boundary adjustment affects more than 10 percent of the park land and is controversial.

OGALS initially stated they considered the District's proposal to be a "small" conversion. Subsequent review by OGALS determined the proposal did not qualify as a "small" conversion. The District is aware of this clarification made by OGALS. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R34-4 The commenter deems that the description of the area encompassed by the LWCF 6(f)(3) boundary, on page 5.8-3 of the DEIR, misleads its usefulness to the community. The commenter states that the description of the baseball/multipurpose field being underutilized is not based on data or study.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

Descriptive language can be useful to provide further explanation of the condition of the topic being described. This is a subjective observation of the amount of use by the public of one play area in relation to another. However, usefulness is not an environmental issue to be studied in this report. Furthermore, as it relates to the school's operations, the District knows the school seldom uses the dirt infield because it presents concerns regarding injury to students. In addition, the dirt infield and grass field area north of the apparatus play area is underutilized by the school because it is difficult to adequately supervise due to the fact that the play structures separate the field areas and obstruct views.

R34-5 The commenter references a passage on page 5.8-10 of the DEIR that discusses the enhancement of the outdoor recreation area, educational program, and safety, and states that the statement is untrue. The commenter states that the District created the proposed plan before it knew that the land was within a LWCF 6(f)(3) boundary, and states that LWCF conversion proposal outlined in the DEIR retrofits a new 6(f)(3) boundary around a finalized construction plan.

The comment is unsubstantiated. This issue was discussed directly with OGALS. The District was informed by OGALS that the project would be evaluated on its benefit to

the community even though the District was not aware of the LWCF agreement before beginning the design process. Although the District proposed the school reconstruction and developed conceptual plans prior to recognizing both the District and City were out of compliance with the LWCF agreement, OGALS recognizes that the intent of the project has always been to enhance the user experience of the outdoor recreation area. The project as presented would enhance the outdoor recreation area, which would also benefit the community, as it would continue to be publicly available after school hours via the Civic Center Act.

R34-6 The commenter asks what data the District has to support that recreational opportunities would be enhanced. The commenter also states that the boundary adjustment would replace 35,000 square feet of park land with a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The project would enhance existing recreational facilities by constructing proposed recreational improvements (see Chapter 4, *Project Description*, of the DEIR): the existing baseball dirt infield would be removed and two natural turf soccer fields would be installed along San Elijo Avenue; the existing play structure that bisects the two fields and restricts supervision of the fields would be relocated to the south side of the site, near the intersection of San Elijo Avenue and Mozart Avenue, and would include a jungle gym and other play equipment; picnic areas would be provided at both the north and south ends of the play field areas; the school garden would become a shared garden with the community; an outdoor concrete plaza would be located adjacent to the field areas; and concrete spectator seating would be provided adjacent to the soccer fields.

R34-7 The commenter states that the list of bullet points of the site improvements, on page 5.8-10 of the DEIR, could be accomplished without adjusting the 6(f)(3) boundary. The commenter deems that the point about the proposed Project improving parking is not relevant as there is ample street parking and the on-site parking lot is usually empty. The commenter believes that the boundary adjustment is not being requested to improve the park.

The commenter is correct in that some of the identified recreational improvements could be constructed without conversion of the 6(f)(3) boundary; however, the existing facilities on the project site are not in compliance with the LWCF agreement and encroach on the existing 6(f)(3) boundary. The boundary adjustment is being proposed in part to bring the site into compliance with the LWCF agreement on behalf of both the District and the City, and a major component of the proposed conversion is

improving the outdoor recreation areas. The increase to the on-site parking is in direct response to the request by the City of Encinitas and is an enhancement for the users of the outdoor recreation area by accommodating more users who may not live within walking distance or may choose to drive for various reasons.

R34-8 The commenter references Table 5.8-3 of the DEIR and states that it contains inaccuracies, specifically Row 15, which discusses recreation. The commenter states that the statement indicating that the LWCF boundary would increase is distorted, as the new boundary would contain a parking lot, which would impact recreation.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R34-9 The commenter references Table 5.8-4 of the DEIR and states that it is inaccurate—specifically the responses to questions 3, 5, and 6, which the commenter states should be changed to "yes" or "to be determined."

The commenter requests that the following three areas of Table 5.8-4 of the Environmental Screening Form be changed from "no" to "yes" or "to be determined":

3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)].

> See Table 1-1, *Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation*, of the DEIR. The project would not result in significant unavoidable impacts. While the proposed conversion of the 6(f)(3) boundary might be opposed by one or more commenters, there is no evidence that it is a controversial project. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?

> The proposed 6(f)(3) conversion is required to ensure District and City compliance with the LWCF agreement. The precedent the District is setting would be related to ensuring District and City compliance in the future for any development using LWCF lands. The project would not result in significant and unavoidable impacts and is not setting a precedent that would result in future significant environmental

effects. All future projects at the site or within a LWCF boundary area would be evaluated for their merits on a project-by-project basis.

6. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?

As stated throughout the topic sections of the DEIR (sections 5.1 through 5.12), the project would not result in a significant cumulative environmental effect. Although the project would result in an increase in the school capacity by 22 seats, the project would not directly result in an increase in enrollment that could result in significant cumulative environmental effects. The project would continue to operate as a school, and growth-inducing impacts would be less than significant.

R34-10 The commenter references Chapter 7 and states that it does not provide true alternatives. The commenter states that it is feasible to construct a project without encroaching on the park, which the commenter believes is true as the proposed Project does not significantly increase classroom space.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R34-11 The commenter states that before Measure GG was passed, voters were shown a plan that did not encroach on the park (Scenario C); however, after the Measure GG was passed, the District stated that Scenario C was not feasible. The commenter asks why Chapter 7 does not explore Scenario C or a similar design as an alternative. The commenter states that Figure 7-1 of the DEIR should not be considered an alternative as it more significantly violates the LWCF Agreement.

The commenter is incorrect. Scenario C provided by the commenter indicates a parking lot larger in area than the District's proposed multi-purpose building encroaching into the 6(f)3 boundary.

Alternatives are discussed in Chapter 7 of the Draft EIR and include a reasonable range intended to reduce or eliminate environmental impact. The role of the EIR is not to evaluate design alternatives, but rather recommend alternatives that reduce environmental impacts. Alternatives prepared prior to the passage of Measure GG, such as Scenario C, were modified based on public feedback, site design principles, and main program elements. Scenario C was not included as an alternative in the Draft EIR because it was determined to be infeasible and did not meet project objectives. At the Cardiff School Conceptual Site Design Meeting #2, held on August 3, 2017, the District presented four site design schemes based on site design principles and main program

elements. The District and planning committee determined that of the four project alternatives, Scheme B met the best combination of site design principles and main program elements and was still considered and rejected during the planning process. Please see Master Response 2.2, for discussion of the school site design process.

Additionally, please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R34-12 The commenter states that there are significant issues with the DEIR and that the document should be recirculated.

The commenter's comments are responded to in R34-1 through R34-11, above. The comment does not cite a specific issue related to the adequacy of the DEIR under CEQA; therefore, no further response is necessary.

R34-13 The commenter provides "Possible Scenario C" from a District meeting. The graphic is a hand-drawn site plan and provides a list of pros and cons as well as approximate cost.

The commenter provides this as an attachment to support comment R34-11. See response to R34-11.

LETTER R35 – Judith Ogata (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Protect Berkich Park
1 message

Judy Ogata [redacted] Sun, Nov 18, 2018 at 1:47 PM
To: "cardiffDEIR@cardiffschools.com" <cardiffDEIR@cardiffschools.com>
Cc: "david_siegenthaler@nps.gov" <david_siegenthaler@nps.gov>, "council@encinitasca.gov" <council@encinitasca.gov>

Dear CardiffDEIR,

R35-1 *I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.*

R35-2 *The open space at George Berkich Park is a precious resource that should be preserved. Also, that preservation is an important example and lesson for the children of Cardiff Elementary School district. They, and their children will not thank the present board in the future.*

Sincerely,
Judith H Ogata
[redacted]
Cardiff, CA 92007

2. Response to Comments

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R35. Response to Comments from Judith Ogata, dated November 18, 2018.

R35-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R35-2 The commenter states that open space at the park is a precious resource that should be preserved, and that this lesson of preservation would be an example for the students at the District.

See response to R35-1, above. The commenter does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

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LETTER R36 – Gary and Kathleen Schneiderman (3 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Comments on EIR for Cardiff School
2 messages

Gary Schneiderman [redacted] Sun, Nov 18, 2018 at 10:14 PM
To: CardiffDEIR@cardiffschools.com

November17,2018

From: Gary Schneiderman MD
Kathleen Schneiderman MD
[redacted]
Cardiff, Ca 92007

Re: Comments regarding EIR for Cardiff School Reconstruction-Health Concerns

R36-1 Of particular concern to my wife and I, both of whom are physicians, relates to Section 2, Table 2-2 , Table 2-3, section 5.9 (Noise). While noise is discussed in general terms in section 5.9, the specific health issues related to the noise associated with the new school's geographical footprint were not mentioned nor addressed. There is no mention of noise as a critical health issue that was brought to the School Board's attention in October and November, 2017. Our concern at that time was based upon well known medical evidence that sound levels over a specific dBA (decibels) could result in permanent hearing loss. There is abundant medical and audiological data on this topic. Noise has also been associated with reduced test scores and can negatively impact the learning environment.

R36-2 The remodeled school's footprint would bring the children closer to the main vehicular thoroughfare resulting in greater sound pressure from traffic , but of greater concern was closer proximity of classrooms to the railroad tracks. Furthermore, a second railroad track is currently being constructed adjacent to the school and the new school footprint brings the school closer to these tracks. Noise and sound levels due to trains and train horns is expected to significantly increase due to increased railroad traffic. Increased noise levels as the new school moved towards the road and tracks would present an increased health risk to both the young children who attend the school but also to the adults. Noise levels could exceed the recommended standards for a school's environment.

R36-3 This concern was brought to the attention of the Cardiff School Board at a public meeting in November 2017 and also in a written email to the district superintendent Jill Vinson which is attached below dated October of 2017. Please note, as indicated in the attached letter, that we performed a rudimentary study to assess the noise levels and did find excessive levels of noise at the site where buildings were to be built. We called for further study of this issue, and as parents and physicians were appalled that the district not only ignored our comments and findings in the Public Comment section of the EIR but did not perform any study to identify if noise could be a long term health issue due to the placement of the new buildings.

R36-4 The EIR in Table 5.9-3 states that sound levels in 60-70 dBA range may be "conditionally acceptable" but that in this instance "New construction or development should be undertaken only after detailed analysis of noise reduction requirements is made and needed noise insulation features be included in the design". . Above 70 dBA, noise is normally unacceptable with new construction discouraged and above 80 dBa new construction should not be undertaken. At the very least, based on our measurements, the noise levels require a detailed study to ensure that the proposed new buildings are safe for the children and staff. Please note in our study that the ambient noise level at times exceeded 70 dBA. Train noise without horn sounded was 72-82 dBA, and with horn 89-94 dBA. Per the EIR document, these levels of sound need a formal investigation.

R36-5 Furthermore, in section 5.9.1.1 (Regulatory Background) State standards under Title 5 of the California Department of Education recommend that an acoustical engineer be hired "to determine the level of sound and to assist in designing the school" "when considering a potential school site near a freeway or other sound". CALGreen has requirements that appear to specify proper noise insulating measures when a building is in proximity to a railroad if buildings exposed noise level of 64 dBA Leq during any hours of operation. Both these conditions appear to be present, yet the EIR does not identify that a formal noise study has been undertaken to assess environmental noise and its impact on the students and staff.

R36-6 Taking all these noise factors into consideration and the risk that noise can cause permanent injury it is our opinion that the EIR is incomplete and does not merit acceptance. We respectfully and strongly recommend that it be rejected , the appropriate studies completed and a new EIR be prepared that is comprehensive and complete.

Respectfully submitted,

2. Response to Comments

Gary Schneiderman MD
Kathleen Schneiderman MD

October 14,2017
Dear Jill ,

Jill, thank you for approaching me after the meeting on October 12. You may recall I am Kathy Schneiderman MD, the pediatrician you spoke with.

R36-7 *After giving up the podium at our School Board meeting, I realized that there were additional issues requiring discussion. The following morning, I spoke to my husband, who is also a physician, and we began to research the topic of concern.*

The construction of new classrooms along Montgomery may lead to irreversible hearing loss and could adversely affect the learning environment due to the proximity of the school to the railway.

R36-8 *It is well known that exposure to loud noises can result in permanent noise induced hearing loss. Damage from loud noise to the cochlear hair cells is irreversible and like the effect of sun on skin is cumulative. The degree of damage is dependent on volume, as well as time and frequency of exposure. The closer you are to a loud sound the greater the exposure and risk. In occupational situations NIOSH recommends hearing protection if exposure is greater than 85 decibels (dBA) It has been recommended that children wear hearing protection at sporting events, music venues and anywhere where loud noise can occur. Younger children are more sensitive to damage.*

R36-9 *The proposed expansion of the Cardiff School Campus towards the railway may be placing children and staff at risk for permanent hearing loss. There is an abundance of medical, government and institutional literature on this topic. If you look at the attached chart (see attachment) you will note that there is significant exposure to damaging sound within 500 feet of a railway. The current plan places the new buildings well within this parameter at approximately 300-400 feet per our measurements. Furthermore, the proposal to have open windows and perhaps even open "garage type" doors in these classrooms, removes sound buffers and adds further risk of hearing damage due to higher levels of ambient noise.*

Furthermore, medical and educational literature identifies that higher ambient noise in classrooms results in a poor learning environment and poorer test scores. Background noise often disrupts concentration and according to NIOSH ambient noise affects people's health by increasing general stress levels. This can aggravate stress related conditions such as hypertension, coronary disease, peptic ulcers and migraine.

The literature from the CDC has indicated that being closer than 400 feet to a railway will usually result in the speaker having to pause until the train passes. Thus, the teacher or student will need to pause their conversation. ANSI (American National Standards Institute) recommends that the ambient noise level of an empty classroom be no greater than 35 dBA.

R36-10 *For informational purposes, we measured the ambient noise at the proposed classroom site as well as the train noise at the site without a horn and at Chesterfield with the horn. At Chesterfield we measured the dBA 350 feet from the railway, the same distance as the middle of the proposed classroom site for both Coaster and Amtrak. Baseline ambient noise without the train measured between 53 and 72 dBA. Train with horn 89-94. Train without horn 72-82. These are cause for concern. The higher sound levels can cause hearing loss and the baseline ambient noise far exceeds recommendations.*

R36-11 *There are approximately 11 passenger trains during school hours of 7:30 AM to 3 PM. While currently the train does not sound its horn, there is substantial increased ambient noise associated with the trains passage. At Montgomery, this may change with further development of the rail corridor. The frequency of railway traffic including freight trains is planned to significantly increase as the track project is completed. If a crossing is constructed at Montgomery or Verdi' as is being considered, a horn may sound further increasing ambient noise with increased risk of hearing injury. Without a doubt the railway development will only add to the ambient and excessive noise.*

R36-12 *In conclusion, the school board and the administration have repeatedly stated that the students' safety and education are their primary concern. As physicians with a collective experience of 75 years caring for children, we are greatly concerned that moving classrooms closer to the railway may be a significant health issue. Also, the increase in ambient*

noise expected in the classrooms may adversely affect the students' learning environment. These risks also apply to your staff.

These concerns are supported in the medical and educational literature. It is our conclusion that the current site plan creates a significant health risk to both students and staff. We would appreciate a response to our concerns.

R36-12 CONT'D

Respectfully
Kathleen Schneiderman MD, Pediatrician
Gary Schneiderman MD, Orthopedic Surgery

/var/folders/d1/4h4sm3tn6zb_95ztmg4vxfg80000gn/T/com.microsoft.Word/WebArchiveCopyPasteTempFiles/cleardot.gif

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Gary Schneiderman MD

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:53 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R36. Response to Comments from Gary and Kathleen Schneiderman, dated November 18, 2018.

R36-1 The commenters raise concerns about the noise section of the DEIR, section 5.9, and state that the section discusses noise in general terms and that the specific health issues related to noise associated with the proposed Project were not addressed.

In accordance with Education Code Section 17251, the California Department of Education (CDE) requires preparation of a rail safety study if a school is within 1,500 feet of a railroad easement. A rail safety study was conducted for the proposed Project, which analyzed the impact of rail noise on the site occupants based on the proposed location of the buildings. According to the rail safety study, the noise levels from the Coaster and Amtrak passenger trains would generate 54 dB for the wheel/rail noise and 46 dB for locomotive hours at the property boundary, which are less than the acceptable Encinitas community noise exposure for schools of up to 60 dB.

R36-2 The commenters state that the new school footprint would bring students closer to the main vehicular thoroughfare and the railroad track. The commenters further note that a second railroad track is being constructed adjacent to the school site and could exceed recommended noise standards for a school environment.

As discussed in Impact 5.9-2, the project would not result in a significant increase in traffic that could result in a significant noise impact at the project site. The project proposes to reconstruct the play facilities on the western portion of the campus and would not move students closer to San Elijo Avenue.

The rail safety study accounts for the North Coastal Transit District double tracking project from Oceanside to San Diego. See response to R36-1; rail wheel and locomotive horn noise would not exceed the City of Encinitas community noise exposure threshold.

R36-3 The commenters state that they raised these concerns at a public meeting in November 2017 and in an email to Superintendent Jill Vinson on October 14, 2017. The commenters state that they conducted a rudimentary study to assess noise levels and found that noise levels would be excessive. The commenters requested that the District conduct further study, but the commenters state that this request was ignored.

See R36-7 through R36-12, below, for responses to the letter provided to Jill Vinson on October 14, 2017.

The noise analysis of the DEIR was conducted using procedures and methodologies as specified by the City of Encinitas, the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA). Additionally, a rail safety study was conducted in accordance with the California Education Code Section 17251, and determined that rail and locomotive noise would not result in a significant impact.

2. Response to Comments

R36-4 The commenters reference Table 5.9-3 of the DEIR, which states that 60 to 70 dBA may be considered acceptable, and that, based on the commenters' study, they found that noise levels, at times, exceeded 70 dBA. The commenters state that these noise levels require a detailed study to ensure safety for children.

The commenter is correct in that Table 5.9-3 of the DEIR states that noise levels between 60 and 70 dBA would be considered acceptable. According to Impact 5.9-2 of Section 5.9 of the DEIR, the project would not result in long-term operation-related noise that would exceed local standards. Additionally, as discussed in R36-1, the proximity of the site to the Coaster and Amtrak rail lines would not exceed noise thresholds.

R36-5 The commenters reference Section 5.9.1.1 of the DEIR and state that the DEIR does not identify if a formal noise study has been conducted to assess environmental noise and its impact on students and staff.

The commenter does not specify what a "formal" noise study would be; the impact analysis of DEIR Section 5.9 would be considered a noise study. Additionally, see response to R36-1, which discusses the rail safety study conducted for the project site.

R36-6 The commenter states that the DEIR is incomplete, as it does not take into consideration the risk that noise can cause permanent injury.

See response to R36-1. Additionally, construction of the improvements would be conducted in accordance with Occupational Safety and Health Administration Noise Exposure standard: 29 CFR 1910.95. The site would continue to operate as a school and the increase in traffic noise due the increase of 22 seats would be negligible.

R36-7 The commenters attached a letter that was sent to Superintendent Jill Vinson, dated October 14, 2017. The commenter states that there are additional issues that require attention.

The comment does not address the adequacy of the DEIR as it pertains to CEQA. The comment is noted and no further response is necessary.

R36-8 The commenter states that the construction of new classrooms along Montgomery may lead to irreversible hearing loss and could adversely affect the learning environment based on proximity to the railway. The commenter states that for occupational situations NIOSH recommends hearing protection for noise exposure that is greater than 85 dBA.

As stated on page 5.9-10 of the Draft EIR, Figure 4.10-1 of the City of Encinitas 2013-2021 Housing Element Environmental Assessment shows the project site lies within the 65 dBA CNEL noise contour, meaning the ambient noise environment is between 65 and 69 dBA CNEL. The project would be required to comply with CALGreen requirements for exterior-to-interior noise transmission for nonresidential structures.

Further, as shown in Figure 4-2, the proposed Project does not place classroom buildings closer to the railroad than the existing site plan shown in Figure 3-4.

R36-9 The commenter states that the expansion of the campus toward the railway would place children and staff at risk for hearing loss. The commenter cites a chart (not provided) and states there is significant damaging sound within 500 feet of a railway; the current plan propose buildings within 300 to 400 feet and would have open windows.

See response to comment R36-8.

R36-10 The commenter states that being closer than 400 feet to a railway would result in the speaker having to pause until the train passes. The American National Standards Institute recommends that the ambient noise level of an empty classroom be no greater than 35 dBA. The commenter states they measured ambient noise at the proposed classroom site and at Chesterfield (350 feet from railway) with and without the train horn. The baseline ambient noise without the train measured between 53 and 72 dBA, the train with the horn 89 to 94 dBA, and without horn 72 to 82 dBA.

See response to R36-8.

R36-11 The commenter states that there are approximately 11 passenger trains during school hours of 7:30 AM to 3:00 PM. The commenter states that although the train does not sound its horn there is substantial increased ambient noise associated with the passing train, and ambient noise may change at Montgomery with further development of the rail corridor. If a crossing is constructed at Montgomery or Verdi, a horn may sound, further increasing ambient noise.

See response to R36-8. The CEQA analysis evaluates existing conditions. If a crossing is added at a future date, it will be the responsibility of that project to evaluate the impact of any additional noise on the existing school.

R36-12 The commenter states that the school board and administration have stated their concern with student safety. The increase in ambient noise would affect student learning and staff.

See response to R36-8.

2. Response to Comments

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LETTER R37 – Barbara Stewart (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Protect Berkich Park
2 messages

Barbara Stewart [redacted] Sun, Nov 18, 2018 at 6:38 PM
To: "cardiffDEIR@cardiffschools.com" <cardiffDEIR@cardiffschools.com>
Cc: "david_siegenthaler@nps.gov" <david_siegenthaler@nps.gov>, "council@encinitasca.gov" <council@encinitasca.gov>

To Whom It May Concern:

I am opposed to the current proposal to destroy land in the George Berkich Park. You are proposing putting in a parking lot on land that is protected under a Land and Water Conservation Fund agreement. This land is meant to be protected for recreational activity. A parking lot does not fit that requirement.

R37-1

I have lived in Cardiff for 38 years. I love our community and do not want to loose precious resources because of poorly thought out ideas. Phase 3 of the Board Presentation apparently lacks the funding available to build it.

I want George Berkich Park to stay protected as per the Land and Water Conservation Fund agreement.

thank you,

Barbara J Stewart

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:53 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R37. Response to Comments from Barbara Stewart, dated November 18, 2018.

R37-1 The commenter is opposed to the proposed Project, and states that a parking lot does not fulfill the requirement of protected land for recreational activity. The commenter states that Phase 3 of the Board Presentation lacks funding to construct it. The commenter wants the park to remain protected as per the LWCF Agreement.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes. The project does not propose a Phase 3; the project proposes Phases I and II, each of which has two subphases. Nonetheless, the entire project would be funded by Measure GG funds.

2. Response to Comments

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LETTER R38 – Leslie Tuchman (4 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Save Berkich National Park Land in Cardiff

3 messages

Leslie Goldberg [redacted] Sun, Nov 18, 2018 at 12:50 AM
To: cardiffDEIR@cardiffschools.com, david_siegenthaler@nps.gov, council@encinitasca.gov

R38-1 I am opposed to the proposed encroachment of Cardiff Elementary School onto public National Park Land. The beautiful open space and unobstructed ocean views are a precious resource for our community that should not be encroached upon. Every evening at sundown, children play on the fields and groups of residents and visitors stand and watch the sunset at Berkich Park (National Park Land). This land should continue to be preserved in perpetuity as the City of Encinitas and the Cardiff School District both had promised and not be encroached upon by parking lots and buildings.

The current school proposal consists of many single story buildings. By just making one of those buildings into a 2 story structure, both National Parkland and school capacity could be maintained.

R38-2 Lastly, Cardiff School District was alerted to this encroachment onto parkland over a year ago and could have easily altered their designs to save the park. Instead, they chose to ignore constituents and promote a false narrative regarding their rights and ownership of the present day park. Please see email below from Cardiff School District dated October 11, 2017. In the email, they state: "Recently, Cardiff families and community members have received emails, fliers or postcards, or seen social media posts regarding information about the rebuilding of Cardiff School. These communications have originated from a group of neighbors and contain inaccurate graphics and misinformation..... **Who owns George Berkich Park?**
The entire property, consisting of Cardiff School and the adjacent field space known as George Berkich Park, including the dog park, is owned by the Cardiff School District. It is not a City park. The School District opens the fields and play equipment for public use after school hours and on weekends."

R38-3 In conclusion, I implore you to save our National Park Land in Cardiff, CA. The design of the school could easily be amended to preserve park land. There should be no encroachment onto National Parkland. The City of Encinitas and the Cardiff School District should continue to be uphold their agreement and preserve this outdoor recreation area in perpetuity.
Sincerely,
Leslie Tuchman MD
[redacted]

---------- Forwarded message ---------
From: **Cardiff School District** <district.news@cardiffschools.com>
Date: Wed, Oct 11, 2017 at 3:31 PM
Subject: Current Information About Cardiff School Rebuild
To: [redacted]

CARDIFF SCHOOLS

Dear Cardiff School District Families,

R38-4 Recently, Cardiff families and community members have received emails, fliers or postcards, or seen social media posts regarding information about the rebuilding of Cardiff School. These communications have originated from a group of neighbors and contain inaccurate graphics and misinformation. Although the District sent out a detailed update on September 27th regarding our Measure GG progress, we would like to provide you with additional information and clarification. We have prepared answers to some of the questions we have received over the past couple of weeks and would like to share them with you so that everyone is accurately informed about the rebuilding of Cardiff School.

2. Response to Comments

Please know that this is an exciting time for the Cardiff School District and community and we are proud to present a conceptual site plan for Cardiff School that;

1. Prioritizes Students' Educational Programs
2. Increases Student Safety and Security
3. Preserves George Berkich Park – Including Dog Park, Garden and Brick Building
4. Reconfigures Play Fields and Playground for Expanded School Use
5. Improves Traffic Flow

Additional information, including all news releases and presentations can be found on the Cardiff Schools website at https://www.cardiffschools.com/Page/1768

Why is Cardiff School being rebuilt?

Cardiff School District has been educating students for over 100 years. A significant portion of the buildings on the Cardiff School campus are between 55 to 65 years old and need to be replaced or repaired. In the November 2016 election, 65.9% of Cardiff residents voted and passed a $22 million bond, Measure GG, to rebuild, remodel and repair Cardiff School and replace portables with permanent classrooms.

Is George Berkich Park being removed?

No, the park is not being removed. The field space and playground area are being reconfigured to increase security and enhance field use by the school and community. The dog park, garden and brick building are NOT BEING ELIMINATED.

A multipurpose room and a Kindergarten courtyard are being proposed to the northwest of the administration building, which is the main entrance to the school. This will increase security and allow for the the use of North George Berkich Park during the school day. Currently, the baseball field and adjacent grassy area are unused during the school day. Building the Kindergarten classrooms on the northwest side of campus will allow for an adjacent grassy area for the children to run and play, which the current Kindergarten play area lacks.

R83-4
CONT'D

Who owns George Berkich Park?

The entire property, consisting of Cardiff School and the adjacent field space known as George Berkich Park, including the dog park, is owned by the Cardiff School District. It is not a City park. The School District opens the fields and play equipment for public use after school hours and on weekends.

Is the dog park being removed?

There are no plans to remove the dog park.

Has the District considered how the dogs barking in the park will disrupt the Kindergarten classes?

We do not anticipate that this will be a concern. Currently, garden classes are held directly next to the dog park throughout the day and the garden classes are not disrupted by the adjacent location.

What are the District's top priorities in putting together the conceptual site plan?

The District considers the students' educational program needs and security as the top priorities in the rebuilding of Cardiff School. Building the multipurpose room towards the front office is an important security issue so that the outside public does not have to travel through the school and student classroom hallways to access it. The administration building, including the technology room and library, and the science/STEAM lab were built in 2002, and are not being rebuilt and will remain as the hub of the campus.

Having a separate, secure drop off and pick up for Kindergarten is also important and is addressed by locating the Kindergarten courtyard by the existing brick building.

Moving the existing play structures from the center to the south end of George Berkich Park opens the field for better supervision of students during the school day and watching of soccer games and other activities during community use.

Will the neighbors' views be impacted?

While in the current conceptual site plan the single story auditorium and Kindergarten classrooms are placed on the lowest elevation of the campus, the views of some neighbors on Montgomery Avenue may be affected.

Although the Board and District have and will continue to consider the impact on the ocean views of the residents on Montgomery Avenue and those walking by, our first priorities remain the educational program and safety of our students.

What did Measure GG approve?

Measure GG approved $22 million in funding to rebuild, remodel and repair Cardiff School District facilities to improve the quality of education.

The bond measure did NOT include or approve any architectural plans.

I thought I saw a rendering before the election. Why does the current Site Plan look different?

In order to determine the appropriate amount of money needed to fund the type and level of projects that the Board was considering to put before voters, several possible scenarios were considered. Two of these scenarios were sketched for the sole purpose of developing the necessary cost estimates. These hand drawn renderings were never intended to be used as the Site Plan should the bond measure pass.

R38-4
CONT'D

Upon successful passage of Measure GG, the District began by formally selecting a Bond Program Manager and Architect to undertake a comprehensive programming, planning and design process, of which an early step is the development of a Site Plan.

Why can't we just rebuild on the current footprint?

While we carefully evaluated this option during the development process of the Site Plan, we determined that it is impossible to meet the students' educational program needs within the existing Cardiff School campus footprint. For example, a wing of portable classrooms encroaches on the students' blacktop play area. This wing of classrooms needs to be accommodated as part of the new construction to recapture adequate play area. Also, the current multipurpose room is not large enough to accommodate all of the Cardiff students. An appropriately sized, single-story multipurpose room is planned to address that need.



Conceptual site plan for Cardiff School in Cardiff School District as of September 11, 2017 by Studio E Architects. The conceptual site plan focuses on the program needs of the school to support the education, safety and security of its students and serves as a community resourcefor meetings, events and athletics.

****

Please DO NOT REPLY to this email address. For more information about this email, please contact one of the following as appropriate:

- Principal, Julie Parker
- Principal, Janelle Scheftner
- Superintendent, Jill Vinson

2. Response to Comments

- Cardiff SEA

R38-4 CONT'D

To update your email address or to remove yourself from this email list, please contact your child's school office:
Cardiff School 760-632-5892
Ada Harris 760-632-5894

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Leslie Tuchman
[redacted]

Tiana Hejduk [redacted] Mon, Nov 19, 2018 at 11:26 AM
To: Leslie Goldberg [redacted]
Cc: CardiffDEIR@cardiffschools.com, david_siegenthaler@nps.gov, council@encinitasca.gov

Thanks for sharing Lesli! You are awesome! Thanks for your support.
[Quoted text hidden]

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:49 AM
To: [redacted]

[Quoted text hidden]

R38. Response to Comments from Leslie Tuchman, dated November 18, 2018.

R38-1 The commenter is opposed to the encroachment of Cardiff School onto the park, and states that open space with unobstructed ocean views is a precious resource to the community. The commenter states that the park should continue to be preserved. The commenter states that if one of the buildings in the proposed Project is made a two-story building, the park and the school capacity could be maintained.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

DEIR Impact 5.1-1 adequately analyzes the project's impact on views and concludes that the proposed Project would not block public views of the ocean; existing public views of the ocean would be maintained. The comment provides a request to make all of the proposed single-story buildings into one two-story building. However, consolidating the proposed classrooms into a two-story building could result in new significant impacts to public views.

R38-2 The commenter states that the District was made aware of the encroachment onto the park over a year ago, and that designs could have been altered to save the park. The commenter states that District provided false information in regard to the District's ownership of the park in a letter dated October 11, 2017, in which the District stated that it owns George Berkich Park and opens it for community use after school hours and on weekends.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed LWCF land conversion, land ownership, and alternative site design. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes. See also Master Response 2.2 for discussion of the conceptual design process. The District is correct that they own the Cardiff School campus, including George Berkich Park, which is protected under Section 6(f)(3) of the LWCF Act. The site is maintained as public outdoor recreational space when not used by Cardiff School.

R38-3 The commenter states that the park, national park land, should be saved, and that the proposed design could be altered to preserve park land. The commenter states that the City of Encinitas and the District should continue to uphold their agreement and preserve the outdoor recreation area in perpetuity.

Please see Master Response in Section 2.2 of this FEIR, which addresses alternative site design. Additionally, see DEIR Chapter 7, *Alternatives to the Proposed Project,* which

analyzed four project alternatives: Alternative 1, Maintain Multipurpose Room in Current Location; Alternative 2, Scheme B Site Plan; Alternative A, No Project Alternative; and Alternative B, Reduced Capacity Alternative. None of the alternatives considered met all of the project objectives. The No Project Alternative did not meet 9 of the 12 objectives, and the Reduced Capacity Alternative did not meet 2 of the 12 objectives.

The District intends to uphold their agreement after the proposed 6(f)(3) boundary conversion and would maintain the LWCF lands for recreational use in perpetuity.

R38-4 The commenter attached a letter from the District, dated October 11, 2017, with the subject line, "Current Information About Cardiff School Rebuild."

The letter was provided to Cardiff School District families via email regarding the proposed modernization of Cardiff School on October 11, 2017. The letter details the project. No comment related to the adequacy of the DEIR as it relates to CEQA is provided; therefore, no further response is necessary.

LETTER R39 – Prem Bovie-Ware (3 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Comments on DEIR
2 messages

Prem Bovie-Ware [redacted] Mon, Nov 19, 2018 at 9:30 AM
Reply-To: Prem Bovie-Ware [redacted]
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

November 18, 2018

To all parties concerned,

R39-1 I had no idea we were at the end of time. At least that is what one would believe if the Cardiff School District is permitted to declare "kings ex" and tidily ignore the meaning of the legal phrase "in perpetuity". The term "in perpetuity" according to all esteemed standard dictionaries means "FOREVER". That was ,and is, the wording stipulated in the agreement enacted and certified when Berkich Park at Cardiff School was created. In specifically employing those words it is quite clear that the people who wrote the agreement definitively inserted "in perpetuity" into the text because they foresaw the distinct possibility that there would come a time when an entity or group of people would try to undermine the existence of the park partially or in totality. Keen foresight they had. They moved to prevent that possibility by inserting the words "in perpetuity" which means FOREVER! It does not mean: until we realize we haven't planned for growth by acquiring another site and decide we need a bigger parking lot, a multipurpose room, or more sports fields for local organized soccer leagues. The framers of the original document instead inserted "in perpetuity" to safeguard the free open space; an unorganized space to fly a kite, to have a place for a group of neighbors to go play softball, for senior citizens or young parents with strollers to walk a loop, to set up a badminton net, play bocce ball or croquet, for kids to invent a wildly free-running game or simply to lie on one's back and look at the dome of sky above. That is what it means.

R39-2 The wide unencumbered dome of sky that is Berkich Park has no equal in the area. Look at the satellite view on Google maps. Glen Park is there but does not offer the flat and open dome. Look at the topography for the majority of Cardiff west of Interstate 5. It is very hilly and with little space for flat open running areas in backyards. That is why preserving all of space that is the current footprint of Berkich Park is critical and why the stipulation "in perpetuity" was included. It is a statement insuring the responsible stewardship that the participants envisioned and enacted to require future accountability for that expectation.

In addition to encroaching on the current "in perpetuity" footprint of the park, there are several flaws in this new iteration of the plan that effect the neighborhood and beyond:

1) In reading the Aesthetic Evaluation section of the DEIR, I would disagree that there will be little environmental impact from the lighting of the expanded new parking lot.

R39-3 "Create a new source of light or glare which would adversely impact daytime or nighttime views in the area." DEIR page 49.

I disagree with the "less than significant Impact" designation indicated in the DEIR. The residences lining the north side of Montgomery opposite the school all sit on elevated lots in relationship to the elevation of the school and the street by approximately 6-10 feet. Lighting the new proposed parking lot essentially means that the lights would be visually even with the first floor of residences. This would create light pollution in general, and in the form of illuminating rooms when the residents retired for the night and by creating more obstruction to views. It would, therefore, "adversely impact daytime and nighttime views in the area."

R39-4 2) Encroaching on the original Berkich park footprint by creating a new parking lot configuration and encroaching on the footprint and the open space by constructing the multi-purpose room with an 15-20 foot high roofline and possibly roof mounted HVAC which would add noise pollution to the residences across the street whose houses would be at that level also.

R39-5 3) The placement of the play equipment area is adjacent to the corner of Mozart and San Elijo. First, as a current grandma of a 3 and a 4 year old, I am an expert on the importance of a park play area. When you have strollers, toddlers,

2. Response to Comments

R39-5 CONT'D pre-schoolers and beyond, proximity to parking is extremely important. The placement of the current play area means that the parking and traffic will be highly increased on Mozart because no one will want to trek all the way from the Montgomery side of the park to get to the playground equipment on the Mozart Avenue side. Therefore, parking and traffic will markedly impact Mozart Avenue unless by design there will not be public access to the play equipment area. Usually that area is one of the biggest draws to a park and most parks have reasonably accessible access. A good design also acknowledges that proximity to parking allows for crime prevention.

R39-6 Additionally, in reading the DEIR, a comment was made as to why the equipment should be moved from the middle of the park, the reasoning being
that it was difficult to supervise the sports fields. It should be noted that if proximity of supervision is that distant or sparse then it already is a security and safety concern, especially in the current social climate. With the new plan and the playground equipment in the far south corner and one of two sports fields in the far north corner, at a minimum, supervision will be needed near each of those three locations in addition to the hard court area. Moreover, the multipurpose room will prevent line of site supervision as it encroaches on the current sports field footprint of the park.

R39-7 4) Is the Park for the public or just an ancillary concern? Much of the DEIR is focused on school use objectives. When is the park or play area going to be available to the public? Just after school? There is a statement that security fencing will be installed on the perimeter of the facilities. Understood and valid, but does that mean that the entire park cannot be used by the public to walk or otherwise enjoy it during the school day? The National Park Service certainly should be invested in fostering reasonable access to the park.

R39-8 5) It appears that the student enrollment has markedly dropped since the 2001 school year. Currently the DEIR states the average enrollment is 367. Rather than just the past 10 years, it would be important to investigate what are the enrollment projections for the next 10 years? For under 400 students this is a big and costly remodernization project. Is the enrollment projected to increase or decrease and by how much? Do the future projections support the expanded building plan? Do they merit encroaching on the open dome of the park for car space? Furthermore, is there verified funding support for the entire project outlay (all phases)?

R39-9 Obviously I have immense concerns about that the apparent brushing aside of the LWCF “in perpetuity” clause. Publicly elected representatives have a duty of stewardship for the park and its continued presence in its current footprint in entirety. That is evidenced by the foresight of the Board and other signatories, including the City of Encinitas, whom entered into the LWCF agreement protecting “in perpetuity” the George Berkich park footprint. It was for the “benefit and enjoyment of the people”. That does not just mean organized sports competitions, or pre-planned reserved access. It means that if a parent wants to take their child, or foster child, or a Big Brother mentor wants to take a kid to play catch or practice hitting, or fly a Frisbee, there is an open free space, unencumbered to do so. Isn’t that part of the mission of The National Park Service? How many other places in the beachside Cardiff Community are there to do this? Again, Glen Park is certainly not flat and open. Are the diamonds and fields at the new Encinitas Community sports park open to anyone, anytime, or are they reserved and possibly locked unless they have been “properly” and “previously” arranged to be used? Berkich Park is uniquely situated and certainly fills a variety of neighborhood and community open space needs. Nibbling away at its space will set a dangerous precedent and adversely impact an important childhood resource.

The ability to have unstructured, open areas leads to spontaneous opportunities for play. We used to play from dawn to dark on these fields. It allowed for inclusion of all the kids no matter ability and skill. It allowed for just playing a game. Now it seems you can only play a sport if you are on ‘THE” team, when it should be you can all suddenly just play Nerf football, or croquet, or 3 fly’s up. It should facilitate that you can be on “any” team, especially spontaneous ones.

R39-10 Increasingly schools limit and even lock up areas that used to be open to the public. Clearly the proposed Cardiff School DEIR plan will impact the availability of access to the park all the time, (which is understood) but it should be considered that not every park space has to be in the form of a soccer field. Having the ability for a family to come to Berkich Park and use the old baseball backstop or just fly kites, taking advantage of the dome of open space should not be eliminated, negated, or marginalized so the District can hold wedding receptions or other money generating events in the multi-purpose room, which with the expanded parking lot is the main infringement to the Berkich parkl footprint. That is an affront to those that entered into the LWCF with a strong dedication to preserving the George Berkich Parkland for posterity with a nod to accessibility and acknowledgment of the sanctity of expansive open spaces anywhere, much less the California coastline. One can’t not help to realize that once it is gone, it is gone forever..uh like “in perpetuity”!

R39-11 It is too bad that in the last 20-40 years that none of the governing Cardiff
School Boards of Education had the vision to anticipate, imagine or undertake some analysis of growth that perhaps acquiring more land for another school or facility might be a good idea, given the ongoing growth that all communities encounter. But that is not justification to nullify or simply disregard the LWCF “in perpetuity” stipulation. This appears to be one of the tactics that is being employed. We will go forward with the plan and deal with that pesky little detail of the LWCF or completely funding it down the road. We can use legal maneuvering, various ploys, and wear down or eliminate any resistance. Right now up and down California’s Coast that scenario is being exercised rampantly. And that is a travesty. Ignoring the “in perpetuity” stipulation will hurt our little community park by the sea, but moreover, it will give another legal precedent toe hold to the vehement assault by special interests, wealthy landowners and developers that

R39-11 CONT'D the California coastline is currently experiencing. Please realize that your inaction as The National Park Service can have huge reverberating effects setting legal precedent.

As an representative of the public and the public good it is your responsibility, as The National Park Service, to fight that fight on the public's behalf. You are in a position to prevent the LWCF from being ignored or amended to suit the Cardiff School District's plan. If you do not hold them to the wording of the agreement, you will give the special interests that are bit-by-bit assaulting the protective umbrella of the California coast, and indeed across the nation, another little tear in the protective fabric that are our open natural spaces. It is well known that once it is gone, it is gone.

R39-12 Please own your responsibility as The National Park Service and defend the wording of the LWCF. Please do not be complacent in allowing the convenient disregard of the words 'in perpetuity" by the Cardiff School District and allow them to encroach on Berkich Park's footprint. It is clear that the signatories of the agreement had foresight and integrity in providing for protection for the parkland "in perpetuity". Their intension was clear and it should be enforced as written, without discounting or manipulating its intent: To preserve the park as designed for "the benefit and enjoyment of the people". Please do the right thing and hold the Cardiff District accountable to the stipulations detailed in the terms of the LCWF.

Sincerely,

Premila Anklesaria Bovie-Ware

Addendum:

Here is my background in having a voice in opposition to usurping the
boundaries of Berkich Park. I moved to Cardiff in 1961 and was in third
grade. I lived on Rossini Drive and I along with most of the neighborhood kids
played on the spacious playground of the school year around both in and out of school. I flew my kite on the field adjacent to Montgomery for the 3rd grade kite flying contest.

Mr. Berkich was my 6th grade teacher. He was an avid outdoor person and surfer.

During my teen year I lived directly across the street from the school on Montgomery and still own that residence. At one point in the early 70's we

R39-13 rode horses in the school dirt parking lot. We used the park for a variety of activities including flying kites.

When my son was born in 1982 he was walked around the park path loop in his stroller. You could make a complete circle of the grounds and without any elevation changes. Is there a complete single level loop in the current plan? He along with many young children played on the playground equipment that was there, too.

Comment on the Process:

It would appear that there is a lack of transparency and demonstrated desire not to be inclusive or forthcoming by the Cardiff School District when a citizen is trying to be civically involved and voice concerns about this issue. If this is a public process and document why is it required to submit name and email address in order to have a copy of the DEIR of the Cardiff School Modernization Project sent to you? It would seem that a public document should not have strings attached to them just a simple link to click in order
to examine the document.

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:51 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R39. Response to Comments from Prem Bovie-Ware, dated November 19, 2018.

R39-1 The commenter states that the LWCF Agreement uses the term "in perpetuity" so that the park could remain preserved forever and not be acquired for a parking lot or multipurpose building.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R39-2 The commenter states that there is no equivalent to George Berkich Park in the area, and that Glen Park does not offer flat and open space, which is why preserving the current footprint of George Berkich Park is critical.

The comment does not address a CEQA issue or the adequacy of the DEIR; therefore, no further response is required.

R39-3 The commenter references the Section 5.1, *Aesthetics*, of the DEIR, and states that the lighting from the proposed parking lot would adversely impact residents.

As stated in the Initial Study, included as Appendix 1-1 to the DEIR, light and glare impacts would be less than significant. Night-time security lighting in the parking lots and interior of campus would be installed for security purposes. Lighting would be similar to existing conditions and would be directed into the intended area to be lit and would not spill off campus. This is a design component of the proposed Project and also a requirement of the California Building Code.

R39-4 The commenter states that encroaching on the park footprint to create a new parking lot and relocate the multipurpose building, with a possible roof-mounted HVAC system, would cause noise pollution and impact residents living across the street.

See Section 5.9, *Noise*, of the DEIR. Short-term construction and long-term operation of the project would not result in significant noise impacts to off-site receptors. Therefore, the comment is noted.

R39-5 The commenter opines that the placement of the play equipment would increase parking and traffic on Mozart Avenue because parents and children would not want to walk across the campus from the Montgomery Avenue parking lot.

The comment is unsubstantiated. The project would replace play facilities within generally the same footprint as existing. Although there would be a new play structure at the southern portion of the site near the intersection of San Elijo Avenue and Mozart Avenue, it would not result in a direct increase in parked vehicles on Mozart. Parents and

children walk across campus to reach the site play facilities under existing conditions when parked on Montgomery Avenue, and access would continue to be provided at the southern and northern portions of the site. Additionally, as noted in Section 5.10 of the DEIR, *Transportation and Traffic*, the project would not result in a significant impact to street parking (see page 5.10-43 of the DEIR).

R39-6 The commenter opines that the proposed placement of the play equipment would require supervision at three locations in addition to the hardcourt, and that the multipurpose building would prevent sightlines for those supervising, as it encroaches on the current sports field footprint.

The existing play structure that bisects the two fields and restricts supervision of the fields would be relocated to the south side of the site, near the intersection of San Elijo Avenue and Mozart Avenue. Although the improvements would improve line-of-sight for supervisors during play periods, the District would continue to provide the same number of supervisors.

R39-7 The commenter asks if the park is for public use, and if so, when the park would be available for community use. The commenter states that the DEIR focused on the school-use objectives. The commenter also asks if the security fencing would prevent the public from using the park while the school is in session

The park would be available for public use after school hours via the Civic Center Act, similar to existing conditions. The DEIR is focused on school objectives because the Cardiff School District is the lead agency, and the proposed Project is the modernization and reconstruction of Cardiff Elementary School. Existing access points would remain on Montgomery Avenue and Mozart Avenue. The access point along San Elijo Avenue would be relocated farther south, adjacent to the hardcourt area. Fencing would be installed around the core campus buildings to limit public access to the classroom portions of the main school ground; field access would be maintained from the street.

R39-8 The commenter states that enrollment at the school has decreased since 2001, and states that the DEIR should project enrollment for the next 10 years. The commenter opines that the proposed Project is costly for a school with an enrollment of less than 400 students. The commenter asks if future enrollment projections support the proposed Project. The commenter also asks if funding has been verified for all phases of the proposed Project.

The comment does not address a CEQA issue or the adequacy of the DEIR; therefore, no further response is required.

39-9 The commenter states that the park is for the enjoyment of everyone, and states that there are not many open space areas in Cardiff. The commenter states that Glen Park is

not flat and open, and asks if the fields at the new Encinitas Community sports park are open to the public at any time, or if prior arrangements have to be made.

See response to R39-7, above. The play fields on the Cardiff School campus would be available outside school hours via the Civic Center Act. Fencing would be installed around the core campus buildings to limit public access to the classroom portions of the main school ground, but field access would be maintained from the street, similar to existing conditions.

R39-10 The commenter states that the proposed Project would impact the availability of access to the park, and states that not all park space has to be in the form of soccer fields, as community members enjoy participating in other activities. The commenter states that the District's use of the proposed multipurpose building for money-generating events is an affront to those who entered the LWCF.

The project would not change the availability of the play fields (see response to R39-7, above). The project would involve the reconstruction of the play field space and installation of two new play structures, and the existing hardcourt would be repaved.

The multipurpose building, similar to the site play space, would be available to the public via the Civic Center Act. Section 38134 of the California Education Code states that "The governing board of a school district shall authorize the use of school facilities or grounds under its control by a nonprofit organization, or by a club or an association organized to promote youth and school activities…." The intent of the multipurpose building is for use by the District students and staff. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R39-11 The commenter states that growth within the community is not a justified reason to disregard the LWCF Agreement.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. The District has worked with the community and OGALS to determine the best method of meeting the needs of the community while honoring the LWCF agreement. As described in the Master Response, OGALS has concurred with the District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval.

R39-12 The commenter states that the National Park Service has the ability to prevent the LWCF from being amended by the District's proposed Project. The commenter states that the park should be designed for the benefit of the public.

2. Response to Comments

The District has worked with the community and OGALS to determine the best method of meeting the needs of the community while honoring the LWCF agreement. As described in the Master Response, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval.

While the play area would be primarily used by the District students and staff during the school day, it would serve as a benefit for the enjoyment of the public.

R39-13 The commenter states information about her background, and indicates that the District is not transparent or inclusive in regard to community input. The commenter asks why the public has to provide a name and email in order to receive a copy of the DEIR, and that there should be a link to view the document.

The comment is noted. The commenter does not comment on the adequacy of the DEIR as it relates to CEQA; therefore, no further response is required.

LETTER R40 – Jon Cohen (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff Elementary
2 messages

Jon Cohen [redacted] Mon, Nov 19, 2018 at 1:58 PM
To: "CardiffDEIR@cardiffschools.com" <CardiffDEIR@cardiffschools.com>

I fully support the plans for rebuilding Cardiff Elementary School.

I have lived in Cardiff for 25 years, and my 3 children all attended Cardiff Elementary School. I have been on the board of Cardiff Soccer League for much of that time, and I currently serve as president. I am not writing on behalf of the club, but simply to tell you that we have hundreds of players each year use the fields at Cardiff Elementary for practices and games.

R40-1 I have participated in the several of the community work shops at school board meetings about the redevelopment of the school, and it has been a thorough, iterative, and inclusive project. Indeed, I had criticisms of the initial field design and the subsequent changes addressed them.

The opposition to the rebuilding of the school has inaccurately portrayed the process as steamrolling their concerns simply because they do not like the outcome. They also attempted to stop the project with a trivial legal issue about an agreement with the federal government not to reduce park space, which was a desperate attempt to gum up the works. They have unfairly criticized the topnotch school administrators and the thoughtful school board. What they have never acknowledged is that their actions could delay badly needed repairs—this happened with an earlier campaign. Simply put, their alternate visions of how to address the school's problems were considered and rejected.

R40-2 The plan's most controversial element is the multi-purpose room, which will take away a small portion of view for a small number of residents. Cardiff has no view ordinance, and, as someone who has an ocean view home, I understand why people would be upset about losing even a small portion of their view. That said, the law they need to address is the view ordinance, which has nothing to do with the school project.

Cardiff Elementary, which has a spectacular track record, offers more bang for buck than any single investment in our community. There will always be people who are against taxes, bonds, and even public schools. Fortunately, they are in the minority—as the passing of the bond measure amply demonstrates. Their actions ultimately are selfish, stingy, and shortsighted. Children are the future. Let's prepare them for it with a modern, efficient, and beautiful school that will last for another 50 years.

Jon Cohen
[redacted]
Cardiff, CA 92007

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:45 PM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R40. Response to Comments from Jon Cohen, dated November 19, 2018.

R40-1 The commenter is supportive of the proposed Project. The commenter states that community members in opposition to the proposed Project could delay desperately needed repairs, and that the District considered, and rejected, their alternatives.

The District is appreciative of the support of the project. The commenter's statements regarding the public process and the community opinions are noted. The District underwent a lengthy design development process with numerous public meeting and opportunities for public input, as further described in Section 2.2 and Attachment 1 to this FEIR. The commenter does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

R40-2 The commenter indicates that the multipurpose building would impact a small portion of views for a small number of residents, and that there is no view ordinance that protects residents' views.

See response to R17-1. Although private views are not protected, the project would not result in a significant impact to public views of scenic vistas including the Pacific Ocean (see pages 5.1-15 through 5.1-21 of the DEIR). The ground level of the proposed multipurpose building (referred to as Building L in Figure 4-2 of the DEIR) would be approximately 9 feet below the existing administrative building (Building E). As a result, the top of the new Building L would appear to be approximately 2 feet below the existing administrative building (see page 5.1-22 of the DEIR).

2. Response to Comments

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LETTER R41 – Jeff and Roxanne Goggin (2 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Opposition Response to the Draft Environmental Impact Report for the Cardiff School 6(f)3 Boundary Adjustment Proposal

2 messages

[redacted] Mon, Nov 19, 2018 at 3:12 PM

To: cardiffDEIR@cardiffschools.com

Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

Please consider this letter a strong objection to the proposed encroachment on George Berkich Park that the Cardiff School District is currently proposing.

R41-1 While we have no objection to the school district wanting to improve the condition of the existing elementary school, we cannot support that decision knowing the Cardiff School District, City of Encinitas, the State of California and the National Park Service knowingly and purposefully entered in to an agreement 25 years ago to protect ***in perpetuity*** the land known as Berkich park for recreational activity.

In reviewing a letter addressing the above subject, written by Mr. Randy Peterson, Bond Program Manager, dated July 17, 2018, we are struck by three key points that have caused us to go on record against this proposal:

1. **Ignorance of an existing and properly executed agreement is not an excuse or justification for this "last minute" variance request.**

R41-2 The existence of this agreement, executed in good faith 25 years ago is not disputed. Ongoing communication between the City of Encinitas and OGAL (Office of Grants and Local Services) since the contract was signed is also not disputed. The Bond Manager appears to be suggesting the justification for now ignoring the agreement appears to rely on the excuse "…the District did not retain knowledge of the agreement and the associated conditions. " This alleged lack of knowledge should not be allowed to be used as an excuse to knowingly violate an agreement the District now acknowledges exists. The purpose of an agreement like this is to prevent from happening what is now being retroactively proposed!

What is the value of any valid agreement designed to protect open space if it can later be ignored by the same entities that agreed to it originally?

2. **The clever redrawing of the boundary that includes 35,000 square feet of parking lot is in direct conflict with the original agreement to keep the land protected, in perpetuity, for recreational purposes.**

R41-3 It appears the proposed new boundary lines are clearly designed to include a new Multi Purpose room that appears to be one of the primary sources of conflict regarding this major project. What is so critical about this building with respect to the needs of the school? Classroom capacity and overall sight security and safety should be the District's primary goals for this project.

3. **We have very real concerns about public entities that choose to ignore agreements previously agreed to for the good of the community when they inconveniently interfere with new goals.**

In Mr. Peterson's seven page letter, paragraphs are written about all the benefits to the "community" this project will offer in defense of the need to ignore the existing agreement. Only one paragraph on the last page is devoted to the concerns of "local neighbors". We are one of those neighbors that do not have a concern about "…their view to the ocean…". Cardiff Elementary is a school with a long and proud tradition of providing excellent education for its students which should be

R41-4 the District's primary focus when spending public money for improvements of an aging facility. The Districts' primary responsibility should be to allocate its limited dollars to educate children in a safe and secure environment, not "… assisting the City with developing facilities for community use."

This entire matter brings to mind an old song by the Counting Crows that was a hit in the early 70's:

They paved paradise
And put up a parking lot
With a pink hotel, a boutique
And a swinging hot spot
Don't it always seem to go
That you don't know what you've got til its gone

2. Response to Comments

R41-4 CONT'D ***They paved paradise***
And put up a parking lot

R41-5 There should be a way for reasonable people to reach an agreement that meets the primary responsibility of the District, while preserving the existing open space already protected by a formal agreement.

Respectfully submitted,

Jeff and Roxanne Goggin

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Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:47 PM
To: [redacted]

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R41. Response to Comments from Jeff and Roxanne Goggin, dated November 19, 2018.

R41-1 The commenters are opposed to the proposed encroachment on the park, but do not have objections to the District wanting to improve Cardiff School. The commenters state that the LWCF Agreement was signed to protect the park in perpetuity.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R41-2 The commenters reference a letter from the Bond Manager, dated July 17, 2018, and state that the District's lack of knowledge about the LWCF Agreement should not be an excuse to violate the Agreement. The commenter rhetorically asks what the value of an agreement designed to protect open space is if it can be ignored by the same entities that originally agreed to it.

The realignment of the 6(f)(3) boundary is proposed in response to recognition that the modernization improvements conducted in the early 2000s were not in compliance with the LWCF alignment. The District has worked with OGALS to rectify this issue and bring the 6(f)(3) boundary into compliance with the LWCF agreement on behalf of both the District and the City. As described in the Master Response, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval.

R41-3 The commenters indicate that the redrawing of the boundary to include the parking lot is in direct conflict with the original Agreement to protect the park. The commenters ask what is so critical about the multipurpose building in respect to the school's needs. The commenters states that classroom capacity and security and safety should be the District's primary concerns.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

The multipurpose building has been omitted from the 6(f)(3) boundary because it would not comply with the requirements outlined in the Code of Federal Regulations Section 59.3, Conversion Requirements, as they relate to its public recreational utility. Because the proposed parking lot would be used for the play area and would provide for an increase in available parking for the park, it is considered to be within the LWCF definition of land of equivalent usefulness and location (36 CFR Section 59.3).

2. Response to Comments

R41-4 The commenters state that the District's focus, when spending public money for improvements, should be providing excellent education and a safe and secure environment, not assisting the City with developing facilities for community use. The commenter provided an excerpt from a Counting Crows song.

As provided in Section 4.1 of the DEIR, some of the objectives of the project are to implement facility improvements at Cardiff School per the District's Guiding Principles for electorate-approved Measure GG, prioritize learning spaces, and maximize use of limited District funds. These objectives, in addition to others on page 4-1 of the DEIR, would contribute to an enhanced learning environment with focus on education. The excerpt of lyrics do not address the adequacy of the DEIR as it relates to CEQA; therefore, no further response is necessary.

R41-5 The commenters believe that there should be a reasonable way to reach an agreement that meets the primary responsibility of the District while preserving open space that is protected by a formal agreement.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

LETTER R42 – Judy Hejduk (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Opposed to the Rebuild

2 messages

Tiana Hejduk [redacted] Mon, Nov 19, 2018 at 1:23 PM
To: CardiffDEIR@cardiffschools.com

R42-1 I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. There is no reason why they need to encroach upon open park land to build a huge multi purpose room and a parking lot. Since when do children play in parking lots? They claim that a bigger drop off/ pick up zone will help the flow of traffic. Show me a traffic study to prove it. Or just go to Ada Harris School during drop off/ pick up hours and find out for yourself. It's a cluster mess. Adding a bigger parking lot does not help!

R42-2 It is a bit confusing to me that on the Cardiff School District's website they list that what they're doing is a "small conversion" but yet in the second paragraph of the DEIR they reference this project as "major reconstruction". I have been to many of the School Board meetings concerning this matter and it seems to be a general trend that they are very

R42-3 disingenuous with us local community members. If you read the Measure GG, it never states that they would be building anywhere on Goerge Berkich Park. They baited people into thinking that they were making improvements to the school and then switched their plans, hoping nobody would notice once they got their vote. Makes me wonder whether or not they would have got their 66% vote had they been honest from the start. This doesn't seem fair.

R42-4 On page 2 and 4 of the DEIR the Bond Project Manager makes reference that the "greater Cardiff community" is in favor of the Cardiff School District's proposed "improvements". Who does he include in this group of people? I'm not in favor of these so called improvements and I consider myself as part of the greater Cardiff community. Did we take another vote? His claim is biased, a general statement that he wants you to believe. There are many people opposed to their rebuild. It just so happens that the Cardiff School District would like to turn a blind eye to them, just like they turned a blind eye to already building on preserved park land violating a major contract with The State of California and OGALS.

R42-5 Besides the problems with encroaching on protected park land, the construction project has major budget issues. If one examines the latest Board Presentation it can be seen that the district is attempting to go forward with a plan they can't afford, not to mention at this point would be illegal to do so. Makes me question their antics again. It is hard to believe that the District has $24 million for construction (Page 8 of the Board Presentation) and this is not enough. I say enough is enough!

R42-6 Please decide not to grant the boundary adjustment the Cardiff School District is proposing. It will have a negative impact on Cardiff. Such beautiful land that our children and grandchildren play on should never be turn into concrete. Remember, the Land and Water Conservation Fund Program was designed to ensure that at-risk open space would be protected in perpetuity. I hope for new plans where the square footage of George Berkich Park will remain the same.

Thank you for your time.

Sincerely,

Judy A. Hejduk
Cardiff local for 40+ years

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:43 PM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R42. Response to Comments from Judy Hejduk, dated November 19, 2018.

R42-1 The commenter is opposed to the destruction of land at the park, and states that there is no reason for the proposed Project to encroach onto the park. The commenter wants to see a traffic study that verifies that a larger drop-off/pick-up zone would help the flow of traffic. The commenter also requests to review Ada Harris School during student drop-off/pick-up hours.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The Traffic Impact Analysis was conducted and included as Appendix 5.10-1 to the DEIR. As shown in Impact 5.10-4 of the DEIR (page 5.10-44), the proposed improvements to the parking lot would improve AM and PM student loading operations and reduce queueing on residential streets during these times. Because the Ada Harris has a different loading design and surrounding streets configuration, the improvements to Cardiff School cannot be compared to Ada Harris for their impact on queuing and traffic at the site.

R42-2 The commenter states that they are confused, as the District's website lists the proposed Project as a small conversion, but the DEIR states that the proposed Project is a major reconstruction.

The proposed "small conversion" is in reference to the conversion of the LWCF agreement 6(f)(3) boundary (see Section 2.1 of this FEIR for further discussion). The project is referred to as a "major reconstruction" because it would result in a number of structural improvements to the existing facilities on the project site.

R42-3 The commenter claims that Measure GG did not mention constructing on the park, and that the District "baited" the community into believing that improvements would be made to the school, and then switched the plans.

The District underwent a lengthy design development process with numerous public meeting and opportunities for public input, as further described in Section 2.2 and Attachment 1 to this FEIR. While the District revised the site plan as a result of public input, the District would continue to comply with the stated project components of the Measure GG Bond text. The project would involve the conversion of the 6(f)(3) boundary in order to comply with the LWCF agreement, which is also stated as a project objective in Section 4.1 of the DEIR. The new 6(f)(3) boundary would be outside of building footprints on the project site (see Figure 4-6, *Proposed 6(f)(3) Boundary,* of the DEIR).

2. Response to Comments

R42-4 The commenter references pages 2 and 4 of the DEIR, which indicates that the Bond Manager states that the greater Cardiff community is in favor of the proposed changes, and claims that the Bond Manager's statement is biased, as there are many people oppose to the proposed Project.

The DEIR does not have pages 2 and 4 so it is not clear what the commenter is referencing. However, the commenter is correct in that the District's statement was their opinion, and that the commenter's statement is their opinion. The District understands that there are community members who support and oppose the project. However, this comment does not address the adequacy of the DEIR as it relates to CEQA; therefore, the comment is noted and no further response is required.

R42-5 The commenter indicates that the proposed Project has budget issues, as the District cannot afford the plan it is proposing.

The comment does not address a CEQA issue or the adequacy of the DEIR; therefore, no further response is required.

R42-6 The commenter states that granting the boundary adjustment would result in negative impacts on Cardiff, and states that the LWCF Program was designed to ensure at-risk open space would be protected.

The commenter does not specify what "negative impact" the boundary adjustment would have on Cardiff. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

LETTER R43 – Tiana Hejduk (2 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Opposed to Cardiff School Rebuild
2 messages

Tiana Hejduk [redacted] Mon, Nov 19, 2018 at 3:20 PM
To: CardiffDEIR@cardiffschools.com

To Whom it may Concern,

Let me introduce myself. My name is Dr. Tiana D. Hejduk. Not only did my brother and I attend Cardiff Elementary School but so did my daughter Nevaeh Hejduk. I love Cardiff-by-Sea and personally dislike all the proposed construction going on in my community, especially the plans to destroy open park land at George Berkich Berkich Park.

There are two sides to every story. I'm sure you have investigated and read the DEIR that Cardiff School District has produced. That's their side. Now I would like to take you to the side of locals who are opposed to the construction.

R43-1 The Cardiff School District had been disingenuous with local community members from the start. Measure GG, was presented as a 22 million dollar bond initiative needed in order to renovate and fix old existing buildings at Cardiff Elementary School. When you read the Measure it NEVER states that they would be taking away any part of George Berkich Park or building upon it. It is my oppinion that the District baited the general public into thinking they were doing one thing, and then switched their plans dramatically once they got their 66% vote. They list their plans on the school's website as a "small conversion" but at the same time on page 1 of their DEIR state that they are currently planning a "major reconstruction". Seems a bit confusing! Just like Measure GG is!

R43-2 My parents and I attended almost every single School Board Meeting in 2017-2018 concerning their reconstruction/ demolition of the entire school. Many locals were opposed to it and spoke out against their design plans. The school offered what they called "community input meetings" but they were focused on what the design team/ architect was was offering and not so much on what us locals were concerned about. The biggest issue locals had were the destruction of open park land and historical trees located on the area the school was proposing to build upon. Mr. George Berkich was my principle and the community voted long ago to name the park after him. It should also be mentioned that if you look at the history of their design plan they had to redo their plans three different times thanks to the locals who saw illegalities with their proposal. Thanks to locals they didn't break state and Federal land protection laws and made the rebuild plans safer for children attending Cardiff Elementary. In the same respect I feel that local community members caught something that the Bond Project Manager and School Board should have known about. Because of the District's lack of knowledge it has cost them hundreds of thousands of dollars in bond money. Bond money is money that is paid for by tax payers. I don't know about you but I'm not too fond of paying for other people's mistakes. Especially people who get paid a lot of money to perform their job. (Ask how much the Bond Program Manager has been paid so far).

R43-3 Many locals were upset with the School District because at Board Meeting they would make comments that "everyone is happy with the plans" and "there are only a few people opposed" basing it on how many locals actually came to their meetings. My father was even threatened by the Cardiff School District (give me call if you want to see proof) when he suggested to parents that they attend school board meetings because the Cardiff School District did a poor job of publicising when and where the school boards meetings were. The bottom line was, they didn't want people knowing what they were intending to do once they got their $22 million. They were hoping nobody would care. I think it's important to listen to people who actually made the time to attend meetings rather than turn a blind eye to them.

I find it interesting that in the DEIR the Bond Program Manager states on page 2 and 4 that the "greater Cardiff community" likes their so called "improvements". I consider myself a part of the greater Cardiff community living here for 40+ years, but I am absolutely opposed to the building upon George Berkich Park. I think you need to question his biased general statements and ask who he considers to be in that group. Let's take a new vote!

R43-4 Do not be fooled into thinking that the Cardiff School District is giving us any land back. The majority of the construction is a huge parking lot that will not solve traffic issues. I urge you to go to Ada Harris School during drop off/pick up. You'll find that it is a cluster mess during those times. Adding a bigger drop off/ pick up zone does not solve the problem. Paving paradise to put in a parking lot is a poor decision. I don't know about you but I don't play with children in parking lots! It's not safe!

R43-5 The massive multi-purpose room encroached on George Berkich Park taking open park land away. There was talk at the Board Meeting that the school would be able to make money off this new building because it would face the water and

2. Response to Comments

R43-5 CONT'D they could rent it out for weddings. I question whether it's legal to make revenue off of Bond money. Is the building for the education of the children or for profit? Again I question the District's intent.

R43-6 Besides the problems with encroaching on protected parkland, the major construction has severe budget issues. Let's just be honest, you could build several schools with 22 million. How are they already 3+ million over budget? Enough is enough!

R43-7 There is a simple solution to all this. Build on the current footprint of Cardiff Elementary School. Why has that never been an option? It solves every problem the District is facing. And remember, nowhere in Measure GG does it state that they would be building on the park.

R43-8 I urge you to listen to the locals who care about their community park land and open space. You have the power to decide. Please decide not to grant the boundary adjustment the Cardiff School District is proposing. It will have a negative impact on Cardiff.

Thank you for your time.

Sincerely,

Dr. Tiana D. Hejduk
[redacted]

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:49 PM
To: [redacted]

[Quoted text hidden]

R43. Response to Comments from Tiana Hejduk, dated November 19, 2018.

R43-1 The commenter is opposed to the proposed Project. The commenter states that Measure GG does not indicate that the proposed Project would take away any part of the park or build upon it, and opines that the District "baited" the community into voting for Measure GG. The commenter is confused of the language on the District's website, which indicates the proposed Project is a "small conversion," and the DEIR, which states the proposed Project is a "major reconstruction."

The District would continue to comply with the stated project components of the Measure GG Bond text and is not proposing new improvements or conflicting improvements from the Bond text. The realignment of the 6(f)(3) boundary is proposed in response to recognition that the modernization improvements conducted in the early 2000s were not in compliance with the LWCF alignment. As described in the Master Response in Section 2.1, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval. The new 6(f)(3) boundary would be outside of building footprints on the project site (see Figure 4-6, *Proposed 6(f)(3) Boundary,* of the DEIR) and would result in an increase in 2,047 square feet of area within the boundary.

The proposed "small conversion" is in reference to the conversion of the LWCF agreement 6(f)(3) boundary (see Section 2.1 of this FEIR for further discussion). The project is referred to as a "major reconstruction" because it would result in a number of structural improvements to the existing facilities on the project site.

R43-2 The commenter states that the community voiced its opposition about the proposed designs during community input meetings and notified the District of illegalities with the designs. The commenter states that the District has spent hundreds of thousands of dollars in bond money due to their lack of knowledge.

The commenter is correct in that the District was not aware of the LWCF agreement until after construction of the modernization improvements in the 2000s. As described in the Master Response, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval. The remainder of the comment is the commenter's opinion regarding how bond money should be spent. The comment does not address the adequacy of the DEIR as it relates to CEQA; therefore, the comment is noted and no further response is necessary.

R43-3 The commenter opines that the District did not want the community to know how the bond money was going to be spent; therefore, the District poorly publicized school Board meetings. The commenter states that the Bond Manager's statement on pages 2 and 4 of the DEIR, indicating that the greater Cardiff community favors the improvements, is a biased claim.

2. Response to Comments

The DEIR does not have pages 2 and 4 so it is not clear what the commenter is referencing. Nonetheless, the comment does not address a CEQA issue or the adequacy of the DEIR; therefore, no further response is required.

R43-4 The commenter states that a majority of the construction is a large parking lot that would not solve traffic issues, and states that adding a larger drop-off/pick-up zone would not solve the issue.

See Section 2.1 of this FEIR, which discusses the square footage of play space and parking lot within the 6(f)(3) boundary. As shown in Impact 5.10-4 of the DEIR (page 5.10-44), the proposed improvements to the parking lot would improve AM and PM student loading operations and reduce queueing on residential streets during these times.

R43-5 The commenter states that the large multipurpose building encroaches onto the park, taking away open space. The commenter asks if it is legal for the District to make money by renting the multipurpose building for weddings, which was constructed using Bond money. The commenter asks if the multipurpose building is for students' education or for profit.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

While the proposed multipurpose building would be constructed over an area of existing grass playfield, the recreational area at the site would be reconfigured and would be provided elsewhere within the 6(f)(3) boundary, which would be expanded by 2,047 square feet from its current area.

The multipurpose building, similar to the site play space, would be available to the public via the Civic Center Act. Section 38134 of the California Education Code states that "The governing board of a school district shall authorize the use of school facilities or grounds under its control by a nonprofit organization, or by a club or an association organized to promote youth and school activities…." The intent of the multipurpose building is for use by the District students and staff.

R43-6 The commenter asks how the District is already more than $3 million over budget.

The comment does not address a CEQA issue or the adequacy of the DEIR; therefore, no further response is required.

R43-7 The commenter states that the solution to these issues would be to construct the proposed Project on the current school footprint. The commenter asks why this option was not considered.

Chapter 7, *Alternatives to the Proposed Project,* analyzed four project alternatives: Alternative 1, Maintain Multipurpose Room in Current Location; Alternative 2, Scheme B Site Plan; Alternative A, No Project Alternative; and Alternative B, Reduced Capacity Alternative. None of the alternatives considered met all of the project objectives. The No Project Alternative did not meet 9 of the 12 objectives, and the Reduced Capacity Alternative did not meet 2 of the 12 objectives.

The District would not be able to construct within the existing building footprints because the existing layout is currently in violation of the LWCF agreement. The proposed improvements would result in a realignment of the 6(f)(3) boundary and would bring the site into compliance with the LWCF agreement on behalf of both the District and the City.

R43-8 The commenter deems that the proposed Project would negatively impact Cardiff, and asks that the boundary adjustment not be granted.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R44– James Howell (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Boundary adjustment
2 messages

James Howell [redacted] Mon, Nov 19, 2018 at 4:00 PM
To: cardiffDEIR@cardiffschools.com

To whom it may concern,

R44-1 In regards to the boundary line adjustment to George Berkich Park. I am strongly opposed to the boundary adjustment and ask that it not be approved. Open space is very, very precious and we should leave the park the way it is.

Thank you,
James Howell
[redacted]

Sent from my iPhone

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:50 PM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R44. Response to Comments from James Howell, dated November 19, 2018.

R44-1 The commenter is opposed to the proposed boundary adjustment and asks that it not be approved, as open space is precious.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The realignment of the 6(f)(3) boundary is proposed in response to recognition that the modernization improvements conducted in the early 2000s were not in compliance with the LWCF Agreement. As described in the Master Response, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval. The new 6(f)(3) boundary would be outside of building footprints on the project site (see Figure 4-6, *Proposed 6(f)(3) Boundary,* of the DEIR) and would result in an increase in 2,047 square feet of area within the boundary.

2. Response to Comments

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LETTER R45 – Karen Knight (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff School Open Space - George Berkich Park
2 messages

[redacted] Mon, Nov 19, 2018 at 8:09 AM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

To Whom It May Concern

I am writing to express my strong opposition to the destruction of land at George Berkich Park that the Cardiff School District has proposed.

Open space is a highly valuable resource, and with due respect, is one that seems to be disappearing on many levels within our community. We should be preserving rather than building upon.

R45-1

The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on the Cardiff community.

Thank you for your time and consideration. As the trusted leaders of our community, please do the right thing and protect our open space.

Kind regards,

Karen Knight

Karen Knight
Blue Wolf Associates LLC
Essential Concierge
[redacted]
www.bluewolfassociates.com (new site coming soon)
www.essentialconcierge.com

2. Response to Comments

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R45. Response to Comments from Karen Knight, dated November 19, 2018.

R45-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R46 – Niels Lund (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff School Project - Berkich Park

2 messages

Niels Lund [redacted] Mon, Nov 19, 2018 at 3:08 PM
To: CardiffDEIR@cardiffschools.com

To Whom it May Concern:

R46-1 As a long-time resident of Cardiff, and having known George Berkich when he was principal of the school, I've always enjoyed seeing George Berkich park as I drive by almost every day – a solid reminder of the man who served our community so well for many years. My daughter went through the Cardiff School District from K to 6th grade, and my grandson now attends as a 2nd Gr. Student. The park that was established soon after George retired has been a significant part of the community, and I hope it can as much as possible remain intact when the new Cardiff School construction is completed. The Cardiff community will benefit tremendously from the building of a new Cardiff School, but doesn't want to sacrifice the park. Please preserve the park as close to the original intent as can be done.

Respectfully,

Niels Lund (Cardiff resident for over 30 years)

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:46 PM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R46. Response to Comments from Niels Lund, dated November 19, 2018.

R46-1 The commenter states that the community would benefit from the building of the new Cardiff School, but does not want to sacrifice the park. The commenter hopes that the park can remain intact, and be preserved, as much as possible.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The conversion of the 6(f)(3) boundary is proposed in response to recognition that the modernization improvements conducted in the early 2000s were not in compliance with the LWCF alignment.

2. Response to Comments

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LETTER R47 – Thomas Newcomer (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

at George Berkich Park
1 message

Tom Newcomer [redacted] Mon, Nov 19, 2018 at 9:13 AM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

To: cardiffDEIR@cardiffschools.com

Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

R47-1 I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon. The Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.

Thomas A. Newcomer, Architect

[redacted]

Cardiff CA 92007

2. Response to Comments

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R47. Response to Comments from Thomas Newcomer, dated November 19, 2018.

R47-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R48 – Justine Nielsen (10 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Cardiff School Modernization Project - DEIR Comment Letter

2 messages

Nielsen, Justine K. <Justine.Nielsen@procopio.com> Mon, Nov 19, 2018 at 12:30 PM
To: "CardiffDEIR@cardiffschools.com" <CardiffDEIR@cardiffschools.com>
Cc: "david_siegenthaler@nps.gov" <david_siegenthaler@nps.gov>, "Barbara.Baker@parks.ca.gov" <Barbara.Baker@parks.ca.gov>, "Luan.Aubin@parks.ca.gov" <Luan.Aubin@parks.ca.gov>, "GSabine@encinitasca.gov" <GSabine@encinitasca.gov>, "Thomas, Joanne E." <Joanne.Thomas@procopio.com>, "dave.clark@cardiffschools.com" <dave.clark@cardiffschools.com>, "nancy.orr@cardiffschools.com" <nancy.orr@cardiffschools.com>, "siena.randall@cardiffschools.com" <siena.randall@cardiffschools.com>, "david.ross@cardiffschools.com" <david.ross@cardiffschools.com>, "mark.whitehouse@cardiffschools.com" <mark.whitehouse@cardiffschools.com>

Please see the attached DEIR Comment Letter.

JUSTINE K. NIELSEN
SENIOR ASSOCIATE
PROCOPIO

P. 619.906.5787 | F. 619.398.0160 | justine.nielsen@procopio.com
525 B STREET, SUITE 2200, SAN DIEGO, CA 92101
procopio.com

mailgw01.procopio.com made the following annotations

Mon Nov 19 2018 12:30:38

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DOCS--3485967-v1--Cardiff School DEIR Comment Letter.PDF
256K

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:41 PM
To: [redacted]

[Quoted text hidden]

DOCS--3485967-v1--Cardiff School DEIR Comment Letter.PDF
256K

2. Response to Comments

PROCOPIO
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San Diego, CA 92101
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F. 619.235.0398

JUSTINE K. NIELSEN
P. 619.906.5787
justine.nielsen@procopio.com

DEL MAR HEIGHTS
LAS VEGAS
PHOENIX
SAN DIEGO
SILICON VALLEY

November 19, 2018

VIA E-MAIL [CARDIFFDEIR@CARDIFFSCHOOLS.COM]

Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

Re: **Comments on Cardiff School District Modernization and Reconstruction Project DEIR**

Dear Cardiff School District Board of Trustees:

We represent the Gerrity Family who, along with numerous other Cardiff residents, is concerned about the Cardiff School District's ("District") proposed Modernization and Reconstruction Project ("Project"). The purpose of this letter is to provide comments to the District on the October 2018 Draft Environmental Impact Report ("DEIR") for the Project at Cardiff Elementary and to inform the District that the Project conflicts with the Local Coastal Program and National Park Service requirements. In addition, the DEIR for the Project violates the minimum standards of adequacy under the California Environmental Quality Act ("CEQA"), Public Resources Code section 21000 et seq., and the CEQA Guidelines, California Code of Regulations, title 14, section 15000 et seq. R48-1

For all the reasons set for below, the DEIR does not comply with the requirements of CEQA. As a result of the DEIR's numerous and serious inadequacies, there can be no meaningful public review of the Project. The District must revise and recirculate the DEIR in order to permit an adequate understanding of the environmental issues at stake.

I. Project Background

Cardiff School is a small public school serving students in grades K-3 located at 1888 Montgomery Avenue, approximately 500 feet east of the Pacific Ocean. The impetus for the Project was the passage of Measure GG which provided for $22 million in bond funding to improve Cardiff School. Notably, however, the improvement plan presented to the public in connection with Measure GG in 2016 showed that, although the classrooms would be completely rebuilt, the footprint of the school would remain largely unchanged. Impact to the neighborhood would be minimal and the beloved George Berkich Park would be preserved. Unfortunately, the Project proposed, reviewed and analyzed in the DEIR is drastically different R48-2

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R48-2 CONT'D

than the original proposal in that it encroaches into protected park space, obstructs important visual resources, and is inconsistent with the Local Coastal Program,

II. NEPA Review is Required

R48-3

As a procedural matter, it is wholly inappropriate for the District to plan, design, and study the Project prior to approval of the Boundary Conversion for George Berkich Park. As previously explained to the District in a letter dated November 13, 2018, George Berkich Park is subject to an Agreement with National Park Service ("NPS") in furtherance of the Land and Water Conservation Fund program ("LWCF Agreement"). The LWCF Agreement prohibits the conversion of George Berkich Park to any use other than "public outdoor recreation" and requires George Berkich Park to be "maintained in public outdoor recreation in perpetuity." Therefore, an amendment to the LWCF Agreement, which must be reviewed and approved by NPS and requires environmental review pursuant to the National Environmental Protection Act ("NEPA"), NPS policies and procedures governing boundary conversions and agreement amendments, is required prior to the District's consideration of the Project. The NPS has discretion to deny the conversion request and/or to require modifications to the Project that would have to be addressed in the DEIR. CEQA review should not have started because completion of NEPA review is required before the conversion proposal may be submitted to NPS. Skipping these preliminary steps is a violation of federal laws and regulations and may result in penalties for the District and the LWCF project.

III. The DEIR Fails to Comply with CEQA

R48-4

In light of the Project's proposed encroachment into protected park land, its location within the Coastal Zone, and the community's concerns about the Project, the DEIR should be of the highest quality and give both decision-makers and the public a full opportunity to understand and analyze the environmental effects of the Project. An EIR is "the heart of CEQA." *Laurel Heights Improvement Ass'n v. Regents of University of California* (1988) 47 Cal.3d 376 at 392 (*"Laurel Heights I"*). A primary function of an EIR is "'to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.' Because the EIR is certified or rejected by public officials, it is a document of accountability." *Laurel Heights I,* 47 Cal.3d at 392 (citations omitted). Unfortunately, the DEIR fails to uphold this mandate.

The DEIR fails to comply with CEQA and is insufficient to support a decision on the Project. In particular, the DEIR fails to provide necessary information and analysis. It also fails to state or substantially understates the severity and scope of the Project's environmental impacts, including impacts to Aesthetics, Biological Resources, Cultural Resources, and Land Use and Planning. Finally, the DEIR fails to analyze a reasonable range of alternatives and presents a faulty analysis of feasible alternatives to the Project that would substantially reduce its environmental impacts. As a result, the public and decision-makers cannot fully appreciate the consequences of Project approval.

R48-5

To comply with state law and ensure the public and the decision-makers have adequate information to consider the effects of the Project, the District must prepare and recirculate a

2. Response to Comments

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R48-5 CONT'D

revised DEIR that properly describes the Project, analyzes its impacts, and considers meaningful alternatives and mitigation measures to reduce those impacts.

1. The DEIR Fails to Provide an Adequate Description of the Project

Pursuant to CEQA, a clear and comprehensive description of the project in the EIR is critical to meaningful public review. *Coutny of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193 (*"Inyo II"*). In *Inyo II*, the court explained the importance of a comprehensive project description:

> A curtailed or distorted project description may stulify the objecitive of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefits against its envrionmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the "no project" alternative) and weigh the other alternatives in the balance.

Id. at 192-93. Thus, "[a]n accurate, stable, and finite project description is the sine qua non of an informative and legally sufficient EIR." *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 830.

R48-6

The most basic failure is the DEIR's failure to describe aspects of the Project critical to its analysis in an attempt to improperly piecemeal the reivew in vilation of CEQA. Piecemealing is "[t]he process of attempting to avoid a full environmental review by splitting a project into several smaller projects which appear more innocuous than the total planned project." (East Sacramento Partnership for a Livable City v. City of Sacramento (2016) 5 Cal.App.5th 281, 293.) Improper piecemealing is "when the purpose of the reviewed project is to be the first step towards future development" or "when the reviewed project legally compels or practically presumes completion of another action." (Banning Ranch Conservancy v. City of Newport Beach (2012) 211 Cal.App.4th 1209, 1223.) The DEIR fails to describe the additional permitting or other requirements necessary for the Project to move forward, such as the park conversion approval by NPS or a Coast Development Permit from the California Coastal Commission. As such, the DEIR needs to be revised and recirculated to include a more thorough description of the Project for the public and decision-makers. This constitutes improper piecemealing under CEQA and therefore, the Project Description must be revised.

2. The DEIR Fails to Adequately Evaluate the Project's Environmental Impacts

The core of any EIR is the discussion of the Project's environmental impacts. *See* CEQA Guidelines section 15126.2(a) ("[a]n EIR *shall* identify and focus on the significant environmental effects of the proposed project")(emphasis added). As explained below, the DEIR's environmental impacts analysis is deficient under CEQA because it fails to provide the necessary facts and analysis to allow the decision-makers and the public to make informed decisions about the Project. An EIR must effectuate the fundamental purpose of CEQA: to "inform the public and responsible officials of the environmental consequences of their decisions before they are made." *Laurel Heights Improvement Ass'n. v. Regents of the University of California,* 6 Cal. 4th 1112 at 1123 (1993). To do so, an EIR must contain facts

R48-7

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and analysis, not just an agency's bare conclusions. *Citizens of Goleta Valley v. Board of Supervisors* 52. Cal. 3d 553, 568 (1990). Therefore, a conclusion regarding the significance of an environmental impact that is not based on an analysis of relevant facts fails to fulfill CEQA's keystone disclosure requirement.

R48-7 CONT'D

Additionally, an EIR must identify a range of feasible alternatives and feasible mitigation measures to mitigate significant environmental impacts. CEQA Guidelines § 15126.4. Under CEQA, "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measure available which would substantially lessen the significant environmental effects of such projects...." Pub. Res. Code § 21002.

a. Aesthetics

Cardiff School and the adjacent George Berkich Park are located a few hundred feet west of the community's most important visual resource: the Pacific Ocean. If approved, the Project would irreparably alter the visual character of the Project site and the surrounding areas. Given the Project's proposal to construct a building on the west side of the existing campus, the DEIR should have devoted particular attention to the Project's visual impacts. Instead, the DEIR uses misleading photographs to obscure the scope and extent of the existing scenic resources and concludes, with little analysis, that the impacts would be less than significant.

R48-8

Expanding a school campus into an existing park which provides one of the largest open, unobstructed spaces in the area to view the Pacific Ocean would indisputably have significant visual impacts. The accepted approach to analyzing visual and aesthetic impacts is as follows:

i. Describe the criteria for significance thresholds;

ii. Characterize the existing conditions of the project site and the surrounding area by photograph and description, and select key viewpoints within the area, including scenic corridors and landscapes.

R48-9

iii. Use photomontages or visual simulations to illustrate the change in character of the project site before and after the project implementation.

iv. Identify feasible mitigation measures and alternatives to reduce or eliminate significant impacts

v. Where mitigation measures are proposed, use simulation to illustrate the change in character before and after project mitigation measures are imposed.

Tellingly, the DEIR does not provide a single photomontage or simulation of the Project at full buildout, despite a multitude of public comments at District meetings emphasizing the importance of maintaining visual character of the community. Such images would provide a direct experience of the visual impact of Project. Such analysis could assist decision-makers in determining whether a smaller, less intrusive development—one that does not encroach into George Berkich Park—should be permitted on that site.

R48-10

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R48-11 Additionally, the DEIR mischaracterizes the surrounding area by including misleading photographs—a cloudy gray sky camouflaging the Pacific Ocean—which fail to give decision-makers and the public a true sense of the aesthetic value of the area. A revised EIR must include an objective and thorough description of the surrounding area and analysis of the Project's likely aesthetic impacts, as outlined above.

b. Biological Resources

R48-12 The proposed project would require the removal of 47 trees and the demolition of many of the school buildings. Such action is likely to affect numerous sensitive species that call this coastal habitat home, such as bats, nesting birds, and sensitive plant species. The DEIR points out the possibility for significant impacts on multiple bat species and nesting birds species, and yet the mitigation efforts proposed do not properly analyze if such mitigation would be successful in minimizing impacts to these species to less than significant. Conclusions must be supported by proper analysis.

R48-13 Furthermore, the DEIR admits that another sensitive species, the burrowing owl, may burrow in the areas immediately adjacent to the school, but concludes without much analysis that they would not burrow on the school grounds and that construction on the school grounds would not affect them. There is nothing in the DEIR to show any study or survey has been done to determine whether in fact there are any burrows on the school property that may be used or have been used by burrowing owls. The DEIR simply assumes that animals like squirrels, whose old burrows burrowing owls often use, would not burrow on school grounds because of the frequency of human disruption, without any support for such an assumption. Squirrel populations vary in their comfort with human populations in their vicinity, so to assume that

R48-14 squirrels do not burrow on the school grounds without any evidence to support the claim is inappropriate. There is also no information in the DEIR as to whether construction noise or other construction activities may obstruct burrowing owls who may be burrowing mere feet away from the site between San Elijo Avenue and Coast Highway. Such a conclusion is not supported by the facts in the DEIR.

R48-15 When a project is located in a coastal zone, an EIR should analyze whether any significant habitat on the site may qualify as environmentally sensitive habitat areas under the Coastal Act. *Banning Ranch Conservancy v. City of Newport Beach,* 2 Cal. 5th 918, 941 (2017). The DEIR discusses sensitive plants and sensitive wildlife, but does not address whether the project site contains any environmentally sensitive habitat under the Coastal Act. It discusses wetlands and riparian habitats, but these are not the only types of environmentally sensitive habitat areas. The DEIR fails to meet this requirement of the Costal Act.

The DEIR needs to be revised and recirculated to address the gaps in studies on the burrowing owl and whether any environmentally sensitive habitat areas exist on the site. Without this information, the public and decision-makers cannot fully understand the impacts on biological resources this project may have.

c. Cultural Resources

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The Little Brick Building is a relic of the early days of telephone services in the US. The DEIR states it is likely eligible to be on the list of historically significant buildings for the National Register or the California Register. Thus, it is a historical resource. A significant impact to an historical resource is one that materially impairs the resource. 14 Cal. Code Regs. § 15064.5(b)(1). Material impairment occurs when the physical characteristics that convey its historical significance and that justify its designation as a historical resource are demolished or materially altered in an adverse manner. 14 Cal. Code Regs. § 15064.5(b)(2).

R48-16

The Project describes renovation of the Little Brick Building to meet seismic requirements. However, no details are provided as to what portions of the Little Brick Building would be changed nor any drawings provided to show what it would look like after renovations. There is no detail whatsoever on how the renovations would affect the physical characteristics of the building. Without this information, it is not possible for the public or decision-makers to determine whether the physical characteristics of the building that convey its historical significance would remain.

The DEIR also comments that the renovations will comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings but does not detail how such compliance will occur. Again, without these details, it is impossible for the public and decision-makers to be fully informed on how the Project will affect this historical resource.

R48-17

As such, the DEIR needs to be revised and recirculated to include more information about the proposed renovations to the Little Brick Building and how these renovations will comply with the Secretary's Guidelines.

d. Land Use & Planning

When a DEIR discusses land use and planning effects, it must show that the project satisfies the requirements of other laws that apply to the project. As discussed earlier in this letter, this project is subject to the Land and Water Conservation Fund ("LWCF") Act. The rebuilding of the Cardiff School will significantly alter the 6(f)(3) boundary of the LWCF Agreement between NPS and the District (a conversion). The DEIR misstates the law that applies to conversions. It discusses the necessity of preparing a conversion proposal to submit to NPS, but fails to disclose that this process must occur before CEQA analysis may begin for the project. The DEIR indicates that the District will prepare a proposal, but this proves that such a proposal and subsequent approval has not been obtained, in violation of LWCF Act, a federal law. Showing what will be in a possible conversion proposal is not enough to show that the requirements of this law have been met. As previously discussed in this letter and the previous letter to the District on this topic, the conversion proposal requires thorough NEPA analysis of the potential environmental effects of the conversion. A simple table as included in the DEIR cannot stand in for proper NEPA analysis.

R48-18

Additionally, the DEIR fails to address inconsistencies with the Local Coastal Program as required by CEQA. 14 Cal. Code Regs. § 15125(d). The proposed Project would be inconsistent with the Local Coastal Program policies of preserving the basic character of the community. The

R48-19

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Project completely overhauls the design and appearance of George Berkich Park, which is an important and well-loved community resource. Such a change would negatively affect the character of the surrounding community. Furthermore, the change in layout of the school will change the view residents and other visitors to the area have of the Pacific Ocean. As a seaside town, Cardiff is admired for its ocean views and property near the school is coveted and valuable because of these views. Obstructing views of the Pacific Ocean for the public and the residents is not in alignment with the basic character of the Cardiff community. The DEIR fails to consider these inconsistencies and instead concludes the Project is consistent with the Costal Act and General Plan with regards to these policies.

R48-19 CONT'D

Likewise, the Project is inconsistent with policies in the Local Coastal Program policy regarding the preservation of trees and habitat. Encinitas General Plan, Resource Management Policies 3.1, 3.6. The Project proposes removal of 47 trees. The ages of these trees are not disclosed in the DEIR, so some of them may be mature trees that these policies aim to protect. Even if they are not mature trees, two of the trees to be removed are Torrey Pines, which are protected species in California. Earlier in the DEIR, the District claims the Torrey Pines were ornamental trees and not original to the site, but the General Plan policies do not make a distinction for ornamental trees versus naturally-occurring trees. Thus removal of mature trees and rare trees is inconsistent with the General Plan and should have been discussed in the DEIR.

R48-20

The Project is also inconsistent with Recreation goals of the Local Coastal Program. The DEIR claims the conversion of the 6(f)(3) boundary will result in 2,047 additional feet of recreational space. However, comparing the map of the proposed boundary change with the plan for the Project, much of the "increase" in the recreational space will actually be devoted to a parking lot. In addition, portions of the original park space will be devoted to school buildings. Therefore, this change actually decreases usable public recreational space. This negative change in recreational space is inconsistent with Recreation Policy 2.3 and should have been evaluated in the DEIR.

R48-21

Because the DEIR shows that the requirements of the LCWF Act for conversions have not been met, which are required to be met before CEQA analysis, the DEIR violates CEQA. The DEIR also fails to address several of the Project's inconsistencies with the Local Coastal Program/General Plan. The DEIR must be revised and recirculated to show compliance with the LWCF Act and to address these inconsistencies with the General Plan.

R48-22

3. The DEIR's Analysis of Project Alternatives is Inadequate

Every EIR must describe a reasonable range of alternatives to the proposed project and its location that would feasibly attain the project's basic project objectives while avoiding or substantially lessening the project's environmental impacts. Pub. Res. Code § 21100(b)(4); CEQA Guidelines § 15126(d). A proper analysis of alternatives is essential for an agency to comply with CEQA's mandate that significant environmental damage be avoided or substantially lessened where feasible. Pub. Res. Code § 21002; CEQA Guidelines §§ 15002(a)(3), 15021(a)(2), 15126(d); *Citizens for Quality Growth v. City of Mount Shasta* (1988) 198 Cal.App.3d 433,443-445. As stated in *Laurel Heights I*, "[w]ithout meaningful analysis of

R48-23

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alternatives in an EIR, neither the courts nor the public can fulfill their property roles in the CEQA process…" The DEIR circulated by the District does not include adequate analysis of the alternatives and also does not consider an important alternative.

R48-24

Alternative A, the No Project Alternative, is environmentally superior but does not meet 8 of the 12 project objections according to the DEIR. However, this claim is misleading. The final objective listed in the conclusion states "Regain and maintain compliance with the Land and Water Conservation Fund Agreement." DEIR 7.15.13. This is incorrect and misleading. If the No Project Alternative were to be selected, the District could still regain and maintain compliance with the LWCF Agreement by filing for a retroactive conversion approval. Not doing the project would not prevent them from seeking this retroactive approval from NPS. Therefore, by making the public believe the only way to be in compliance with the LWCF Agreement is to pursue the Project (or Alternative B), the DEIR is unfair and confusing. The DEIR must be revised and recirculated to amend this mistake.

R48-25

Alternative B makes one small change to the Project: one less classroom. Alternatives under CEQA must reduce or avoid significant environmental impacts. 14 Cal. Code Regs. §15126.6(a)-(b). Furthermore, the alternatives discussed in and EIR should offer "substantial environmental advantages" over the proposed project. *Citizens of Goleta,* 52 Cal. 3d at 566. In contrast, this alternative merely slightly decreases the impact of four environmental effects. This can hardly be considered an alternative that offers "substantial" advantages over the proposed project with this minimal change and where the rest of the effects are the same as the Project. Therefore, this alternative should not have been chosen. The District should choose another alternative that has a more significant change in potential effects and revise and recirculate the DEIR.

R48-26

Furthermore, there is no discussion of an alternative whereby the old school buildings are demolished and rebuilt on the same footprint without a need to encroach onto the 6(f)(3) Boundary. This alternative should have been considered. It could substantially reduce environmental impacts, attain most of the basic project objectives, is potentially feasible, is reasonable and realistic, and was originally proposed to the public in connection with Measure GG. 14 Cal. Code Regs. § 15126.6(c). As such, it could have been a project alternative but is not discussed as either an alternative that was rejected early on or as an actual alternative. This alternative, rather than one where one less classroom is built, would give a more accurate depiction of alternatives that would reduce environmental impacts. Therefore, the District should revise and recirculate to include this alternative.

The DEIR must be revised and recirculated to consider other alternatives, including an alternative that allows the buildings to be reconstructed within the same footprint.

IV. The DEIR Must be Revised and Recirculated

R48-27

CEQA requires recirculation of an EIR when significant new information is added to the document after notice and opportunity for public review was provided. Pub. Res. Code § 21092.1; CEQA Guidelines § 15088.5; *Laurel Heights II,* 6 Cal. 4th at 1130. As this letter explains, the DEIR requires extensive revisions, which will include significant new information

2. Response to Comments

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and analysis. This analysis will likely result in the identification of new, significant impact or substantial increases in the severity of existing impacts. Consequently, the District must revise and recirculate the EIR for public review and comment.

Very truly yours,

Justine K. Nielsen

cc: Glenn Sabine, City Attorney, City of Encinitas
Deborah Lee, District Manager, California Coastal Commission

R48. Response to Comments from Justine Nielsen, dated November 19, 2018.

R48-1 The commenter states that the DEIR conflicts with Local Coastal Plan (LCP) and the National Park Service requirements. The commenter states that the DEIR violates the minimum standards of adequacy under CEQA. The commenter states that the District must revise and recirculate the DEIR.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site and the NPS requirements. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The commenter does not specify how the project conflicts with the LCP; see Table 5.8-1 of the DEIR, *Project Consistency with Coastal Resources Planning and Management Policies*, and Table 5.8-2, *Project Consistency with the City of Encinitas LCP Policies,* which compare the project to the California Coastal Act (Chapter 3, Coastal Resources Planning and Management Policies) and the Encinitas LCP. As provided, the project is consistent with the California Coastal Act and the City of Encinitas LCP, and a less than significant impact would occur.

The comment that the DEIR violates the minimum standards of adequacy under CEQA Public Resources Code section 21000 et. seq. and the CEQA Guidelines, CCR Title 24, Section 15000 et seq., and the request to recirculate are unsubstantiated.

R48-2 The commenter provides a project background summary. The commenter states that the plan presented to the public at the 2016 Measure GG meeting showed that the footprint of the school would remain largely unchanged and that impacts to the park would be preserved. The commenter states that the proposed Project encroaches into the protected park, obstructs visual resources, and is inconsistent with the LCP.

This EIR evaluates only the environmental impacts of implementing the proposed Project, not the contents of the 2016 Measure GG. See Master Response in Section 2.2 of this FEIR, which describes the site design process for the proposed Project.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

See response to R48-1 for discussion of LCP consistency. See Chapter 5.1-1, *Aesthetics*, and response to R12-5 for discussion of impacts to visual resources.

R48-3 The commenter states that the conversion proposal must be reviewed and approved by the National Park Service, and that NEPA review is required prior to the District's consideration of the proposed Project. The commenter states that CEQA review should

not have commenced because the completion of NEPA review is required before the conversion proposal may be submitted to the National Park Service.

The realignment of the 6(f)(3) boundary is proposed in response to recognition that the modernization improvements conducted in the early 2000s were not in compliance with the LWCF alignment. As described in the Master Response, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval.

The commenter is correct in that the NEPA review under the NPS would be required prior to project approval. However, CEQA and NEPA review are not required to be conducted at the same time, although it does streamline the environmental review process (CEQA Title 14 CCR 3 Article 14 Sections 15220 to 15226). Please see Master Response in Section 2.1 of this FEIR, which explains the role of NEPA for this project. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R48-4 The commenter opines that the DEIR does not analyze and consider the ecological implications of the proposed Project. The commenter deems that the DEIR is insufficient as it fails to provide necessary information and understates the severity of the scope of the proposed Project's impacts to Aesthetics, Biological Resources, Cultural Resources, and Land Use Planning. The commenter states that the DEIR fails to analyze a range of feasible alternatives.

The commenter states that the DEIR understates the severity and scope of the project's environmental impacts, but does not substantiate why the identified impacts are "understated." Chapter 7 of the DEIR, *Alternatives to the Proposed Project*, analyzed four project alternatives. The No Project Alternative is determined to be the environmentally superior alternative, and the Reduced Capacity is the next environmentally superior alternative. Though it is necessary to identify the environmentally superior alternative, decision-makers are free to select the proposed Project or any of the alternatives evaluated in this EIR.

R48-5 The commenter states that the DEIR must be revised and recirculated, and the DEIR should analyze impacts, and consider meaningful alternatives and mitigation measures to those impacts.

The comment does not provide information that would lead to a need for revision and/or recirculation of the Draft EIR.

R48-6 The commenter states that the DEIR fails to describe aspects of the proposed Project that is critical to its analysis. The commenter accuses the DEIR of piecemealing as they state that the DEIR fails to describe the additional permitting or other requirements

necessary for the project to proceed, including the park conversion approval by NPS or the Coastal Development Permit from the Coastal Commission.

See Table 4-3, *Lead and Responsible Agencies* (page 4-21 of the DEIR), which identified lead, responsible, and reviewing agencies for the project improvements and their respective responsibilities. As included in Table 4-3, the National Park Service and California State Parks Office of Grants and Local Services would be required to approve the 6(f)(3) minor boundary changes, and the City of Encinitas would be required to review and approve of the Coastal Development Permit (in accordance with their certified Local Coastal Program Land Use Plan). The California Coastal Commission would be a reviewing agency for the DEIR and Coastal Development permit.

See Table 5.8-1 of the DEIR, *Project Consistency with Coastal Resources Planning and Management Policies*, and Table 5.8-2, *Project Consistency with the City of Encinitas LCP Policies,* which compare the project to the California Coastal Act (Chapter 3, Coastal Resources Planning and Management Policies) and the Encinitas LCP. As provided, the project is consistent with the California Coastal Act and the City of Encinitas LCP, and a less than significant impact would occur. See Impact 5.8-2 of the DEIR

R48-7 The commenter states that the analysis of the DEIR's environmental impacts is deficient because it fails to provide the necessary analysis to allow the public and decision-makers to make an informed decision and is supported by bare conclusions. The commenter states that an EIR should identify a range of feasible alternatives and mitigation measures.

The commenter does not specify why the environmental significance determinations made in the DEIR are "bare conclusions." The DEIR was prepared in accordance with CEQA Guidelines Section 15126.4. As provided throughout the DEIR and summarized in Table 1-8, *Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance After Mitigation*, all proposed mitigation would reduce impacts to a less than significant level; no significant unavoidable impacts would occur. Additionally, see Chapter 7 of the DEIR, *Alternatives to the Proposed Project*, which provides a range of alternatives in accordance with CEQA Guidelines. Though it is necessary to identify the environmentally superior alternative (the no-project alternative), decision-makers are free to select the proposed Project or any of the alternatives evaluated in this EIR.

R48-8 The commenter deems that the proposed Project would irreparably alter the visual character of the project site and surrounding area if approved. The commenter states that the DEIR should have devoted particular attention to the proposed Project's visual impacts, and claims that the DEIR used misleading photographs to obscure the scope of the existing scenic resources.

It is not clear which photographs the commenter is referring to or what about them is misleading.

See Section 5.1 of the DEIR, *Aesthetics*, for discussion of project impacts on visual resources. The Pacific Ocean can be seen from Mozart Avenue near the southern drop-off location, as shown in Photograph 1 of Figure 5.1-4, *Views from Mozart Avenue,* of the DEIR. Between the southern drop-off and the intersection of Mozart Avenue and Montgomery Avenue, the existing buildings, landscaping, and playground equipment along Mozart Avenue completely block views of the Pacific Ocean across the project site (see Photograph 2 of Figure 5.1-4). As shown on Figure 4-2, *Site Plan*, classrooms, cafeteria, pollinator garden, and recreational facilities (hardcourt play space, play equipment/sport court, play apparatus) would be located along this same stretch of Mozart Avenue. Construction of the new cafeteria and maker space/specialty classrooms, shown as items J and K in Figure 4-2, will expand the school building into an area that currently allows partial views of the Pacific Ocean. The new buildings will extend approximately 120 feet into the view area and will be 19.5 feet tall.

Portions of the Pacific Ocean can be seen from Montgomery Avenue from the proposed loading area at the northern portion of campus, as shown in Photographs 1 and 2 of Figure 5.1-5, *Views from Montgomery Avenue*, but views are intermittently obscured by trees, buildings, and fencing along the road. As shown in Photograph 1 of Figure 5.1-5, the existing buildings and trees partially obscure views of the Pacific Ocean across the project site. As shown in Figure 4-2, Site Plan, the project would remove two of the three trees and the existing building in the foreground of Photograph 1; the project would increase westward views from this portion of Montgomery Avenue. As shown in Photograph 2 of Figure 5.1-5, views to the west toward the Pacific Ocean include a grass playfield that is partially obscured by trees. The project would remove one of the three trees, but would construct the multipurpose building near the center of the foreground of Photograph 2. The multipurpose building is approximately 21.25 feet in height and would extend approximately 75 feet into the view area. Views of the Pacific Ocean would continue to be intermittently obscured along Montgomery Avenue, but not substantially changed from existing conditions. Additionally, the ground level of the proposed multipurpose building (referred to as Building L in Figure 4-2 of the DEIR) would be approximately 9 feet below the existing administrative building (Building E). As a result, the top of the new Building L would appear to be approximately 2 feet below the existing administrative building (see page 5.1-22 of the DEIR).

R48-9 The commenter lists various approaches to which the visual and aesthetic impacts of the proposed Project could have been addressed, such as using photomontages and simulation when mitigation measures are proposed.

The existing school facilities are on the eastern portion of campus with the open space on the western portion. Westward facing views are obscured under existing conditions, as described throughout Section 5.1, *Aesthetics*, of the DEIR. The commenter lists an accepted approach to analyzing visual and aesthetic impacts:

i. Describe the criteria for significance thresholds.

Significance thresholds are identified in DEIR Section 5.1.2, *Significance Thresholds*, on page 5.1-6 of the DEIR.

ii. Characterize the existing conditions of the project site and surrounding area by photograph and description, and select key viewpoints within the area, including scenic corridors and landscapes.

Existing conditions of the project site and surrounding area and scenic corridors and vista points are described in Section 5.1.12, *Existing Conditions*, of the DEIR (pages 5.1-4 through 5.1-6). Figure 5.1-1, *Vista Points and Scenic Corridors*, shows designated vista points and scenic corridors within the City and their proximity to the project site. Figures 5.1-2a and 5.1-2b, *Site Photographs*, and Figure 5.1-3, *Surrounding Residences,* show the project site and surrounding uses.

iii. Use photomontages of visual simulations to illustrate the change in character of the project site before and after project implementation.

Although the aesthetics section of the DEIR does not include visual simulations of the improvements within the existing topography, the analysis of Impacts 5.1-1 and 5.1-2 compare the existing grade, building height, and tree cover with the grade, building height, and tree cover of the proposed improvements to describe the change in character. Impact 5.1-2 describes the building material for the proposed improvements and the location of the buildings relative to those of the existing buildings.

iv. Identify feasible mitigation measures and alternatives to reduce or eliminate significant impacts.

Although the visual qualities of the project site during construction would not appear better than the existing condition of the property, the construction worksite would be partially hidden by a construction barrier that would be removed once construction is completed. Because the finished project would include landscaping and planting of trees; new buildings with siding, paint, and windows; and the remodel of existing buildings to match the new construction, this temporary impact will be eliminated with completion of the project.

v. Where mitigation measures are proposed, use simulation to illustrate the change in character before and after project mitigation measures are proposed.

See response to iv, above. No visual simulations would be required.

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R48-10 The commenter states that the DEIR does not provide any photomontages or simulations of the proposed Project at full buildout. The commenter states that providing such images could assist decision-makers in making their determinations.

See response to comment R48-9.

R48-11 The commenter states that the DEIR uses mischaracterizing photos, which include images taken on a cloudy gray day that camouflages the Pacific Ocean, thus making it difficult for decision-makers and the public to get a true sense of the aesthetic values of the area.

See response to R48-9 for discussion of project impacts related to aesthetics. Due to the proximity of the project site to the coast there is frequently a marine layer, and opportunities were limited to take pictures with a clear and sunny sky. Nonetheless, the Pacific Ocean is still clearly distinguishable in the images provided in Chapter 3, *Environmental Setting*, and Section 5.1, *Aesthetics*, where views are not currently impeded by buildings, vehicles, or tree cover. The weather conditions in the photographs do not change the findings of significance or the analysis in the DEIR.

R48-12 The commenter states that the proposed Project would remove 47 trees, and that the DEIR does not properly analyze if the mitigation measures would be successful in minimizing impacts to multiple bat species and nesting bird species, to less than significant.

As provided in Section 5.3, *Biological Resources*, mitigation measures BIO-1 and BIO-2 would be implemented prior to construction to reduce impacts to nesting birds and special-status bat species to a less than significant level. Mitigation measures BIO-1 and BIO-2 would involve preconstruction nesting surveys to determine if nesting bird species and special-status bat species are present, as well as protocols for removal or protection of the species. See pages 5.3-12 and 5.3-13 of the DEIR for the full mitigation measure text.

R48-13 The commenter states that the DEIR does not provide much analysis on the burrowing owls that may burrow on the school property. The commenter indicates that the DEIR does not show that any study has been done to determine if there are any burrows on the school property that may be used by burrowing owls.

The burrowing owl could inhabit scrub and disturbed habitat between San Elijo Avenue and Coast Highway, west of the site. However, burrowing owl is unlikely to inhabit the campus because they nest in old underground burrows left by other animals, which are unlikely to inhabit the campus due to frequent disturbances from use of the park, mowing, maintenance, etc. The project site operates as a school with open space available for public use. The site is precluded from burrowing owl due to its developed nature and because of the frequent disturbance at the site.

R48-14 The commenter states that the DEIR assumes that animals like squirrels would not burrow on the school property because of the frequency of human disruption, without providing support. The commenter states that the DEIR does not indicate whether construction noise or activities may obstruct burrowing owls who burrow between San Elijo Avenue and Coast Highway.

The playing fields are managed to reduce the potential for squirrels and other burrowing animals from creating holes in the playing surface that could result in injury to athletes using the fields. The field management, along with frequent human activity that includes the walking of dogs, discourage squirrels from nesting within the playing fields.

R48-15 The commenter states the DEIR discusses sensitive plants and wildlife, but does not address if the project site contains environmentally sensitive habitat under the Coastal Act. The commenter states that there are other environmentally sensitive habitats besides wetlands and riparian habitats. The commenter states that the DEIR needs to be revised and recirculated to address the gaps in studies on burrowing owls and environmentally sensitive habitat.

The project site is fully developed as an elementary school. No sensitive plant species or environmentally sensitive habitat are onsite due to frequent disturbances by school use and landscape maintenance. Construction will occur within the campus boundaries, and will not affect adjacent habitat across Mozart Avenue, or between San Elijo Avenue and South Coast Highway 101.

R48-16 The commenter states that the proposed Project describes that the renovation of the Little Brick Building would meet seismic requirements; however, the DEIR does not provide details as to which portions would be changed, nor were drawings provided of what the Little Brick Building would look like after renovations. The commenter states that no details on the physical characteristic of the Little Brick Building, after renovations, were provided.

At this time there are no project details regarding the renovation of the Little Brick Building. The intent of the District is for the exterior to remain visually similar to the existing building, and any seismic improvements would be interior. This may not be possible; therefore, as stated on page 4-14 of the Draft EIR, any alterations to the little brick building would only be conducted in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. See also mitigation measure CUL-1 on page 5.4-15 of the Draft EIR that requires public circulation of a rehabilitation plan prior to any construction.

R48-17 The commenter indicates that the DEIR does not provide detail on how the renovations of the Little Brick Building would comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The commenter states that the DEIR

needs to be revised and recirculated to include more information on the proposed renovations to the Little Brick Building.

See response to comment R48-16.

R48-18 The commenter states the DEIR does not disclose that the conversion proposal must be submitted to the National Park Service before CEQA analysis may begin. The commenter states that the District is in violation of the LWCF Act as the DEIR states that approval for the conversion has not been obtained. The commenter states that the conversion proposal requires thorough NEPA analysis of the potential environmental effects of the conversion

The commenter is correct in that the NEPA review under the NPS would be required prior to project approval. However, CEQA and NEPA review are not required to be conducted at the same time, although it does streamline the environmental review process (CEQA Title 14 CCR 3 Article 14 Sections 15220 to 15226). Please see Master Response in Section 2.1 of this FEIR, which explains the role of NEPA for this project.

R48-19 The commenter states that the DEIR does not address the inconsistencies with the LCP. The commenter indicates that the proposed Project would be inconsistent with the LCP policies of preserving the basic character of the community. The commenter states that the proposed Project would change the appearance of the park, negatively affect the character of the surrounding community, and change the view residents and visitors have of the Pacific Ocean, which the commenter states would not align with the basic character of the Cardiff community.

The commenter does not explain how the project would conflict with the LCP policies related to preserving the basic character of the community. Please see Section 5.1, *Aesthetics*, of the DEIR, for discussion of project-related changes to visual character and quality of the site; the project would not result in a significant impact to visual character and quality of the site. See response to R12-5 for discussion of impacts to views of the Pacific Ocean. Although private views from residences are not protected, the project would not result in a significant impact to public views of scenic vistas including the Pacific Ocean (see pages 5.1-15 through 5.1-21 of the DEIR).

Additionally, see Table 5.8-1 of the DEIR, *Project Consistency with Coastal Resources Planning and Management Policies*, and Table 5.8-2, *Project Consistency with the City of Encinitas LCP Policies,* which compare the project to the California Coastal Act (Chapter 3, Coastal Resources Planning and Management Policies) and the Encinitas LCP. As provided, the project is consistent with the California Coastal Act and the City of Encinitas LCP, and a less than significant impact would occur. See Impact 5.8-2 of the DEIR

R48-20 The commenter states that the proposed Project is inconsistent with the LCP and General Plan policies regarding tree and habitat preservation, as the proposed Project would remove 47 trees, including two Torrey pines.

See response to comment R48-19. The tree inventory is provided on page 5.3-4 of the Draft EIR and is based on the Campus Tree Evaluation included as Appendix 5.3-1 to the Draft EIR. Existing trees are shown in Figure 5.3-1 of the Draft EIR. As noted in the initial study included as Appendix 1-1 of the Draft EIR, "The City of Encinitas Tree Ordinance and Urban Forest Management Plan protects trees on public lands and in public rights-of-way. The project would remove trees on District-owned property, and no impact to City trees would result. Project implementation would not violate applicable local policies or ordinances protecting biological resources." As stated on Page 5.3-10 of the Draft EIR, "…five Torrey pine trees would be removed because of program needs and design constraints and/or the poor health/condition of the tree per the arborist's report. Torrey pines do not have a federal or state special status (CDFW 2018; CNPS 2018). The Torrey pine trees on campus are part of the ornamental landscaping and are not remnants from native habitat predating the school, as shown on historical aerial photographs (NETR 2018). Removal of the trees is not considered a significant impact."

R48-21 The commenter indicates that the proposed Project is inconsistent with the recreation goals of the LCP, as the proposed Project would devote much of the increase of the 6(f)(3) area to a parking lot, thereby reducing recreational space.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. The parking lot would be for use by users of the park and is considered to provide recreational utility in accordance with the LWCF Act requirements.

R48-22 The commenter states that because the DEIR indicates that the requirements of the LWCF Act for the conversion have not been met, which is required before CEQA analysis, the DEIR violates CEQA. The commenter also indicates that the DEIR does not address the proposed Project's inconsistencies with the LCP.

See response to comments R48-21 and R48-6.

R48-23 The commenter states that the DEIR circulated by the District does not include adequate analysis of the alternatives and does not consider an important alternative.

The commenter does not specify what "important alternative" is not considered or why there is inadequate analysis of the alternatives. Chapter 7, *Alternatives to the Proposed Project*, provides a reasonable range of alternatives in accordance with Public Resources Code Section 21100(b)(4) CEQA Guidelines Section 15126(f).

2. Response to Comments

R48-24 The commenter states that Alternative A is misleading, as the No Project Alternative could still allow the District to regain and maintain compliance with the LWCF Agreement by filing a retroactive conversion approval. The commenter states that the DEIR is unfair and confusing by making the public believe that the only way to be in compliance with the LWCF Agreement is to pursue the proposed Project or Alternative B.

The District underwent a lengthy design development process with numerous public meeting and opportunities for public input, as further described in Section 2.2 and Attachment 1 to this FEIR. The no-project alternative is a requirement of CEQA. The encroachment into the boundary has already occurred, and any alternative would either result in the demolition of existing school buildings, or in changes to the boundary. In this instance, the proposed Project includes both a change in boundary and reconfiguration of the campus. Alternatives in an EIR evaluate changes to a project that would reduce or eliminate a significant environmental impact. The existing school and park boundary issue is not considered a significant environmental impact. See also the Master Responses in Section 2.1 and 2.2 of this FEIR.

R48-25 The commenter states that Alternative B makes one change to the proposed Project by reducing the number of classrooms by one. The commenter states that Alternative B slightly decreases the impact of four environmental effects, and that this alternative does not provide substantial advantages over the proposed Project. The commenter states that the District should select another alternative that has a more significant change in potential effects, and revise and recirculate the DEIR.

See response to comment R48-24.

R48-26 The commenter indicates that there is no discussion of an alternative where the current buildings are demolished and rebuilt on the same footprint, without the need to encroach onto the park. The commenter states that the DEIR should consider other alternatives, and be revised and recirculated.

See response to comment R48-24.

R48-27 The commenter indicates that the DEIR requires extensive revisions, which would include significant new information and analysis, thus, a revision and recirculation of the DEIR is required.

The commenter expresses an opinion, but does not provide comments specific to the analysis in the Draft EIR.

LETTER R49 – Nancy Orr (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Support for the Cardiff School construction plans
2 messages

Nancy Orr [redacted] Mon, Nov 19, 2018 at 1:09 PM
To: cardiffdeir@cardiffschools.com

As a Cardiff community member, grandparent of Cardiff children and board member, I am writing for my family and myself to express our support of the present rebuild and renovation projects.

Strangers should never be wandering through the campus! Safety of our little ones is paramount. We are pleased the multipurpose room is now close to the parking and away from classrooms. The classroom outdoor learning areas are protected from unwanted intrusions

R48-1 The planned parking area is so much safer. It reduces the chance of accidents; especially during drop off and pickup times. It also relieves the Montgomery Avenue traffic congestion during those times. The needed additional parking spaces will also help.

The safety of our children and the quality of the instructional program is enhanced by the streamlining of the playground and fields. By moving the play structures away from the middle of the field, supervisors have an obstructed view of all activities.

In listening and being sensitive to neighbor's concerns, compromises were made. We would have preferred to have kept some in the plan. However, we applaud that no changes ever comprised the well-being and safety of our children.

Thank you

Sent from my iPad

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:42 PM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R49. Response to Comments from Nancy Orr, dated November 19, 2018.

R49-1 The commenter is supportive of the proposed Project, and states that the proposed Project would enhance safety, supervision, and the educational program, as well as relieve traffic congestion.

The District appreciates support of the project. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R50 – Cynthia Price (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

George Berkich Park

3 messages

Cindy Price [redacted] Mon, Nov 19, 2018 at 3:54 PM
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

R50-1 Please do the moral and ethical thing concerning the preservation of George Berkich Park. This Park was historically intended for total use of land by the families of Cardiff and surrounding communities. This rare gem is a parcel of land that currently is enjoyed by so many. If this planned school expansion is approved, the use would be more limited. It seems such a shame to destroy this precious space for limited use by a K-3 grade school expansion.
Please don't negatively impact this community and the land. Let it be enjoyed by it's community.
Thank you, Cynthia Price

Sent from my iPad

Cindy Price [redacted] Mon, Nov 19, 2018 at 3:57 PM
To: cardiffDEIR@cardiffschools.com

Cynthia Price
[redacted]
Escondido, Ca 92025

Sent from my iPad
[Quoted text hidden]

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:50 PM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R50. Response to Comments from Cynthia Price, dated November 19, 2018.

R50-1 The commenter states that the whole park was intended to be used by the community. The commenter states that the use of the park would be limited if the proposed Project is approved. The commenter indicates that destroying the precious open space for limited use by a proposed school expansion is a shame.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R51 – Darren Quinn (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

George Berkich Park - Response to DRAFT EIR
2 messages

Darren Quinn [redacted] Mon, Nov 19, 2018 at 10:19 AM
Reply-To: [redacted]
To: cardiffDEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov, council@encinitasca.gov

To Whom It May Concern:

I live on Manchester Avenue.

R51-1 I am strongly opposed to the destruction of land at George Berkich Park that the Cardiff School District is currently proposing. Open space is a highly valuable resource that we should be preserving rather than building upon.

he Land and Water Conservation Fund program was designed to ensure that at-risk open space would be protected in perpetuity. We should not allow the boundary of the park to be changed and for parkland to be exchanged for a parking lot. This change will have a negative impact on Cardiff.

Darren Quinn
[redacted]

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:50 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R51. Response to Comments from Darren Quinn, dated November 19, 2018.

R51-1 The commenter is opposed to the modification of George Berkich Park. The commenter states that open space is valuable, should be preserved, and that the LWCF Program was designed to ensure that open space is protected. The commenter states that the Park boundary should not be exchanged for a parking lot.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R52 – Lynne Sallans (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Support for Cardiff School Remodel
2 messages

Lynne Sallans [redacted] Mon, Nov 19, 2018 at 9:15 AM
To: cardiffdeir@cardiffschools.com

R52-1 This email is in support of the remodel project at Cardiff School. I am a teacher here and I am excited about the opportunities for the expanded learning spaces, and more cohesive play areas for all students to use at recess. The new multi purpose room will benefit not only the students but the community as well. It will be located by the front of the school which will make it more convenient for people to come and go and will be safer for our students. Currently the multipurpose is room is far from parking and visitors must walk thru the entire campus to access it. Also, having windows that open and close properly will allow for fresh air to flow throughout our classrooms. New windows will make a huge difference!

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:51 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R52. Response to Comments from Lynne Sallans, dated November 19, 2018.

R52-1 The commenter supports the proposed Project, as it would expand learning spaces, create more cohesive play spaces, enhance safety, and construct a multipurpose building that would benefit the students and community.

The District appreciates support for the project. The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R53 – Gary and Kathleen Schneiderman (3 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Comments regarding Community Health Issues not addressed in Cardiff School EIR
2 messages

Gary Schneiderman <garyspider@gmail.com> Mon, Nov 19, 2018 at 7:57 AM
To: david_siegenthaler@nps.gov, council@encinitasca.gov, CardiffDEIR@cardiffschools.com

November17,2018

From: Gary Schneiderman MD
Kathleen Schneiderman MD
[redacted]
Cardiff, Ca 92007

Re: Comments regarding EIR for Cardiff School Reconstruction-Health Concerns

Of particular concern to my wife and I, both of whom are physicians, relates to Section 2, Table 2-2 , Table 2-3, section 5.9 (Noise). While noise is discussed in general terms in section 5.9, the specific health issues related to the noise associated with the new school's geographical footprint were not mentioned nor addressed. There is no mention of noise as a critical health issue that was brought to the School Board's attention in October and November, 2017. Our concern at that time was based upon well known medical evidence that sound levels over a specific dBA (decibels) could result in permanent hearing loss. There is abundant medical and audiological data on this topic. Noise has also been associated with reduced test scores and can negatively impact the learning environment. The remodeled school's footprint would bring the children closer to the main vehicular thoroughfare resulting in greater sound pressure from traffic , but of greater concern was closer proximity of classrooms to the railroad tracks. Furthermore, a second railroad track is currently being constructed adjacent to the school and the new school footprint brings the school closer to these tracks. Noise and sound levels due to trains and train horns is expected to significantly increase due to increased railroad traffic. Increased noise levels as the new school moved towards the road and tracks would present an increased health risk to both the young children who attend the school but also to the adults. Noise levels could exceed the recommended standards for a school's environment.

This concern was brought to the attention of the Cardiff School Board at a public meeting in November 2017 and also in a written email to the district superintendent Jill Vinson which is attached below dated October of 2017. Please note, as indicated in the attached letter, that we performed a rudimentary study to assess the noise levels and did find excessive levels of noise at the site where buildings were to be built. We called for further study of this issue, and as parents and physicians were appalled that the district not only ignored our comments and findings in the Public Comment section of the EIR but did not perform any study to identify if noise could be a long term health issue due to the placement of the new buildings.

R53-1 The EIR in Table 5.9-3 states that sound levels in 60-70 dBA range may be "conditionally acceptable" but that in this instance "New construction or development should be undertaken only after detailed analysis of noise reduction requirements is made and needed noise insulation features be included in the design". . Above 70 dBA, noise is normally unacceptable with new construction discouraged and above 80 dBa new construction should not be undertaken. At the very least, based on our measurements, the noise levels require a detailed study to ensure that the proposed new buildings are safe for the children and staff. Please note in our study that the ambient noise level at times exceeded 70 dBA. Train noise without horn sounded was 72-82 dBA, and with horn 89-94 dBA. Per the EIR document, these levels of sound need a formal investigation.

Furthermore, in section 5.9.1.1 (Regulatory Background) State standards under Title 5 of the California Department of Education recommend that an acoustical engineer be hired "to determine the level of sound and to assist in designing the school" "when considering a potential school site near a freeway or other sound". CALGreen has requirements that appear to specify proper noise insulating measures when a building is in proximity to a railroad if buildings exposed noise level of 64 dBA Leq during any hours of operation. Both these conditions appear to be present, yet the EIR does not identify that a formal noise study has been undertaken to assess environmental noise and its impact on the students and staff.

Taking all these noise factors into consideration and the risk that noise can cause permanent injury it is our opinion that the EIR is incomplete and does not merit acceptance. We respectfully and strongly recommend that it be rejected , the appropriate studies completed and a new EIR be prepared that is comprehensive and complete.

Respectfully submitted,

2. Response to Comments

Gary Schneiderman MD
Kathleen Schneiderman MD

October 14,2017
Dear Jill ,

Jill, thank you for approaching me after the meeting on October 12. You may recall I am Kathy Schneiderman MD, the pediatrician you spoke with.
After giving up the podium at our School Board meeting, I realized that there were additional issues requiring discussion. The following morning, I spoke to my husband, who is also a physician, and we began to research the topic of concern.

The construction of new classrooms along Montgomery may lead to irreversible hearing loss and could adversely affect the learning environment due to the proximity of the school to the railway.

It is well known that exposure to loud noises can result in permanent noise induced hearing loss. Damage from loud noise to the cochlear hair cells is irreversible and like the effect of sun on skin is cumulative. The degree of damage is dependent on volume, as well as time and frequency of exposure. The closer you are to a loud sound the greater the exposure and risk. In occupational situations NIOSH recommends hearing protection if exposure is greater than 85 decibels (dBA) It has been recommended that children wear hearing protection at sporting events, music venues and anywhere where loud noise can occur. Younger children are more sensitive to damage.

R53-1 CONT'D

The proposed expansion of the Cardiff School Campus towards the railway may be placing children and staff at risk for permanent hearing loss. There is an abundance of medical, government and institutional literature on this topic. If you look at the attached chart (see attachment) you will note that there is significant exposure to damaging sound within 500 feet of a railway. The current plan places the new buildings well within this parameter at approximately 300-400 feet per our measurements. Furthermore, the proposal to have open windows and perhaps even open "garage type" doors in these classrooms, removes sound buffers and adds further risk of hearing damage due to higher levels of ambient noise.

Furthermore, medical and educational literature identifies that higher ambient noise in classrooms results in a poor learning environment and poorer test scores. Background noise often disrupts concentration and according to NIOSH ambient noise affects people's health by increasing general stress levels. This can aggravate stress related conditions such as hypertension, coronary disease, peptic ulcers and migraine.

The literature from the CDC has indicated that being closer than 400 feet to a railway will usually result in the speaker having to pause until the train passes. Thus, the teacher or student will need to pause their conversation. ANSI (American National Standards Institute) recommends that the ambient noise level of an empty classroom be no greater than 35 dBA.

For informational purposes, we measured the ambient noise at the proposed classroom site as well as the train noise at the site without a horn and at Chesterfield with the horn. At Chesterfield we measured the dBA 350 feet from the railway, the same distance as the middle of the proposed classroom site for both Coaster and Amtrak. Baseline ambient noise without the train measured between 53 and 72 dBA. Train with horn 89-94. Train without horn 72-82. These are cause for concern. The higher sound levels can cause hearing loss and the baseline ambient noise far exceeds recommendations.

There are approximately 11 passenger trains during school hours of 7:30 AM to 3 PM. While currently the train does not sound its horn, there is substantial increased ambient noise associated with the trains passage. At Montgomery, this may change with further development of the rail corridor. The frequency of railway traffic including freight trains is planned to significantly increase as the track project is completed. If a crossing is constructed at Montgomery or Verdi' as is being considered, a horn may sound further increasing ambient noise with increased risk of hearing injury. Without a doubt the railway development will only add to the ambient and excessive noise.

In conclusion, the school board and the administration have repeatedly stated that the students' safety and education are their primary concern. As physicians with a collective experience of 75 years caring for children, we are greatly concerned that moving classrooms closer to the railway may be a significant health issue. Also, the increase in ambient

noise expected in the classrooms may adversely affect the students' learning environment. These risks also apply to your staff.

These concerns are supported in the medical and educational literature. It is our conclusion that the current site plan creates a significant health risk to both students and staff. We would appreciate a response to our concerns.

R53-1 CONT'D

Respectfully
Kathleen Schneiderman MD, Pediatrician
Gary Schneiderman MD, Orthopedic Surgery



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Gary Schneiderman MD

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:52 AM
To: [redacted]

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2. Response to Comments

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R53. Response to Comments from Gary and Kathleen Schneiderman, dated November 19, 2018.

R53-1 This letter is a repeat of comment letter R36.

See responses R36-1 to R36-6.

2. Response to Comments

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LETTER R54 – Mridula Sherin (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Positive opinion of Cardiff School rebuild
2 messages

Mridula Pottathil [redacted] Mon, Nov 19, 2018 at 1:18 PM
To: CardiffDEIR@cardiffschools.com

Hello

R54-1 I am a parent of a Cardiff School 1st grader and I have two younger children who will be coming through the Cardiff School system. I am so happy to be part of an amazing community that values children, people, and our neighborhood. I voted yes on Measure GG which enables the improvements to the Cardiff elementary school. I think the district put together an amazing design that is mindful of the environment, the neighbors, and the safety of the school children. As with any new project, there are those that have negative opinions. Change is hard. But I hope the community sees that the negative outlook of a few shouldn't outweigh what is overwhelmingly considered a great project.
I hope this email adds to the voice of the many who believe the Cardiff School rebuild enhances the school and our community. It does not take away from recreation space (the people against the current rebuild are probably the same people that voted against the Encinitas Community Park). We have countless parks, beaches, and space for activities. The school property needs to be upgraded and better utilized.

Thanks!
Mridula P. Sherin, Ph.D.

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:42 PM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R54. Response to Comments from Mridula Sherin, dated November 19, 2018.

R54-1 The commenter is supportive of the proposed Project, and states that the proposed design is mindful of the environment, neighbors, and safety of the children. The commenter indicates that the proposed Project does not take away recreation space, and that Cardiff has other parks, beaches, and spaces for activities.

The District appreciates the support of the project. The commenter does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R55 – Tricia Smith (30 pages)

November 18, 2018

VIA E-MAIL: CardiffEIR@cardiffschools.com

Cardiff School District
1888 Montgomery Ave.
Cardiff, CA 92007

COMMENT ON DRAFT EIR
By
Tricia A. Smith

The Cardiff School District's draft EIR (DEIR) dated October 5, 2018 fails to meet the criteria for certification in that it fails to address the District's compliance with the environmental standards of the Land and Water Conservation Fund (LWCF) Agreement as controlled and interpreted by National Parks Service Federal laws, the State Parks laws and the State Manuals which is required to be analyzed in a cohesive documents under NEPA.

R55-1 The LWCF Agreement protects the parklands of Berkich Park (Park) that are within the 6(f) 3 boundary map **"in perpetuity."** The District plan is to build inside the 6(f) 3 Park boundary lands thereby taking a large section of the lovely green open space and playing fields. The DEIR claims it does not have to address compliance with the LWCF Agreement because the District deemed the conversion of park lands "insignificant" based on their Initial Study which only did a CEQA analysis. CEQA asks different questions and has different standards. This is an ingenuous attempt by the District to ignore the most controversial aspect of the District's project. The District plans to convert portions of their proposed conversion of the Park open space into asphalt and concrete for parking and a large multi-purpose room.

R55-2 The City of Encinitas and the District jointly signed the grant Agreement with State Land and Water Conservation Fund (LWCF) as approved by the National Park Service (NPS) in order to fund park improvements in the Park in approximately 1993. Under certain circumstances with NPS and State Park approval, which do not currently exist here, the LWCF Agreement allows some conversion of Park lands so long as ***new*** replacement park land, which services the same population and which is of equal current value, size, usefulness, appeal and view is purchased by the District for the public. All conversions must be approved by NPS and by State Parks. We are told by NPS and State Parks that the District's requested conversions have not been approved currently and may not be approved in the future.

R55-3 The DEIR does not address the project compliance using these standards. The DEIR wrongly assumes that the District has "discretionary approval authority" (DEIR page 1-1) to label the compliance issues raised by the LWCF Agreement as "insignificant" and thereby ignore them. In fact in the District's proposed conversion of a significant portion of the Park, their new boundary map claims to slightly increase the protected Park space, while in fact it pushes a 35,000 square foot parking lot into park lands where only open grass expanse exist now; and further it breaks up a playing field into narrow, oddly shaped, long areas that are isolated, unsafe and not usable for park activities. It also takes the schools teaching gardens. The environmental standards

1

2. Response to Comments

R55-3 CONT'D

agreed to in the LWCF Agreement are *extremely significant* and are binding on the District. They cannot be handled perfunctorily, labeled *insignificant* and ignored. The DEIR is fatally flawed and cannot be certified.

R55-4

Prior Illegal Conversions. It should also be noted that the DEIR also does not address the illegal conversion of parkland under the LWCF Agreement that took place in approximately 2002-3. At that time approximately 15% of the Park was illegally converted to school use by the construction of a building within the Park boundary and replacing a playground with a large expanse of asphalt in a pick-up lane off Mozart Avenue. Apparently the District believes it has the right to do this. In public meetings, the District bond manager, Randy Peterson said repeatedly that "since the school land is titled in the District's name, the District can use as much of the Park land as it wants". Since the District will now be held accountable for their prior illegal conversions, the District must deal with these conversions in the DEIR as well.

This letter is divided into several sections, namely:

I) Back ground and law governing the District's requests,
II) School District's current and historical bad faith actions,
III) Facts that do not support the District's conversion proposals
IV) Feasible Alternatives to prevent conversion of Park open space
V) Conclusion

1. Background and Law

R55-5

The Cardiff School is located on the coast in Cardiff with great unobstructed ocean views which are enjoyed by all from the Park lands as well as from the Montgomery Avenue which borders the entire east side of the school. Several houses look over Montgomery Avenue out to the ocean as well. There are also lovely views into the Park where children are playing and families are enjoying the leisure from outside of the Park on Montgomery Avenue. In about 1993 the City of Encinitas and the Cardiff School District jointly signed a grant agreement with Land and Water Conservation Fund (LWCF) approved by the NPS to fund park improvements for playing fields, a running/bike track and young children's play equipment in George Berkich Park. It was a "matching funds" agreement with the City of Encinitas providing the District's share of the money. The terms of the Agreement were clear. The City and the District agreed in writing that the area within the 6(f)3 boundary map was to be open space "***in perpetuity***" for the use of the community (See Exhibit 1a & 1b for 6(f)3 Boundary Maps) . The LWCF Agreement (See Exhibit 2, copy of Agreement) requires "**specific performance**" of all parts of the Agreement. The Agreement makes it clear that the District cannot void or change the Agreement by refunding the grant money. The District **must** specifically perform the terms of the Agreement.

R55-6

The District is bound by five levels of regulations all of which set forth specific requirements for the District in protecting environmental standards of the open space land of the Park within the 6(f)3 boundary. All five clearly set out the priority and importance of the outdoor recreational activities of the Park and the stringent environmental standards that must be met by the District in order for the District to convert 6(f)3 Park open space for a school multi-purpose room and large asphalt pick-up/ drop-off lanes and parking lot for the school. The DEIR is bound by these

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standards. The DEIR fails to consider the standards in the five controlling layers of environmental regulations and fails to apply those standards to the District's intended conversions and swaps.

The five controlling levels of environmental regulations and laws are:

- The LWCF Agreement signed by the City of Encinitas, (City) as noted above;
- The Stewardship Guides and Grants in Aid Manual (Manual)which is updated from time to time and provides many details, definitions and examples of unacceptable conversions. The Manual is incorporated into the LWCF Agreement and fully enforces the terms of the Agreement.
- The State Parks Regulations under Office of Grants and Local Services (OGALS) which has its own environmental standards for open space and parks under its jurisdiction.
- The Federal National Parks Service (NPS) Code section 59.3 (See Exhibit 3 for copy of code section.) The Federal code deals specifically with the required federal environmental standards for conversions of 6(f)3 protected park lands. Again the District's construction project on the Park does not comply.
- National Environmental Policy Act (NEPA) which requires a coordinated single process and compliance with all applicable environmental requirement under FHWA policy **(23 CFR § 771.105).**

R55-6 CONT'D

These controlling regulatory levels and laws require the District to obtain approval of their construction project on the 6(F)3 boundary open space of the Park from three separate levels of government—OGALS, NPS and City. If any one level refuses to approve the conversion of the parkland, the District's project fails. To date the District has not secured any approvals from any of the regulating public bodies mentioned herein. In fact it is highly unlikely that the District's conversion attempt will be successful because the District completely fails to meet the criteria and standards required by them. DEIR does not reveal these requirements, let alone discuss them. The three governmental levels are as follows:

- National Park Service (NPS) has to approve the District's proposed conversion of open space. Under the Federal Code, the NPS could not approve the District's proposed conversion of open space in the Park.
- The California State Parks, Office of Grants and Local Services (OGALS) which is the statewide parks program. They are regulated by California and Federal law, the LWCF Agreement and the Manuals. OGALS also could not approve the District's proposed conversion of open space in the Park.
- The City of Encinitas is a signatory to the LWCF Agreement and must sign on any modification of the 6(f)3 boundary map. I have personally talked with each of the City Council members, Mayor and the City Attorney, Glen Sabin. All have expressed their commitment to the 6(f)3 parkland at the Park and do not want the School to use up the open space with buildings and asphalt. If the City refuses to sign the modification even if it is approved by the NPS and OGALS, the District will not be able to build on the Park.

R55-7

The controlling statues, governmental agencies and manuals clearly state that their goal is to protect in perpetuity functioning parklands such as Berkich Park from all of the modern

R55-8

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2. Response to Comments

encroachments which would like to use the open space for their construction projects. This specifically includes schools, libraries and communities. The guiding question as stated in the Manual is:

> "Does the proposed change improve or increase the park's public outdoor recreation use capacity, or is it driven by non-park reasons that are contrary to the primary purpose of improving the park for the public's recreation experience?" How will the proposed change affect the public's park experience, public outdoor recreation, and viewshed?

R55-8 CONT'D

The DEIR has not addressed these questions or even the concept. It is clear that the District proposed conversion of our open space does NOT improve the public's recreation experience or increase the recreation use capacity. In fact it is solely driven by the District's by non-park reasons, namely the Districts desire to have a new, large multipurpose room, and a larger pick-up/drop-off lanes for the school children and their parents at the beginning and end of each school day, plus a new parking lot. None of these enhance or improve an outdoor recreation experience. The Park does not need a larger or reconfigured pick up/drop space or parking lot.

The DEIR Environmental Analysis: Land Use and Planning (Section 5) under Subsection Impact 5.8-2 admits that the conversion of 6(f)3 open space is for the benefit of the school for communication, safety and educational programs; it reads:

R55-9

> "The proposed project is driven by a desire to enhance the outdoor recreation area for the benefit of the communication in addition to the need to provide for increased safety and security of student and current educational program at Cardiff School....The proposed improvements would not conflict with the integrity of the existing public recreation uses. Instead, they would enhance the existing outdoor recreational space and student and community use of it."

The DEIR does not explain how the construction project consisting of a new 5000 square foot 2-story tall building and a 35,000 square foot parking lot and driving lanes constructed on the Park open space would not conflict with the integrity of that open space. Buildings and asphalt do not enhance open space use. Indeed, the claim is simply beyond belief. Obviously, the new building and the asphalted parking and lanes will destroy the open space, not enhance it for anyone.

DEIR Subsection Impact 5.8-2 also strains reason in listing improvements to the Park as if those improvements were contingent on the construction projects. They include grass on the baseball infield, relocation of play equipment, seating area on built into the slope adjacent to the field within the boundary, relocation of picnic tables and finally restrooms which were part of the 2002 conversion and already available to the public and students. These improvements can be accomplished independently of any of the District's construction plans on the protected Park.

R55-10

II. **DEIR Ignores Important Facts Of District's Current And Historical Bad Faith Actions**

R55-11

The DEIR ignores important facts concerning the District's current and historical bad faith action in dealing with the LWCF Agreement compliance issues, in assessing the environmental impact

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of the District's construction project in the Park, and the District's obligation to provide notice to the public. The following are a few of the District's actions.

1. Within approximately 8 years of signing an Amendment to the LWCF Agreement promising that the 6(f) 3 boundary areas would be a park **in perpetuity**, the District blatantly ignored the boundary map and the terms of the LWCF Agreement. Without asking for a conversion or notifying OGALS, NPS or State Parks, the District illegally built a new 2,500 square foot building in the middle of the park encroaching on playing fields and a new 10,000 square foot pick-up/drop off zone off of Mozart Avenue eliminating a young children's playground. (See Exhibit 4). Shockingly, several of the current District members who were serving at the time of the initial Agreement, were still serving at the time of the illegal construction conversions.

2. The LWCF Agreement requires the District to maintain signage on the Park so that the public can read the sign and know what public agencies have jurisdiction over the Park. The District has failed to maintain the required signage on park lands in a readable condition. (See Exhibit 5). After searching, the unreadable sign was discovered and brought to the District's attention. The District has ignored requests to make the signage readable. In other words, the District does not want to give the public notice that the Park is under the jurisdiction of NPS or State Parks. The DEIR does not discuss the LWCF Agreement signage requirement or the effect that lack of notice has on the community. The concept of transparency and notice to the public is an important guiding principal for the DEIR. It is not insignificant.

R55-11
CONT'D

3. When asked to provide copies of the LWCF Agreement signed by the City and the District, the District said there were no agreements, period.

4. When confronted with copies of the LWCF Agreement that we were able to locate through a Freedom of Information Act Request through the State, the District's advisor, Randy Peterson stated that the School's name was on title to the land and that they could build whatever they liked on the Park lands without restrictions. He was not only very rude, but he was also wrong. Nonetheless, the District initial plans used up almost half of the Park open space with new buildings as a result. When the District was confronted with the LWCF Agreement by a large crowd of anger citizens, the District modified their plans and reduced the size of the conversion, but has continued to insist that the District has the right to take parklands.

5. The District has indicated to OGALS that the City of Encinitas support the District's proposal. In fact the City Council members do NOT support the District's proposals as I previously mentioned. The Council highly values Berkich Park public open space and playing fields as an important part of the open space fields that the City maintains for the citizens throughout the city. The City does not want the District to use the protected parklands just because the District wants a new multi-purpose room.

6. In the DEIR, public comments are summarized. I have spoken before the School Board at least 10 times and been present many more times. I have also submitted

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2. Response to Comments

R55-11 CONT'D

written material and heard the comments of and read the letters of other Cardiff Community members. The DEIR Summary of Public Comments does not adequately address the breadth and depth of the public comments as is required.

III. **Facts that do not support the District's conversion proposal** (See Exhibit 6 for School's Conversion Proposal)

1. The District misleads OGALS about the number of students attending Cardiff School. There are 729 students in the District BUT only 340 at Cardiff School. Cardiff School only has grades kindergarten through third grade, ages 5 to 9. The fourth through sixth graders attend Ada Harris School, which is at least 2 miles away on the other side of the freeway and without a park or ocean views. The District has just announced that it would move the 3rd graders to Ada Harris, which means that Cardiff School will only has K -2 graders. I suspect the number of students will therefore be no more than 275. Cardiff School is a small school for our youngest children. To service these children, the school campus should be scaled to them, instead of sprawling and large. Security is also easier. The playground, playing fields and open space are as important as the classrooms to this age group.

R55-12

2. The Cardiff School is not anticipating growth. Its receive news releases has indicated that it does not have the money to build two of the class rooms. This means that the school will actually be reduced in size with the new construction. For this reason as well, the footprint of the school does not need to be increased.

3. The new parking area and pick up/drop off lanes that the school is offering as substituted park land, is another example of the School's bad faith. The number of cars that can be parked will be approximately the same as with the current parking lot. The major difference is a substantial increase in the number of cars that can drop off/pick up students during the 20 minutes in the morning and at the end of the day when the streets are congested with children and parents. In reality, it will not deal with the pick-up and drop off problem during those times. Also there is no enhancement to the "outdoor recreation area and the user experience". It is solely for the benefit of the School when classes begin or let out.

R55-13

In addition, the DEIR failed to consider the impact of creating pick up/drop off lanes in close proximity to the classrooms where rows of cars will be idling and releasing exhaust in an area that is closed in on three sides with restricted air flow. Per Idle-Free California, the EPA and the State have both recognized the risk of idling vehicles to children, especially very young children. The DEIR does not address this issue at all. At a public meeting, a member of the public brought the issue to the attention of the District, which the District ignored. .

R55-14

Under the LWCF Guidelines, the District cannot use any existing spaces that are already developed and in use as part of their replacement property requirement for conversion of Park lands. There is already an existing parking lot and drop off lanes. The Guidelines require ***new land.***

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4. The current parking lot at the School is more than adequate for the Park. But in any event, there is ample street parking surrounding the Park for park use, even when the School locks the parking lot next to the Park. When the gate is open, the School parking lot is seldom full after school hours or weekends. The Park would not benefit from an enlarged parking lot. The majority of Park users arrive on foot or by bicycle; it is a local park. The District's proposed shift of its parking lot onto public land does not improve the accessibility of the Park.

R55-15

5. Berkich Park is very popular and intensely used by the entire community every day after school, all weekend long and during holidays—even in inclement weather. Neighbors see each other while walking or riding and take time to visit. Everyone plays on the fields, including pick-up adult and children games, family games and children's organized sport teams. Families sometimes have picnic on the fields or at the tables. Senior walk around the grassy areas on the paved and little kids storm around on their bikes and scooter... It is an important part of the Cardiff community character and we all love our Park.

R55-16

6. None of the changes to the 6(f) 3 boundary which are proposed by the District's letter are "needed" as claimed by the District. The School has a multi-purpose room on the South side of the campus that is less than 20 years old and that does not need to be replaced. There is more than sufficient money in the Bond Measure GG to do the delayed maintenance that is needed on the existing multipurpose room which will put it into excellent condition. The existing building could be easily enlarged, if the District wants a bigger space. The school does not need a bigger space if the student body size is going to be reduced as was indicated in a District press release this week. Since the current multi-purpose room is located adjacent to Mozart Avenue, the District could easily build a new entrance that faces onto the street if they wanted. It also would be easier to make the current multi-purpose room secure from the rest of the campus for student safety as it is on the edge of the campus and not connected to any classrooms.

R55-17

Also significantly, a large outside section of steps is located next to the multipurpose room. The area is designed for outdoor assemblies for the children and their parents with sweeping views to the playing fields and to the ocean. In our ideal weather, the school hosts assemblies every few weeks on the steps. It would be a significant loss to move these lovely assemblies inside to a new multipurpose room on park lands. I frequently attend the assemblies for my grandchildren. I hear first-hand how much the parents and the children enjoy the location of these assemblies.

7. School Teaching Garden: The Scrumptious Schoolyard garden is the school's teaching garden, where children learn about growing food organically. Learning how to garden and to grow their own food is an important part of the curriculum. There is a garden teacher on staff. Each child spends time each week in the garden. The children should not have to share their garden with the public. The community has a large community garden in Encinitas for adult use. It is inappropriate to change the use to make it a public garden, and not a school teaching garden. The two are in conflict with one another. Also the garden is already developed as open space. Under the LWCF Guidelines, the District cannot use any existing open space or garden that is already developed and in use as part

R55-18

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2. Response to Comments

R55-18 CONT'D

of their replacement property requirement for conversion of Park lands. It has to be ***new land.***

8. If the District is allowed to build the new, enlarged multi-purpose room on the open space, the building will block the "viewshed" into the park and to the ocean along most of Montgomery Avenue and half of Mozart Avenue, which is most of the public view to the sea and into the park. The public as well as the affected houses will see the large blank two-story tall side-wall of the multi-purpose room, which faces the street, instead of the park grassy area and the ocean. It is a terrible loss for the public as well as the few homeowners who are affected. The ocean and park views are greatly enjoyed by the community; this is an intensely walked area of the town. (Interestingly, the fabulous ocean view from the superintendent's office is not impacted!)

R55-19

9.

10. The Districts claim that the park conversions are necessary in order to properly educate the children. Ironically the School already boasts extremely high state and national test scores. There is no indication that the school is anything but excellent. Clearly the current buildings provide a superior environment for learning. In any event this is not a reason to use up the open space Park lands under the standards of the LWCF Agreement, the Federal law, the State Law, or the City of Encinitas.

R55-20

IV. Significant Unavoidable Adverse Impacts

There are significant unavoidable adverse impacts to the Park if the District builds the multi-purpose room, the reconfigured drop off/pick up lanes and parking lot within the 6(f)3 boundary Park open space. The community recreational use of the open space will be permanently lost. The quality of life of each individual in the community including all of the children, who use the open space in the Park, will be irrevocable harmed. No part of the District's proposal for the substitute park lands avoids the irrevocable adverse impact to the Park as is required under the standards of the LWCF Agreement, the Federal law, the State Law, or the City of Encinitas. The permanent adverse impacts to the Park include the following:

R55-21

- The School's new drop off/pick up lanes are for the School use during their busy morning and afternoon times. While they will use up open space permanently, they do not improve or enhance the outdoor recreation al experience of the public. The current parking and available street parking bordering the playing fields are more than sufficient for the Park's need. I might add that they also will not solve the congestion problem during those twenty minutes two times a day. All of the residents of the immediately community knew of the traffic situation during those periods before they purchased their homes. We simply go the other direction to avoid the problem.

  In addition the impact of creating pick up/drop off lanes in close proximity to the classrooms where rows of cars will be idling and releasing exhaust in an area that is closed in on three sides with restricted air flow. This is a real and unavoidable risk with the design of the pick-up/drop off lanes.

R55-22

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- The large multi-purpose room are for the School use except for a few rare occasions during the year when the used may be re-purposed for example for voting. They also will use up open space forever. The School use and the occasional community use do not qualify as substitute open space. The multi-purpose room does not improve or enhance the outdoor recreational experience of the public.

R55-23

- The School Teaching Garden is already an established outdoor space. The Agreement and the law clearly require ***new*** outdoor space, not just new use of existing outdoor space. Also, the District has not indicated that they were planning on abandoning the teaching gardens (fortunately.) Because of the nature of growing food, it is not feasible to have both children and adults trying to use the same space to grow food. These gardens would not qualify as part of the substitute open space because they do not improve or enhance the outdoor recreational experience of the public.

R55-24

- The District claims that the District does not have to follow the rules because the District's conversion is under 10% of the Park lands and therefore insignificant. In fact the District's conversion is over 20% of the Park lands when the prior unlawful conversions that took place in approximately 2002-3 are added to the currently proposed conversions. Under the LWCF Agreement and the law, the District's conversions are significant and the District must follow the law,

R55-25

V. Feasible Alternatives To Proposed Project To Prevent Conversion Of Park Open Space

1. Alternative One: The offending multi-purpose room can easily be located outside of the protected 6(f) 3 boundary area. The District is not projecting a significant increase in the size of the student body. Some of the classroom may not be built due to lack of funds. The community has submitted an architect's drawing which sets out the placement of the proposed improvements in such a way that it does not encroach on the protected parklands. (See Exhibit 7) The drop off/pick-up lanes could stay close to where they are currently located. This would also remove the lanes from such close proximity to the classrooms which would improve the air quality. When this alternative was proposed by the community, the District refused to even consider it. (See Exhibit7 for Alternative Layout that does not require conversion of parklands.) The District does not propose this alternative in the DEIR.

R55-26

2. Alternative Two: Currently the superintendent's administrative office of the two-school Cardiff School District is located on the same site as the classrooms. Ada Harris, the other school in the district is located about 2 miles away. The superintendent's offices are very large and spacious with an ocean view. These offices could be relocated to Ada Harris or off campus. This would add considerable additional square footage for the School without encroaching on the Park lands. This has been repeatedly suggested to the District. The District does not mention this alternative in their DEIR.

R55-27

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2. Response to Comments

3. Alternative Three: The District could not build the multi-purpose room and keep the existing multi-purpose room. The Park lands would not be impacted. The cost of up-grading and enlarging the existing multipurpose room on the south side next to Mozart Avenue would be substantially less than building a new one on the Park land. The District complains that the current multi-purpose room does not hold the entire student body and it does not have an "entrance" from the Mozart Avenue, although it is located contiguous to the street. These are straightforward improvements that could easily be made without building an entirely new building on the Park open space. It is interesting to note that the existing multi-purpose room is structurally sound, earthquake sound and up to school safety standards. If it were not, the District would have used an engineer report to bolster their arguments about tearing it down. Remodeling the existing multi-purpose room has been repeatedly suggested to the District. The District has dismissed this alternative.

R55-28

V. Conclusion

In conclusion, the DEIR fails to meet the criteria for certification in that it fails to address the District's compliance with the LWCF Agreement which is required under NEPA regulations. In failing to address the LWCF Agreement, the DEIR fails to apply the environmental standards set forth in the Federal law under the NPS, the California State Parks OGALS and the position of the City of Encinitas regarding open space and the development of parkland which underpin and control the LWCF Agreement. NEPA regulations at FHWA policy **(23 CFR § 771.105) state** that:

R55-29

- To the fullest extent possible, all environmental investigations, reviews, and consultations be coordinated as a single process, and compliance with all applicable environmental requirements be reflected in the environmental document.

The DEIR has not done this. They have attempted to side step the issue. By calling the environmental impact on the Park open space "insignificant," the DEIR attempts to avoid dealing with any of the stringent environmental standards of NPS, OGALS, the City and the LWCF Agreement. Therefore the DEIR fails to meet the criteria for certification.

Respectfully submitted:

Tricia A. Smith
[redacted]
Cardiff CA 92007
[redacted]

Index to Exhibits

Exhibit 1a & 1b: 6(f) 3 Boundary Maps

Exhibit 2: LWCF Agreement signed by City of Encinitas and District

Exhibit 3: National Parks Service Code, section 59.3 "*Conversion Requirements*."

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Exhibit 4: Map showing 2002 illegal conversions of 6(f) 3 park lands

Exhibit 5: Copy of the sign showing unreadable condition

Exhibit 6: School's Conversion Proposal

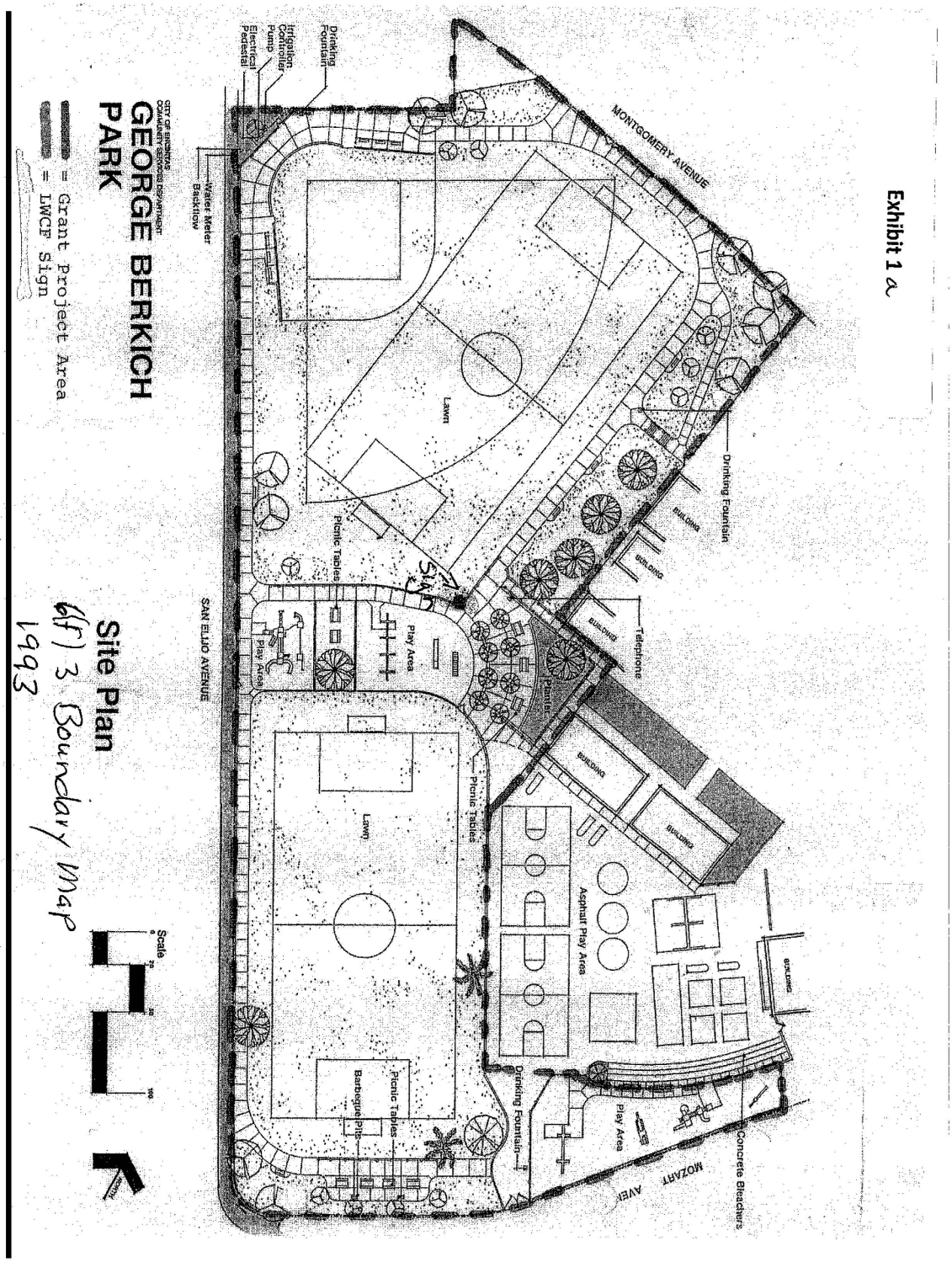
Exhibit 7: Alternative Layout that does not require conversion of parklands.

Exhibit 8a & 8b: Comparison of size of current and proposed drop off lane and parking lots

CC:
Barbara Baker, Office of Grants and Local Services
Lee Butterfield, Office of Grants and Local Services
Luan Aubin, Office of Grants and Local Services
Richard Rendon, Office of Grants and Local Services
Viktor Patiño, Office of Grants and Local Services
Catherine Blakespear, Mayor, City of Encinitas
Joe Mosca, Encinitas City Council Member
Jody Hubbard, Encinitas City Council Member
Tony Kranz, Encinitas City Council Member
Karen Brust, City Manager of Encinitas
Glen Sabine, City Attorney of Encinitas
Jennifer Campbell, Director Parks, Recreation and Cultural Arts of Encinitas

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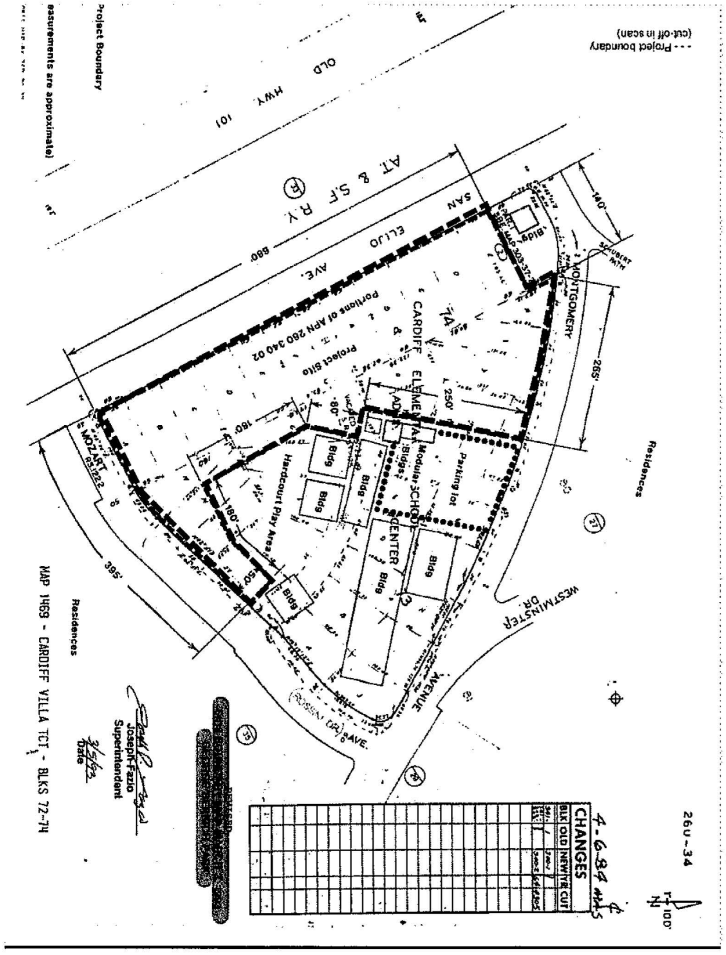
2. Response to Comments



2. Response to Comments

R55-30
CONT'D

Exhibit 1 b



2. Response to Comments

Exhibit 2

STATE OF CALIFORNIA
Department of Parks and Recreation
PROJECT AGREEMENT
Land and Water Conservation Fund Program

Project Title George Berkich Park Development

Participant City of Encinitas and Cardiff School District

Project Period 5/7/93 to 6/30/97 Project Number 06-01346

Project Scope: Development will consist of play area, open sportsfields, picnic facilities and associate facilities.

The participant agrees to submit plans and specifications for the proposed development by December 31, 1993.

Stage Covered by this Agreement Complete

Project Cost:

Amount of Total Project Costs Eligible for Federal Funding	$ 300,000	(1)
Surcharge--State Administrative Assessment 6.4 % of Line (1) (subject to adjustment, see Section III.C.2)	$ 19,200	(2)
Total Eligible Project Costs Plus Surcharge (Line 1 plus Line 2)	$ 319,200	(3)
Federal Participation--up to 50% of Line (3), or up to 50% of actual costs, whichever is the lesser, not to exceed:	$ 159,600	(4)
Estimated Payment to Participant Deduct State Administrative Assessment: [Federal Participation (Line 4) Less Surcharge (Line 2), Subject to Adjustment]	$ 140,400	(5)

R55-30 CONT'D

Continued on are 6 pages numbered 2 through 7 inclusively.

City of Encinitas
PARTICIPANT
By
Title Community Services Director
Date 6-23-93

And

Cardiff School District
Participant
By
Title Superintendent

STATE DEPARTMENT OF PARKS AND RECREATION
By
Date 9-7-93

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LAND AND WATER CONSERVATION FUND
PROJECT AGREEMENT PROVISIONS

I. Definitions

A. The term "NPS" as used herein means the National Park Service, United States Department of the Interior.

B. The term "Secretary" as used herein means The Secretary of the Interior, or any representative lawfully delegated the authority to act for such Secretary.

C. The term "Director" as used herein means the Director of the National Park Service, or any representative lawfully delegated the authority to act for such Director.

D. The term "Liaison Officer" as used herein means the California Director of Parks and Recreation, or other State officer as designated by the Governor.

E. The term "Manual" as used herein means the Land and Water Conservation Fund Grants Manual.

F. The term "Project" as used herein means the project or project segment which is the subject of this agreement as defined in the Project

G. The term "Project Proposal" as used herein means the form and all supplemental attachments used to describe and estimate the cost of planning, acquisition, or development project filed with the Liaison Officer in support of an application for federal financial assistance.

H. The term "State" as used herein means the State of California, and/or its official representative, the Department of Parks and Recreation.

I. The term "Participant" as used herein means the recipient of the federal funds to be disbursed in accordance with the terms of this agreement.

J. The term "State Funds" as used herein means those moneys made available by the State or a Participant as matching money for projects under the Land and Water Conservation Fund Act of 1965, 7 8 Stat. 897 (1964).

K. The term "Leased Land" or "Lease" as used herein means land leased from the Federal Government.

II. Continuing Assurances

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The parties to the project agreement specifically recognized that the Land and Water Conservation Fund assistance project creates an obligation to maintain the property described in the project agreement consistent with the Land and Water Conservation Fund Act and the following requirements.

Further, it is acknowledged intent of the parties hereto that recipients of assistance will use moneys granted hereunder for the purposes of this program, and that assistance granted from the Fund will result in a net increase, commensurate at least with the State cost-share, in a participant's outdoor recreation. It is intended by both parties hereto that assistance from the Fund will be added to, rather than replace or be substituted for, State and local outdoor recreation funds.

A. The participant agrees, as recipient of this assistance, that it will meet the following specific requirements and the terms of the project agreement.

B. The participant agrees that the property described in the project agreement and the dated project boundary map made part of that agreement is being acquired or developed with Land and Water Conservation Fund assistance or is integral so such acquisition or development, and that, without the approval of the Liaison Officer, the Director, and/or the Secretary the Interior, it shall not be converted to other than public outdoor recreation use but shall be maintained in public outdoor recreation in perpetuity or for the term of the lease in the case of leased property. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at lease equal fair market value and of reasonable equivalent usefulness and location. This replacement land becomes subject to Section 6(f) (3) protection. The approval of conversion shall be at the sold discretion of the Secretary, or his designee. Prior to the completion of this project, the participant, the Liaison Officer, and the Director may mutually alter the area described in the project agreement and the dated project boundary map to provide the most satisfactory public outdoor recreation unit, except that acquired parcels are afforded Section 6(f) (3) protection as Fund reimbursement is provided.

In the event the National Park Service provides Land and Water Conservation Fund assistance for the acquisition and/or development of property subject to reversionary interests with full knowledge of those reversionary interests, conversion of said property to other than public outdoor recreation uses as a result of such reversionary interest being exercised is approved. In receipt of this approval, the participant agrees to notify the State of the conversion as soon as possible and to seek approval of replacement property in accord with the conditions set forth in these provisions. The participant further agrees to effectuate such replacement within a reasonable period of time, acceptable to the State, after the conversion of property takes place. The provisions of this paragraph are also applicable to: leased properties acquired and/or developed known and agreed to by the State; and properties subject to other outstanding rights and interests that may result in a conversion when known and agreed to by the State.

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2. Response to Comments

C. The participant agrees that the benefit to be derived by the State from the full compliance by the participant with the terms of this agreement is the preservation, protection, and the net increase in the quality of public outdoor recreation facilities and resources with are available to the people of the State and of the United States, and such benefit exceeds to an immeasurable and unascertainable extent the amount of money furnished by the State by way of assistance under the terms of this agreement. The participant agrees that payment by the participant to the State of an amount equal to the amount of assistance extended under this agreement by the State would be inadequate compensation to the State for any breach by the participant of this agreement. The participant further agrees, that the appropriate remedy in the event of a breach by the participant of this agreement shall be the specific performance of this agreement.

D. The participant agrees to comply with he policies and procedures set forth in the National Park service Grants-in-Aid manual. Provisions of said manual are incorporated into and made a part of the project agreement.

E. The participant agrees that the property and facilities described in the project agreement shall be operated and maintained as prescribed by manual requirements.

F. The participant agrees that a permanent record shall be kept in the participant's public property records and available for public inspection to the effect that the property described in the scope of the project agreement, and the dated project boundary map made part of that agreement, has been acquired or developed with Land and water Conservation Fund assistance and that it cannot be converted to other than public outdoor recreation use without the written approval of the liaison Officer, the Director, and/or the Secretary of the Interior.

G. Nondiscrimination

1. The participant shall comply with Title VI of the Civil Rights Act of 1964 (P.L.88-352) and in accordance with Title VI of that Act, no person in the United States shall, on the ground of race, religion, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of any property or facility acquired or developed pursuant to the project agreement. The participant shall immediately take any measures necessary to effectuate this provision. This assurance shall be binding on the participant or any political subdivision or other appropriate public agency to which Fund assistance or property acquired or developed with Fund assistance has been transferred for public recreation purposes.

2. The participant shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d) prohibiting employment discrimination where (1) the primary purpose of a grant is to provide employment or (2) discriminatory employment practices will result in unequal treatment of persons who are or should be benefiting from the grant-aided activity.

3. The participant shall comply with the regulations and guidelines promulgated pursuant to the Civil Rights Act of 1964 by the Secretary of the Interior and the National Park Service.

4. The provisions of the first three paragraphs apply to any part of the recreation system within which the assisted facility or property exists.

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5. The participant shall not discriminate against any person on the basis of residence, except to the extent that reasonable differences in admission or other fees may be maintained on the basis of residence as set forth in the manual.

III. Project Assurances

A. Applicable Federal Circulars

The State shall comply with applicable regulations, policies, guidelines and requirements including 43 CFR Part 12.41-12.92, Administrative Requirements and Cost Principles for Assistance Programs, Office of Management and Budget Circulars No. A-102 (Uniform administrative requirements for grants-in-aid to State and local governments), A-87 (cost principles for State and local governments), and A-128 (audits of State and local government) as they relate to the application, acceptance and use of Federal funds for this federally assisted project.

B. Project Proposal

1. The project proposal for Federal assistance bearing the same project number as the agreement and associated documents is by this reference made a part of this agreement.

2. The participant possesses legal authority to apply for the grant, and to finance and construct the proposed facilities. A resolution, motion or similar action has been duly adopted or passed authorizing the filing of the project proposal, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the participant to act in connection with the project proposal and to provide such additional information as may be required.

3. The participant has the ability and intention to finance the non-federal share of the costs for the project. Sufficient funds will be available to assure effective operation and maintenance of the facilities acquired or developed by the project.

C. Project Execution

1. It is understood by the parties hereto that this agreement shall not obligate State of California funds for the project costs described herein. The participant thereby promises, in consideration of the promises made by the Liaison Officer herein, to execute the project stage described herein, in accordance with the terms of this agreement. Any disbursement hereunder shall not be made unless and until funds therefor are received by the Liaison Officer from the National Park Service. This item shall not apply when the participant is an agency of the State of California.

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2. The Liaison Officer hereby promises, in consideration of the promises made by the participant herein, to accept appropriated federal funds for the purposes of the project and disburse the same to reimburse the participant up to 50 percent of the eligible project cost not to exceed 50 percent of the direct project cost shown in this agreement; except for a surcharge for administrative costs to be applied to twice the federal share of direct eligible project costs. The surcharge is to be deducted from the reimbursements received from the Federal Government applicable to this project and will be computed at the federally approved surcharge rate in effect at the time the billing is submitted to the Federal Government.

3. The project period shall begin with the date of approval of the project agreement or the effective date of a waiver of retroactivity and shall terminate at the end of the stated or amended project period unless the project is completed or terminate sooner in which event the project period shall end on the date of completion or termination. For project elements added to a consolidated project, the project period will begin on the date the project element is approved.

4. The participant will cause work on the project to be commenced within a reasonable time after receipt of notification that funds have been approved and assure that the project will be prosecuted to completion with reasonable diligence.

5. The State will require the facility to be designed to comply with the Architectural Barriers Act of 1968 (Public Law 90-480), and DOI Section 504 Regulations (43 CFR Part 17). The participant will be responsible for conducting all inspections.

6. The participant shall secure completion of the work in accordance with approved construction plans and specifications, and shall secure compliance with all applicable federal, state, local laws and regulations.

7. In the event the project covered by the project agreement, including future stages of the project, cannot be completed in accordance with the plans and specifications for the project; the participant shall bring the project to a point of recreational usefulness agreed upon by the participant and, the Director or his designee, and the Liaison Officer.

8. The participant will provide for and maintain competent and adequate architectural engineering supervision and inspection at the construction site to insure that the completed work conforms with the approved plans and specifications; that it will furnish progress reports and such other information as the NPS may require.

9. The participant will comply with the terms of Title II and Title III, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646), 94 Stat. 1894 (1970), and the applicable regulations and procedures implementing such Act for all real property acquisitions and where applicable shall assure that the Act has been complied with for property to be developed with assistance under the project agreement.

10. The participant will comply with the provisions of: Executive Order 11988, relating to evaluation of flood hazards; Executive Order 11288, relating to the prevention, control, and abatement of water pollution, and Executive Order 11920, relating to the protection of wetlands.

R55-30 CONT'D

11. The participant will comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, Public Law 93-234, 87 Stat. 975, approved December 31, 1976. Section 102(a) requires, the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any federal financial assistance for construction or acquisition purposes for use in any area that has been identified as an area having special flood hazards by the Flood Insurance Administration of the Federal Emergency Management Agency. The phrase "federal financial assistance" includes any form of loan, grant, guaranty, insurance payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect federal assistance.

12. The participant will insure that the facilities under its ownership, lease or supervision which shall be utilized in the accomplishment of the project are not listed on the Environmental Protection Agency's (EPA) list of Violating Facilities, pursuant to 40 CFR, Part 15.20 and that it will notify the State and NPS of the receipt of any Communication from the Director of the EPA Office of Federal Activities indicating that a facility to be utilized in the project is under consideration for listing by the EPA. The participant agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act of 1970. The participant further agrees to insert this clause into any contract or subcontract in excess of $100,000.

13. The participant will assist the State and NPS in its compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (16 U.S.C. 470) Executive Order 11593, and the Archeological and Historic Preservation Act of 1966 (16 U.S.C. 469a-1 et seq.) by (a) consulting with the State Historic Preservation Officer on the conduct of investigations, as necessary, to identify properties listed in or eligible for inclusion in the National Register of Historic Places that are subject to effects (see CFR Part 800.8) by the activity, and notifying the federal grantor agency of the existence of any such properties, and by (b) complying with all requirements established by the federal grantor agency to avoid or mitigate adverse effects upon such properties.

14. The participant will comply with Executive Order 12432, "Minority Business Enterprise Development as follows:

a. Place minority business firms on bidder's mailing lists.

b. Solicit these firms whenever they are potential sources of supplies, equipment, construction, or services.

c. Where feasible, divide total requirements into smaller needs, and set delivery schedules that will encourage participation by these firms.

d. For any project involving $500,000 or more in grant assistance (except for projects involving acquisition only) the participant shall submit, prior to the commencement of construction and every fiscal year quarter thereafter until project completion, reports documenting the efforts to hire minority business firms. These reports, SF 334, will be submitted one month following the end of each fiscal quarter (i.e., January 31, April 30, July 31, and October 31) to the National Park Service Regional Office in San Francisco.

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2. Response to Comments

D. Construction Contracted for by the Participant Shall Meet the Following Requirements:

1. Contracts for construction in excess of $10,000 shall be awarded through a process of competitive bidding involving formal advertising, with adequate purchase description, sealed bids, and public openings. Copies of all advertisements, bids, and a copy of the contract shall be retained for inspection by the Director and the State.

2. The participant shall inform all bidders on contracts for construction that federal funds are being used to assist in construction.

3. Written change orders shall be issued for all necessary changes in the facility being constructed under contracts of $10,000 or more. Such change orders shall be made a part of the project file and should be kept available or audit.

4. Contracts for construction shall include a provision for compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented by Department of Labor regulations (29 CFR, Part 3).

5. The participant will comply with other procurement standards of OMB Circular A-102, Attachment O, except for provisions related to compliance with Davis Bacon Act requirements (unless required by a program providing supplemental funding). Should supplemental funding be provided which requires compliance with Davis Bacon Act requirements, all construction contracts awarded by the grantee and subgrantee in excess of $2,000 shall include a provision for compliance with such Act (40 U.S.C. 276a to a-7) and as supplemented by Department of Labor regulations (29 CFR, Part 5).

6. The participant shall incorporate, or cause to be incorporated, into all construction contracts exceeding $10,000 (ten-thousand), the following provisions:

"During the performance of this contract the contractor agrees as follows:

"(1) The contractor will not discriminate any employee or applicant for employment because of race, religion, color, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color or national origin. Such action shall include, but not be limited to, the following: Employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

"(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, or national origin.

"(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 as amended (3CFR 169 (1974), and shall post copies of notices in conspicuous places available to employees and applicants for employment.

R55-30 CONT'D

"(4) The contractor will comply with all provision of Executive Order No. 11246, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor.

"(5) The contractor will furnish all information and reports required by Executive Order No. 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, record, and accounts by the contracting agency, the State, and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

"(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order No. 11246, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246, as amended, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.

"(7) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

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7. The participant shall (1) comply with the above provisions in construction work carried out by itself, (2) assist and cooperate actively with the Secretary of the Interior and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the above contract provisions and with the rules, regulations, and relevant orders of the Secretary of Labor, (3) obtain and furnish to the Secretary of the Interior and to the Secretary of Labor such information as they may require for the supervision of such compliance, (4) enforce the obligation of contractors and subcontractors under such provisions, rules, regulations, and orders, (5) carry out sanctions and penalties for violation of such obligations imposed upon contractors imposed upon contractors and subcontractors by the State, or the Secretary of Labor, or the Secretary of the Interior pursuant to Part II, Subpart D, of Executive Order No. 11246, as amended and (6) refrain form entering into any contract with a contractor debarred from government contracts under Part II, Subpart D, of Executive Order No. 11246, as amended. In addition, the participant agrees that if it fails or refuses to comply with these undertakings, the NPS may take any or all of the following actions: Chance, terminate, or suspend in whole or in part this grant; refrain from extending any further assistance to the applicant under the program with respect to which the failure or refusal occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the department of Justice for appropriate legal proceedings.

E. Conflict of Interests

1. No official or employee of the participant, State, or Federal Government who is authorized in his official capacity to negotiate, make, accept, or approve, or take part in such decisions regarding a contract or subcontract in connection with this project shall have any financial or other personal interest in any such contract or subcontract.

2. No person performing services for the participant in connection with this project shall have a financial or other personal interest other than his employment or retention by the participant, in any contract or subcontract in connection with this project. No officer or employee of such person retained by the participant shall have any financial or other personal interest in any real property acquired for this project unless such interest is openly disclosed upon the public records of the participant, and such officer, employee or person has not participated in the acquisition for or on behalf of the participant.

3. No member of or delegate to Congress shall be admitted to any share or part of this agreement, or to any benefit to arise hereupon, unless such benefit shall be in the form of an agreement made with a corporation for its general benefit.

4. The participant, State, and the Director shall be responsible for enforcing the above conflict of interest provisions.

F. Hatch Act

The participant will comply with the provisions of the Hatch Act which provides that no officer or employee of the participant whose principal employment is in connection with any activity which is financed in whole or in part pursuant to this agreement shall take part in any of the political activity prescribed in the Hatch Political Activity Act, 5 U.S.C. Sec. 118k (1964), with the exceptions therein enumerated.

G. Project Administration

1. Project costs eligible for assistance shall be determined upon the basis of the criteria set forth in the manual and OMB Circular A-87.

B55-30 CONT'D

2. The agreement may include the use of the indirect cost rate currently approved, in accordance with A-87, for the participant that is a party to this agreement.

H. Project Administration

1. The participant shall promptly submit such reports and documentation as the Director or Liaison Officer may request.

2. Any moneys advanced to the participant are "public moneys" and shall be deposited in a bank with FDIC insurance coverage and the balances exceeding the FDIC coverage shall be collaterally secured as provided for in 12 U.S.C. 265.

3. The participant shall use any funds received by way of advance payment from the State under the terms of this agreement solely for the project or project stage described in the agreement.

4. Properties and facilities acquired or developed with Fund assistance shall be available for inspection by the State or the NPS at such intervals as the Liaison Officer or the Director shall require.

I. Audit, Retention and Custodial Requirements for Records

1. Financial records, supporting documents, statistical records, and all other records pertinent to this grant shall be retained for a period of three years in accordance with 43 CFR Part 12.41-1292; except the records shall be retained beyond the three-year period if audit findings have not been resolved.

2. The retention periods starts from the date of the final expenditure report for the project or the consolidated project element.

3. State and local governments are authorized to substitute microfilm copies in lieu of original records.

4. The Liaison Officer, Secretary of the Interior, and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the participant and their subgrantees which are pertinent to a specific project for the purpose of making audit, examination, excerpts and transcripts.

5. The participant will comply with the provisions of OMB Circular A-28 (as provided under the Single Audit Act of 1984) establishing audit requirements for state and local governments that receive federal assistance.

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2. Response to Comments

J. Project Termination

1. The Liaison Officer or the Director may temporarily suspend State assistance under the project pending corrective action by the participant or pending a decision to terminate the grant by the NPS or the State.

2. The participant may unilaterally terminate the project or consolidated project element at any time prior to the first payment on the project or consolidated project element. After the initial payment, the project may be terminated, modified, or amended by the participant only by mutual agreement.

3. The Liaison Officer or the Director may terminate the project in whole, or in part, at any time before the date of completion, whenever it is determined that the grantee has failed to comply with the conditions of the grant. The Liaison Officer or Director will promptly notify the participant in writing of the determination and the reasons for the termination, together with the effective date. Payments made to the participant or recoveries by the State under projects terminated for cause shall be in accord with the legal rights and liabilities of the parties.

4. The Director, State, or participant, may terminate grants in whole, or in part at any time before the date of completion, when both parties agree that the continuation of the project would not produce beneficial results commensurates with the further expenditure of funds. The two parties shall agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated. The participant shall not incur new obligations for the terminated portion after the effective date, and shall cancel as many outstanding obligations as possible. The NPS may allow full credit to the participant for the Federal share of the noncancelable obligations, properly incurred by the grantee prior to termination.

5. Termination either for cause or for convenience requires that the project in question be brought to a state of recreational usefulness agreed upon by the participant, the Liaison Officer, and the Director, or that all funds provided by the National Park Service be returned.

K. Fund Acknowledgment

The participant will permanently display in a conspicuous place a bronze plaque which acknowledges Land and Water Conservation Fund assistance. The plaque will be provided by the State Department of Parks and Recreation and its installation by the participant will be required upon initial development of the property.

L. Hold Harmless

The participant shall indemnify the State of California and its officers, agents and employees against and hold the same free and harmless from any and all claims, demands, damages, losses, costs, and/or expenses of liability due to, or arising out of, either in whole or in part, whether directly or indirectly, the organization, development, construction, operation, or maintenance of the project.

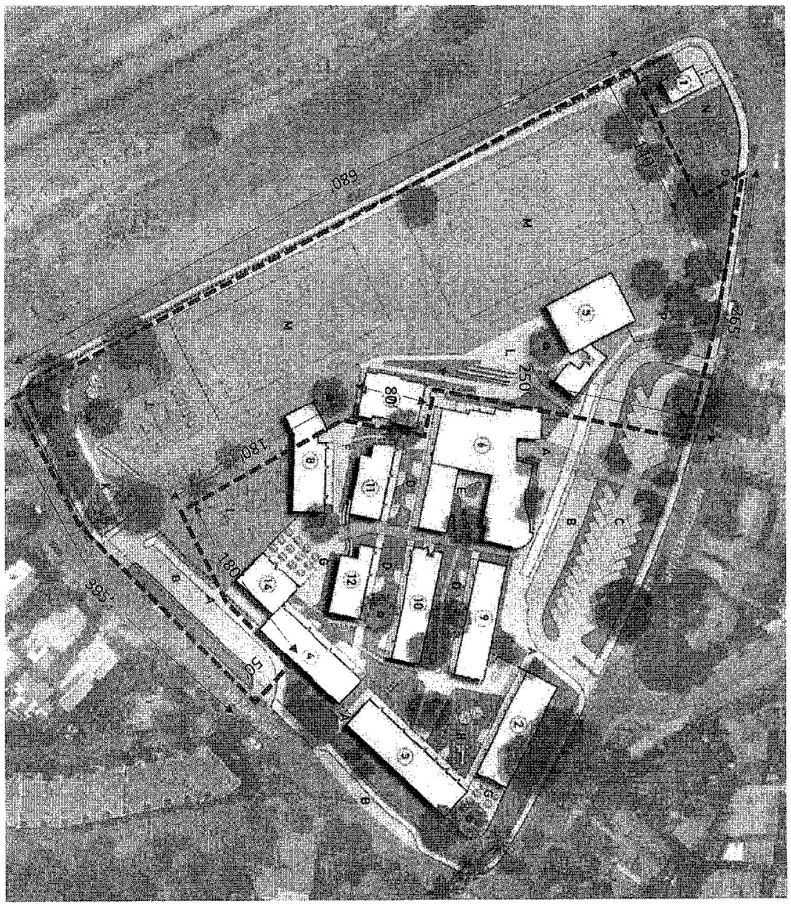
B55-30 CONT'D

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2. Response to Comments

R55-30
CONT'D

Berkich Park:
LWCF Section 6(f)(3)
boundary overlaid
onto current plan



2. Response to Comments

Exhibit 3

or facility and consistent with the contractural agreement between NPS and the State. Responsibility for compliance and enforcement of these provisions rests with the State for both State and locally sponsored projects. The responsibilities cited herein are applicable to the area depicted or otherwise described on the 6(f)(3) boundary map and/or as described in other project documentation approved by the Department of the Interior. In many instances, this mutually agreed to area exceeds that actually receiving L&WCF assistance so as to assure the protection of a viable recreation entity. For leased sites assisted under L&WCF, compliance with post-completion requirements of the grant ceases following lease expiration unless the grant agreement calls for some other arrangement.

R55-30 CONT'D

§ 59.2 Information collection.

The information collection requirements contained in § 59.3 have been approved by the Office of Management and Budget under 44 U.S.C. 3501 *et seq.* and assigned clearance number 1024-0047. The information is being collected to determine whether to approve a project sponsor's request to convert an assisted site or facility to other than public outdoor recreation uses. The information will be used to assure that the requirements of section 6(f)(3) of the L&WCF Act would be met should the proposed conversion be implemented. Response is required in order to obtain the benefit of Department of the Interior approval.

§ 59.3 Conversion requirements.

(a) *Background and legal requirements.* Section 6(f)(3) of the L&WCF Act is the cornerstone of Federal compliance efforts to ensure that the Federal investments in L&WCF assistance are being maintained in public outdoor recreation use. This section of the Act assures that once an area has been funded with L&WCF assistance, it is continually maintained in public recreation use unless NPS approves substitution property of reasonably equivalent usefulness and location and of at least equal fair market value.

(b) *Prerequisites for conversion approval.* Requests from the project sponsor for permission to convert L&WCF assisted properties in whole or in part to other than public outdoor recreation uses must be submitted by the State Liaison Officer to the appropriate NPS Regional Director in writing. NPS will consider conversion requests if the following prerequisites have been met:

(1) All practical alternatives to the proposed conversion have been evaluated;

(2) The fair market value of the property to be converted has been established and the property proposed for substitution is of at least equal fair market value as established by an approved appraisal (prepared in accordance with uniform Federal appraisal standards) excluding the value of structures or facilities that will not serve a recreation purpose.

(3) The property proposed for replacement is of reasonably equivalent usefulness and location as that being converted. Dependent upon the situation and at the discretion of the Regional Director, the replacement property need not provide identical recreation experiences or be located at the same site, provided it is in a reasonably equivalent location. Generally, the replacement property should be administered by the same political jurisdiction as the converted property. NPS will consider State requests to change the project sponsor when it is determined that a different political jurisdiction can better carry out the objectives of the original project agreement. Equivalent usefulness and location will be determined based on the following criteria:

(i) Property to be converted must be evaluated in order to determine what recreation needs are being fulfilled by the facilities which exist and the types of outdoor recreation resources and opportunities available. The property being proposed for substitution must then be evaluated in a similar manner to determine if it will meet recreation needs which are at least like in magnitude and impact to the user community as the converted site. This criterion is applicable in the consideration of all conversion requests with the exception of those where wetlands are proposed as replacement property. Wetland areas and interests therein

which have been identified in the wetlands provisions of the Statewide Comprehensive Outdoor Recreation Plan shall be considered to be of reasonably equivalent usefulness with the property proposed for conversion regardless of the nature of the property proposed for conversion.

(ii) Replacement property need not necessarily be directly adjacent to or close by the converted site. This policy provides the administrative flexibility to determine location recognizing that the property should meet existing public outdoor recreation needs. While generally this will involve the selection of a site serving the same community(ies) or area as the converted site, there may be exceptions. For example, if property being converted is in an area undergoing major demographic change and the area has no existing or anticipated future need for outdoor recreation, then the project sponsor should seek to locate the substitute area in another location within the jurisdiction. Should a local project sponsor be unable to replace converted property, the State would be responsible, as the primary recipient of Federal assistance, for assuring compliance with these regulations and the substitution of replacement property.

(iii) The acquisition of one parcel of land may be used in satisfaction of several approved conversions.

(4) The property proposed for substitution meets the eligibility requirements for L&WCF assisted acquisition. The replacement property must constitute or be part of a viable recreation area. Unless *each* of the following additional conditions is met, land currently in public ownership, including that which is owned by another public agency, may not be used as replacement land for land acquired as part of an L&WCF project:

(i) The land was not acquired by the sponsor or selling agency for recreation.

(ii) The land has not been dedicated or managed for recreational purposes while in public ownership.

(iii) No Federal assistance was provided in the original acquisition unless the assistance was provided under a program expressly authorized to match or supplement L&WCF assistance.

(iv) Where the project sponsor acquires the land from another public agency, the selling agency must be required by law to receive payment for the land so acquired.

In the case of development projects for which the State match was not derived from the cost of the purchase or value of a donation of the land to be converted, but from the value of the development itself, public land which has not been dedicated or managed for recreation/conservation use may be used as replacement land even if this land is transferred from one public agency to another without cost.

(5) In the case of assisted sites which are partially rather than wholly converted, the impact of the converted portion on the remainder shall be considered. If such a conversion is approved, the unconverted area must remain recreationally viable or be replaced as well.

(6) All necessary coordination with other Federal agencies has been satisfactorily accomplished including, for example, compliance with section 4(f) of the Department of Transportation Act of 1966.

(7) The guidelines for environmental evaluation have been satisfactorily completed and considered by NPS during its review of the proposed 6(f)(3) action. In cases where the proposed conversion arises from another Federal action, final review of the State's proposal shall not occur until the NPS Regional office is assured that all environmental review requirements related to that other action have been met.

(8) State intergovernmental clearinghouse review procedures have been adhered to if the proposed conversion and substitution constitute significant changes to the original Land and Water Conservation Fund project.

(9) The proposed conversion and substitution are in accord with the Statewide Comprehensive Outdoor Recreation Plan (SCORP) and/or equivalent recreation plans.

(c) *Amendments for conversion.* All conversions require amendments to the original project agreements. Therefore, amendment requests should be submitted concurrently with conversion requests or at such time as all details of the conversion have been worked out

R55-30 CONT'D

2. Response to Comments

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with NPS. Section 6(f)(3) project boundary maps shall be submitted with the amendment request to identify the changes to the original area caused by the proposed conversion and to establish a new project area pursuant to the substitution. Once the conversion has been approved, replacement property should be immediately acquired. Exceptions to this rule would occur only when it is not possible for replacement property to be identified prior to the State's request for a conversion. In such cases, an express commitment to satisfy section 6(f)(3) substitution requirements within a specified period, normally not to exceed one year following conversion approval, must be received from the State. This commitment will be in the form of an amendment to the grant agreement.

(d) *Obsolete facilities.* Recipients are not required to continue operation of a particular facility beyond its useful life. However, when a facility is declared obsolete, the site must nonetheless be maintained for public outdoor recreation following discontinuance of the assisted facility. Failure to so maintain is considered to be a conversion. Requests regarding changes from a L&WCF funded facility to another otherwise eligible facility at the same site that significantly contravene the original plans for the area must be made in writing to the Regional Director. NPS approval must be obtained prior to the occurrence of the change. NPS approval is not necessarily required, however, for each and every facility use change. Rather, a project area should be viewed in the context of overall use and should be monitored in this context. A change from a baseball field to a football field, for example, would not require NPS approval. A change from a swimming pool with substantial recreational development to a less intense area of limited development such as a passive park, or vice versa, would, however, require NPS review and approval. To assure that facility changes do not significantly contravene the original project agreement, NPS shall be notified by the State of *all* proposed changes in advance of their occurrence. A primary NPS consideration in the review of requests for changes in use will be the consistency of the proposal with the Statewide Comprehensive Outdoor Recreation Plan and/or equivalent recreation plans. Changes to other than public outdoor recreation use require NPS approval and the substitution of replacement land in accordance with section 6(f)(3) of the L&WCF Act and paragraphs (a) through (c) of this section.

[51 FR 34184, Sept. 25, 1986, as amended at 52 FR 22747, June 15, 1987]

§59.4 Residency requirements.

(a) *Background.* Section 6(f)(8) of the L&WCF Act prohibits discrimination on the basis of residence, including preferential reservation or membership systems, except to the extent that reasonable differences in admission and other fees may be maintained on such basis. This prohibition applies to both regularly scheduled and special events. The general provisions regarding nondiscrimination at sites assisted under Interior programs and, thereby, all other recreation facilities managed by a project sponsor, are covered in 43 CFR part 17 which implements the provisions of Title VI of the Civil Rights Act of 1964 for the Department.

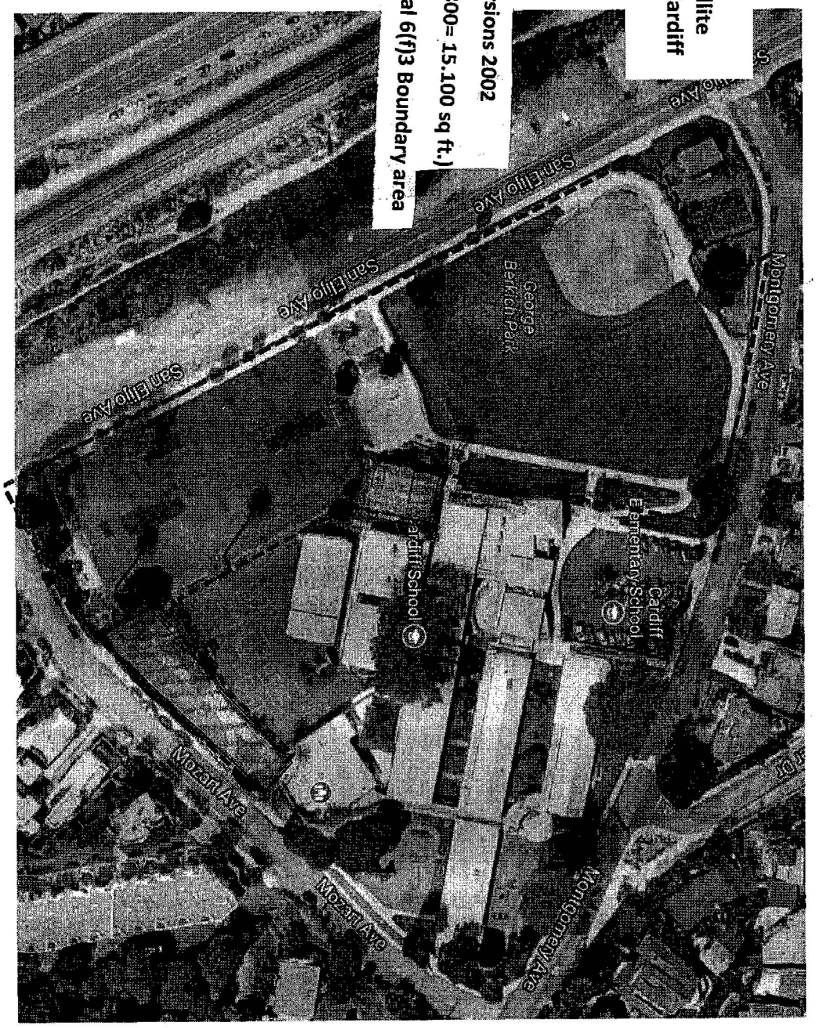
(b) *Policy.* There shall be no discrimination for L&WCF assisted programs and services on the basis of residence, except in reasonable fee differentials. Post-completion compliance responsibilities of the recipient should continue to ensure that discrimination on the basis of residency is not occurring.

(c) *Fees.* Fees charged to nonresidents cannot exceed twice that charged to residents. Where there is no charge for residents but a fee is charged to nonresidents, nonresident fees cannot exceed fees charged for residents at comparable State or local public facilities. Reservation, membership, or annual permit systems available to residents must also be available to nonresidents and the period of availability must be the same for both residents and nonresidents. Recipients are prohibited from providing residents the option of purchasing annual or daily permits while at the same time restricting nonresidents to the purchase of annual permits only. These provisions apply only to the approved 6(f)(3) areas applicable to the recipient. Nonresident

2. Response to Comments

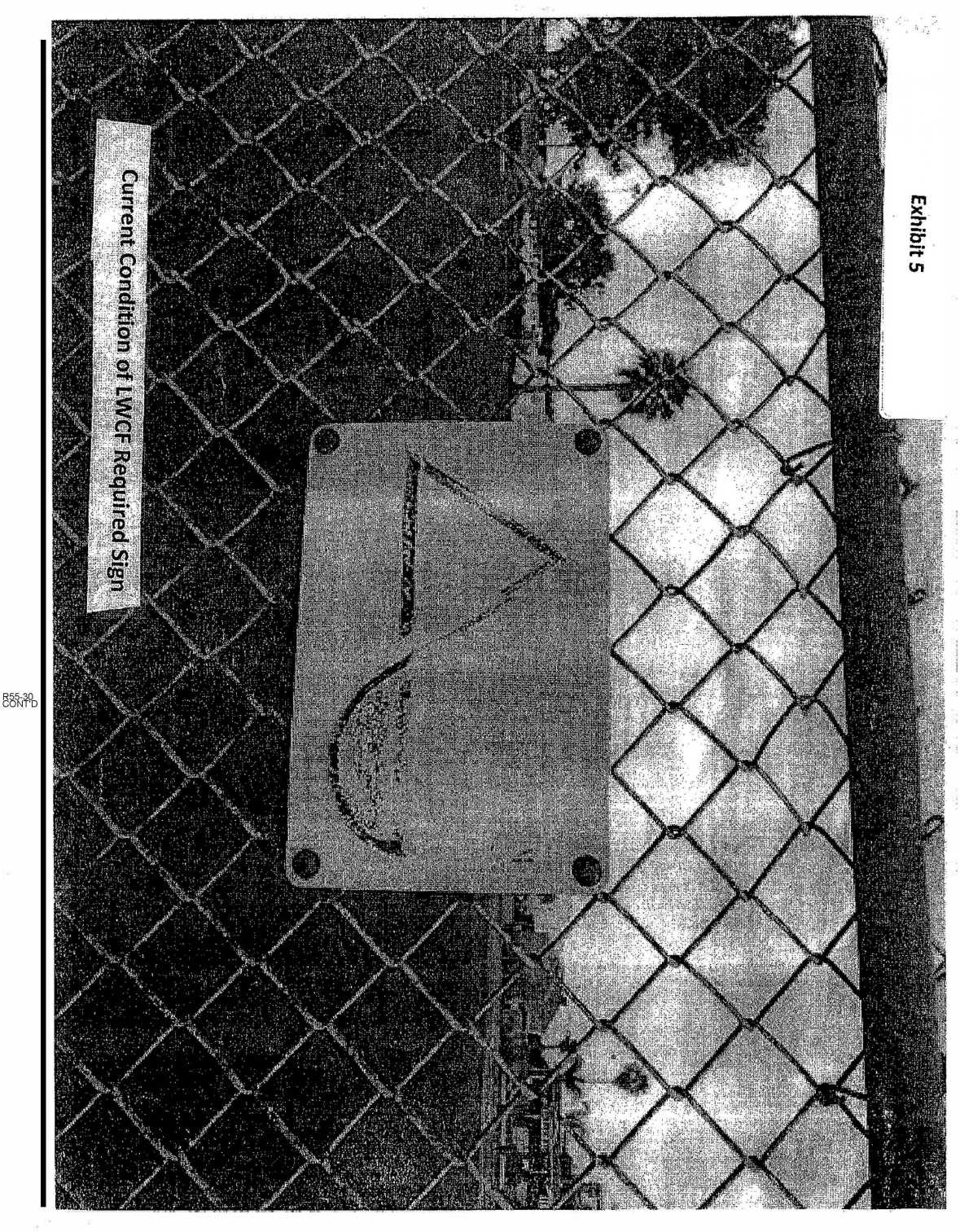
R55-30
CONT'D

Exhibit 4

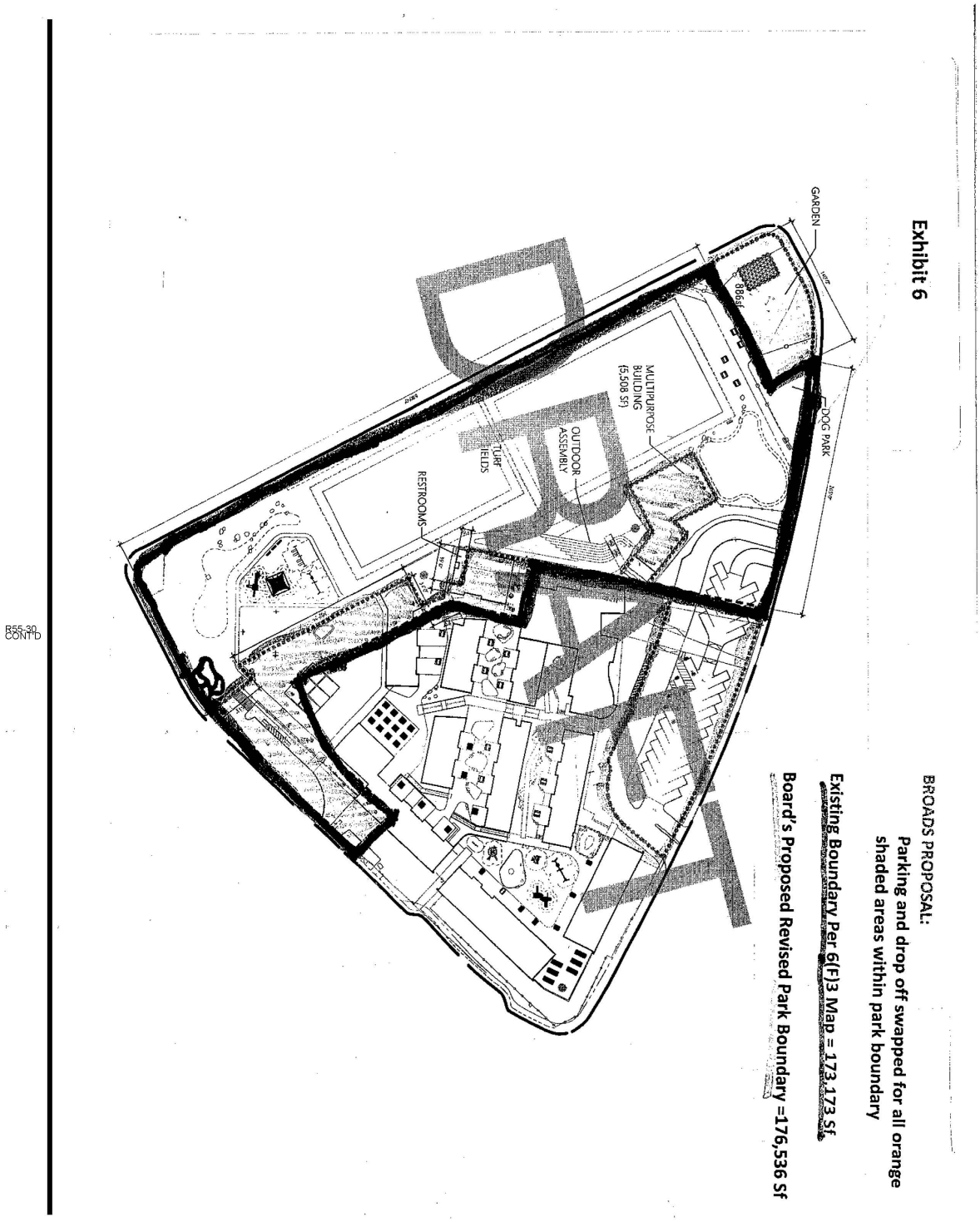


2. Response to Comments

R55-30
CONT'D



2. Response to Comments



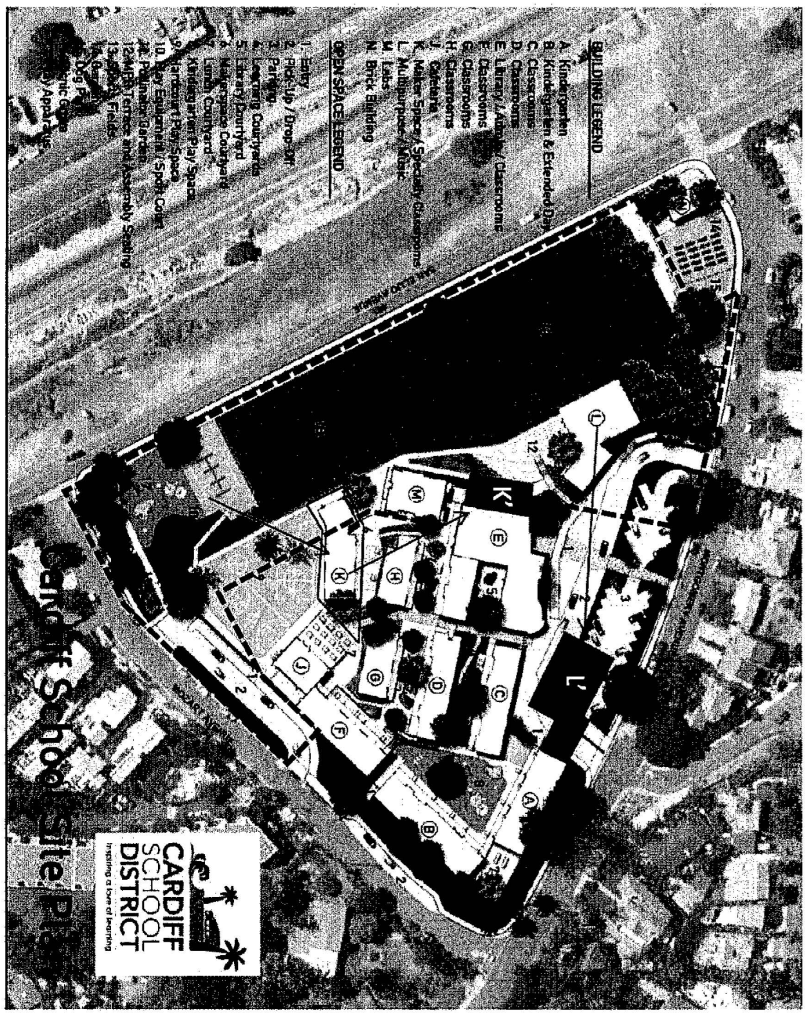
2. Response to Comments

R55.30
CONT'D

Exhibit 7

6(f)(3) boundary overlaid onto alternative Layout proposed by architect/community member Brett Farrow (5/31/18)

Prime (') indicates proposed relocation from school's layout



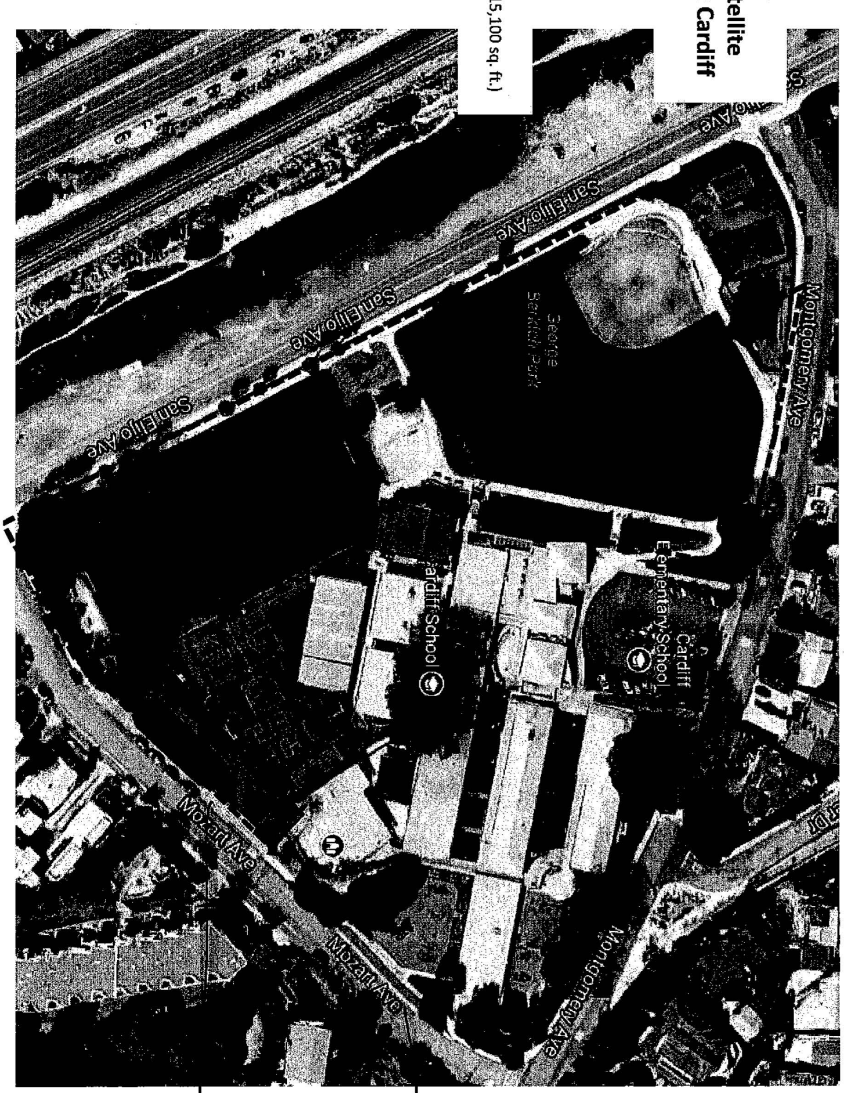
2. Response to Comments

R55-30
CONT'D

Exhibit 8a

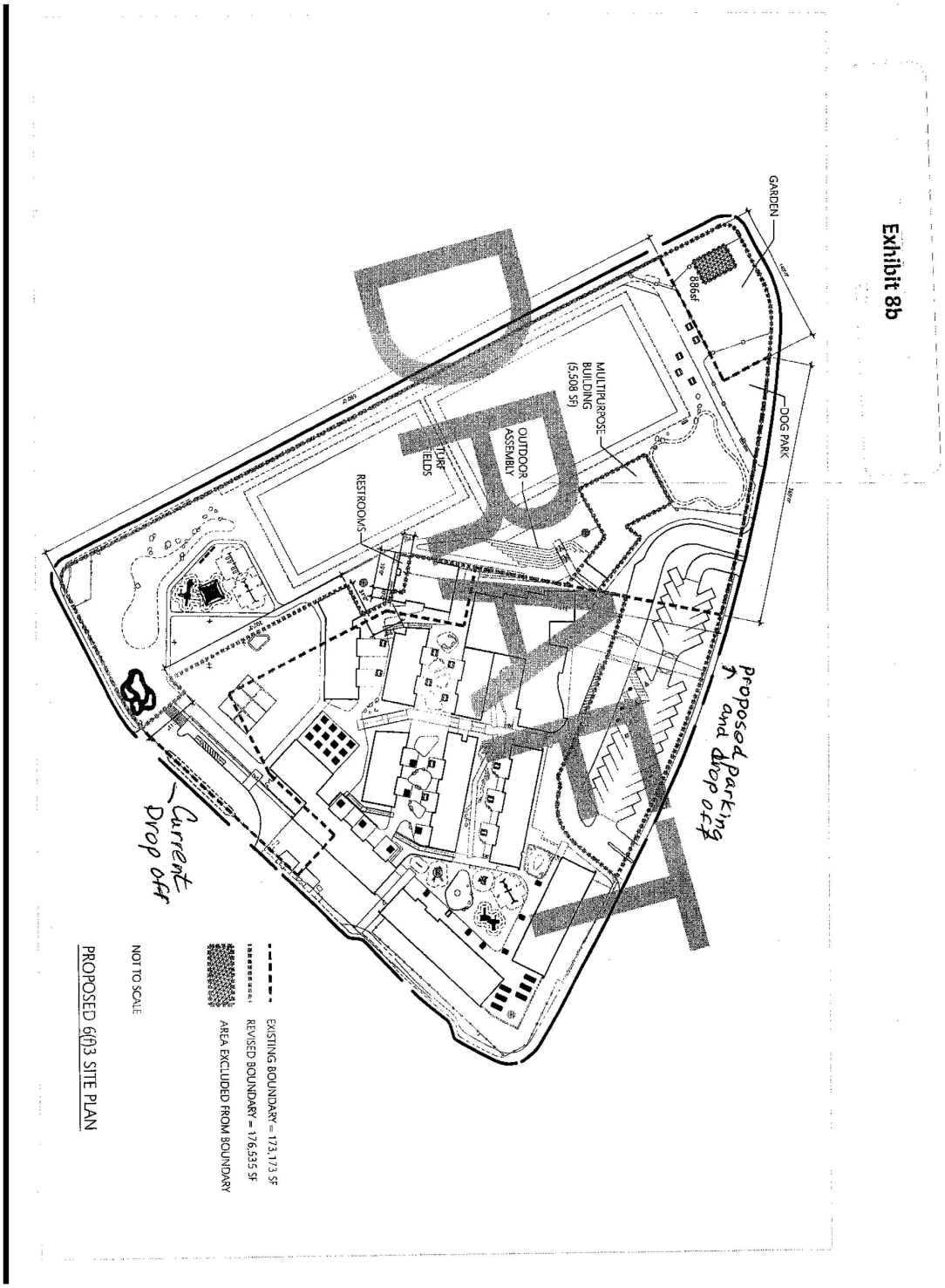
6(f)(3) boundary overlaid onto satellite image of current Cardiff School layout

(~10,300 + 4,800 = 15,100 sq. ft.)
= 9.9%



2. Response to Comments

R55-30
CONT'D



R55. Response to Comments from Tricia Smith, dated November 19, 2018.

R55-1 The commenter states that the DEIR cannot be certified because it does not address the District's compliance with the LWCF Agreement, which requires a NEPA analysis. The commenter states that the District claims it does not have to address compliance with the LWCF Agreement because the conversion is insignificant based on the Initial Study.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The project consistency with the LWCF Agreement was addressed in Impact 5.8-2 of the DEIR, and was not written off in the Initial Study. For the purposes of analyzing project consistency with the National Parks System Proposal Description and Environmental Screening Form requirements and determining the level of NEPA analysis that would be required as part of the proposed conversion, the project improvements were compared to parts A and B of the Environmental Screening Form, as shown in Tables 5.8-3 and 5.8-4 in Section 5.8 of the DEIR. As provided, with implementation of mitigation measures (as identified in their respective sections of the DEIR), the project would result in less than significant impacts. The proposed improvements would not exceed "minor impacts" or require further studies to determine their significance, and preparation of an EIS or EA would not be required.

R55-2 The commenter states that the City of Encinitas and the District signed the LWCF Agreement, which allows for some conversion of park land if a new replacement of park land, that is equal in value, size, usefulness, appeal, and view is purchased by the District for the public. The commenter states that the District's conversions have not been approved by the National Park Service and State Parks.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-3 The commenter states that the DEIR, page 1-1, wrongfully assumes that the District has discretionary approval authority to label the compliance issues raised by the LWCF Agreement as insignificant. The commenter states that the conversion would impact a significant portion of the park by constructing a parking lot onto park lands, and that the teaching gardens would be removed. The commenter asserts that the proposed design of the playfield creates narrow, oddly shaped, and isolated areas that are unsafe and not usable.

2. Response to Comments

The District Board of Education has discretionary approval authority of the EIR and the project. The conditions of the land grant are identified in an agreement with the National Park Service that identifies both the Cardiff School District and the City of Encinitas as co-signatories. The District is the lead agency for the Draft EIR and has authority to make determinations as to the level of environmental impact based on the proposed improvements. The District, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on City technical personnel from other departments and review of all technical subconsultant reports. See response to comment R19-1. As provided in Impact 5.8-2 (pages 5.8-10 through 5.8-18), the proposed improvements would not exceed "minor impacts" that would trigger preparation of an EIS or EA, and would not require further studies to determine their significance; therefore, the project would not conflict with the LWCF Act.

The commenter is incorrect in that the proposed improvements do not include teaching gardens. Cardiff School will still maintain its teaching gardens program while working closely with the community to implement a community garden program within the same garden area. In addition, the project includes an outdoor assembly area that would be used to provide outdoor educational instruction and activities related to outdoor gardening.

The commenter's assertion that the field improvements would become unusable and less safe is an opinion not supported with evidence. The existing play structure that bisects the two fields and restricts supervision of the fields would be relocated to the south side of the site, near the intersection of San Elijo Avenue and Mozart Avenue; therefore, line of sight for supervisors during play periods would be improved. Additionally, the field space would be able to accommodate two contiguous soccer fields or an increased number of smaller fields oriented perpendicular to the proposed arrangement. The fields are currently only used by one organized league comprised of small children and the coach of that league has indicated support for the District's plan.

R55-4 The commenter indicates that the DEIR does not address the illegal park land conversion that took place, approximately, in 2002–3.

Discussion of the LWCF boundary and improvements in the early 2000s is discussed in Section 3.5, *Land and Water Conservation Fund*, and Section 5.8.1.2, *Existing Conditions*, in the DEIR. The baseline of the DEIR assumes existing conditions, which includes the existing buildings being in conflict with the 6(f)(3) boundary as a result of the improvements conducted in the early 2000s. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-5 The commenter provides background information about Cardiff School and the park, and states that the City of Encinitas and the District signed the LWCF Agreement in 1993 to preserve the park in perpetuity. The commenter states that the District cannot void or change the agreement by refunding the grant money and must perform the terms of the Agreement (included by the commenter as Exhibit 2).

The District would not conflict with the agreement, which states that the area within the 6(f)(3) boundary map would be used for open space in perpetuity. Although the portion of the parking lot proposed within the 6(f)(3) boundary is technically not open space, it would be available for users of the park and would be considered part of the utility of recreational space within the boundary area. The District is not proposing to refund money used as part of the original grant. As thoroughly discussed herein, the District has committed to complying with the terms of the original grant agreement and has proposed a modified boundary map that will bring the District and City back into compliance with all such terms.

R55-6 The commenter states that the District is bound by five levels of regulations which provide requirements on protecting the park. The commenter states that the DEIR fails to consider the five levels of regulations and fails to apply them to the proposed conversion.

The commenter lists the five levels of environmental regulations. They are followed by their respective relationship to the analysis of the DEIR.

1. **The LWCF Agreement.** The project was analyzed for its impacts to the LWCF agreement is in Chapter 3, *Environmental Setting*, Chapter 4, *Project Description*, and Section 5.8, *Land Use and Planning*, of the DEIR. As provided in Impact 5.8-2 of the DEIR, the project would result in a less than significant impact to the LWCF agreement.

2. **The Stewardship Guides and Grants in Aid Manual.** This manual establishes the process whereby OGALS facilitates review of proposed conversion. As included in Table 4-3 of the DEIR, the California State Parks Office of Grants and Local Services would facilitate the process for the National Park Service to review and approve the 6(f)(3) boundary conversion.

3. **The State Parks Regulations under Office of Grants and Local Services (OGALS).** It is not clear which regulations the commenter is referring to. As included in Table 4-3 of the DEIR, the California State Parks Office of Grants and Local Services would facilitate the process for the National Park Service to approve the 6(f)(3) boundary changes.

4. **The Federal National Parks Services (NPS) Code Section 59.3.** See response to R41-3, which discusses the process for development of the 6(f)(3) boundary conversion layout. The multipurpose building has been omitted from the 6(f)(3) boundary because it would not comply with the requirements in the Code of Federal Regulations, Section 59.3, Conversion Requirements, as they relate to its public recreational utility. Because the proposed parking lot would be used for the play area and would provide for an increase in available parking for the park, it is considered to be within the LWCF definition of land of equivalent usefulness and location (36 CFR Section 59.3).

5. **National Environmental Policy Act (NEPA) FHWA Policy 23 CFR Section 771.105.** Contrary to the comment, this section of code states that "to the fullest extent possible, all environmental investigation, reviews, and consultations be coordinated as a single process with all applicable environmental requirements be reflected in the environmental review document required by this regulation." Prior to the acceptance of the conversion, NPS requires approval of the CEQA document, which has analyzed the project impacts in consideration of environmental requirements within the purview of CEQA. Upon certification of the EIR, the NPS has stated that they will consider the proposed conversion. OGALS has stated the project would qualify for a Categorical Exclusion, and NPS reinforced this position in its preliminary review, meaning the project would not require a full NEPA analysis.

R55-7 The commenter states that the five levels of regulations require the District to obtain approval for the proposed construction on the 6(f)(3) boundary from OGALS, the National Park Service, and the City. The commenter states that the District has not obtained approvals from any of these agencies.

The District has worked with the community and OGALS to determine the best method of meeting the needs of the community while honoring the LWCF agreement. As described in Master Response 2.1, the District is following the specific direction of OGALS in the preparation of a conversion for approval by OGALS and NPS. The District has kept the City of Encinitas staff informed throughout the CEQA process and during development of the proposed conversion, which has been developed in conjunction with the overall project analyzed by this EIR. As described herein and the Draft EIR, no property, funding or other consideration for the proposed Project will be required from the City. The District understands from OGALS that since the City is co-signatory to the original grant agreement, they will be required to sign an amendment to the original grant agreement and a revised 6(f)3 boundary map that will be generated at the conclusion of the NPS process in order to regain compliance. The City has been informed of this requirement by both the District and OGALS. The proposed

conversion occurs entirely on District property in support of the school's educational program and student safety and security. Furthermore, it does not require the use of any City property and/or other facilities. During the process the District had asked the City if it would be able to provide additional land to be considered as part of the conversion and the said no.

The City did not submit any comments on the Draft EIR. In addition, the City has not submitted any formal comments in opposition to the project and proposed modified boundary map during the planning process, nor has the City formally communicated opposition to the District's plan to enrich the educational programs at the existing school and provide a safer and more secure campus for students. Final District and City sign-off of the amendment to the agreement at the conclusion of the NPS review process will bring both the City and District back into compliance with the terms of the LWCF grant agreement.

R55-8 The commenter states that the DEIR does not address the guiding question about the public park experience, public outdoor recreation, or viewsheds presented in the LWCF Manual. The commenter opines that the District's proposed conversion does not improve the public's recreation experience.

The commenter is entitled to their opinion on the public park experience and the LWCF Manual. However, as thoroughly described in Master Response 2.1, the proposed modifications to the LWCF boundary map are subject to review and approval by OGALS and NPS, not any individual commenter. As discussed in the Master Response, the original grant agreement and the proposed modified LWCF boundary map being reviewed by OGALS/NPS are not environmental impacts or CEQA issues; therefore, they are not directly explored within the DEIR. Contrary to the opinion of the commenter, as documented in the DEIR and herein, the proposed Project would provide significant new and modernized outdoor and other recreational facilities that would enhance the entire school site (see Chapter 4, *Project Description*, of the DEIR)—the existing baseball dirt infield would be removed and two natural turf soccer fields would be installed along San Elijo Avenue; the existing play structure that bisects the two fields and restricts supervision of the fields would be relocated to the south side of the site, near the intersection of San Elijo Avenue and Mozart Avenue, and would include a jungle gym and other play equipment; picnic areas would be provided at both the north and south ends of the play field areas; the school garden would become a shared garden with the community; an outdoor concrete plaza would be located adjacent to the field areas; and concrete spectator seating would be provided adjacent to the soccer fields. Thus, the project would provide significant new recreational facilities and, in effect, enhance the recreational experience of any public users who may access the outdoor recreational spaces that are made available for public use when not in use by for educational purposes.

See response to R17-1. Viewsheds are analyzed in Section 5.1 of the DEIR. Although private views are not protected, the project would not result in a significant impact to public views of scenic vistas, including the Pacific Ocean (see pages 5.1-15 through 5.1-21 of the DEIR).

R55-9 The commenter references Impact 5.8-2, of the DEIR, and states that the DEIR does not explain how the proposed parking lot and multipurpose building would not conflict with the open space.

The realignment of the 6(f)(3) boundary is proposed in response to recognition that the modernization improvements conducted in the early 2000s were not in compliance with the LWCF alignment. As described in the Master Response, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval. The new 6(f)(3) boundary would be outside of building footprints on the project site (see Figure 4-6, *Proposed 6(f)(3) Boundary,* of the DEIR) and would result in an increase in 2,047 square feet of area within the boundary. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The parking lot would be for users of the park and is considered to provide recreational utility in accordance with the LWCF Act requirements. The community will continue to use the multipurpose building and its new location, which is immediately accessible from the parking lot and public streets as well as adjacent to the field areas and will be an enhancement to the community.

R55-10 The commenter states that the improvements listed in Impact 5.8-2, such as grass on the baseball field and the relocation of the play equipment, could be accomplished independently of the construction plans on the park.

The commenter is correct in that the field improvements could be conducted independently of the proposed building improvements. However, this would be in conflict with the LWCF agreement, as the buildings are currently in conflict. Therefore, to make improvements to the site, the 6(f)(3) boundary would need to be reconfigured regardless.

R55-11 The commenter states that the DEIR ignores important facts in regard to the District's compliance issues with the LWCF Agreement, and provides six instances. The commenter also states that the City Council does not support the District's project proposal and that the DEIR Summary of Public Comments does not adequately address the breadth and depth of public comments.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site and the District coordination with OGALS. Also please see Master Response in Section 2.2 of this FEIR, which addresses the site design process conducted for the project. The comments provided are directed at the history of the District's compliance with the LWCF Agreement and opinion; these comments are not within the purview of CEQA.

The District has not received any notification from the City Council citing an official position in opposition to the District's proposal designed to regain and maintain compliance with the LWCF agreement on behalf of both the City and the District nor has the District received any communication from the City identifying the commenter as a representative of the City and able to officially speak on its behalf.

Additionally, the commenter does not cite a specific example of how the DEIR does not adequately respond to comments. Copies of the written comments on the NOP are included in Appendix 2-1 of the DEIR. Four agencies submitted written responses and 31 public comment letters were received during the NOP review period. Agency comments are summarized in Table 2-1, *Agency Responses*; references to the EIR sections where the raised issue is addressed are included. Table 2-2, *Public Comments*, summarize the issues submitted in writing by the public. The Draft EIR addressed the issues brought about by members of the public that commented on the project during the NOP public review period.

R55-12 The commenter states that the District provided misleading information to OGALS about the student enrollment. The commenter states that the number of students attending Cardiff School would decrease if the District moves the 3rd grade to Ada Harris School, and therefore, the proposed Project should be scaled to the younger student population at Cardiff School. The commenter states that Cardiff School is not anticipating growth, and that the District does not have the money to construct two classrooms, which are reasons the school footprint does not need to be increased.

The City of Encinitas is currently working on a housing plan that could increase enrollment at some point in the future. The District's plan for the current Project allows for increases in density as well as provides the District with flexibility in responding to fluctuations in enrollment at various grade levels.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-13 The commenter states that the new parking lot would be approximately the same as the current parking lot, and that the pick-up/drop-off lane would not deal with the pick-

up/drop-off problem during those times. The commenter states that no enhancement to the outdoor recreation area would occur.

As stated on Page 5.10-44 of the Draft EIR, "The proposed Project would reconfigure and expand the existing onsite loading area on Montgomery Avenue from approximately 80 feet to 250 feet in length. The one-way, student-loading loop from west to east would allow vehicles to access the new parking lot or exit the loop via the easternmost driveway and would increase loading area for onsite vehicle queuing. The driveway would allow for the safe curbside pick-up and drop-off of students and accommodate required fire department truck access. Additionally, approximately 280 feet of offsite curbside loading would be available on Montgomery Avenue north of the onsite loading area. The project increase in loading space would reduce loading queues and reduce traffic hazards from passenger loading. Existing loading on Mozart Avenue would remain unchanged."

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-14 The commenter states that DEIR failed to consider the impacts of creating a pick-up/drop-off lane within close proximity to the classrooms, where idling cars would release exhaust. The commenter states that, per the LWCF Guidelines, the District cannot use existing spaces that have already been developed as part of the replacement property requirement for park land conversions.

The Draft EIR evaluates the potential for CO hot spots near the proposed Project on page 5.2-19, concluding that there is insufficient project traffic to result in a hot spot. Table 5.2-8, *Regional Operational Emissions*, on page 5.2-18 of the Draft EIR, shows that the maximum emissions of the proposed Project are below the threshold of significance for San Diego County.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-15 The commenter states that the current parking lot is more than adequate for the park, and that there is ample street parking. The commenter states that the park would not benefit from an enlarged parking lot, and that the proposed parking lot does not improve park accessibility.

The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required.

R55-16 The commenter states that the park is used by the entire community throughout the week and during holidays, and that the park is an important part of the Cardiff community character.

The comment does not address the adequacy of the EIR; therefore, the comment is noted and no further response is required. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-17 The commenter states that none of the proposed changes to the 6(f)(3) boundary are needed, and that the current multipurpose building could be modernized and enlarged instead of replaced. The commenter states that the Cardiff School does not need a larger space since the District stated that the student enrollment will decrease.

The District and its consultants have considered the potential of expanding the existing multipurpose building in its current location and have determined that it did not make economic sense nor did it meet the needs of the educational program or provide for the appropriate level of safety and security of students. The current facility is not large enough to accommodate existing educational programs for the current enrollment. The facility is not large enough to accommodate all students at one time, necessitating that the District duplicate programs. Furthermore, the District is not able to ascertain to what extent the density increases being considered by the City of Encinitas to its housing plan will increase future enrollment. The City's plan to increase zoning will exacerbate the current situation.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-18 The commenter states that the students should not have to share their teaching garden, Scrumptious Schoolyard garden, with the public. The commenter states that, per the LWCF Guidelines, the District cannot use existing open space or garden that is already developed as part of the replacement land.

The District is utilizing the resources legally available to it to regain and maintain compliance with the LWCF agreement on behalf of both the District and the City. The school garden is not currently available for public use. Having it available for public use makes it eligible for conversion land. Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-19 The commenter states that the proposed multipurpose building would block the public and homeowners' viewshed into the park and to the ocean.

As discussed in Section 5.1, *Aesthetics*, of the DEIR, the multipurpose building would be approximately 21.25 feet in height. Although private views are not protected, the project would not result in a significant impact to public views of scenic vistas, including the Pacific Ocean (see pages 5.1-15 through 5.1-21 of the DEIR). Additionally, the ground level of the proposed multipurpose building (referred to as Building L in Figure 4-2 of the DEIR) would be approximately 9 feet below the existing administrative building (Building E). As a result, the top of the new Building L would appear to be approximately 2 feet below the existing administrative building (see page 5.1-22 of the DEIR).

R55-20 The commenter states that the District claims that the park conversion is necessary in order to provide an enhanced educational experience for the students. The commenter opines that the current buildings provide a superior learning environment, and that the park land does not need to be encroached on.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. The new proposed buildings would be constructed to meet current building codes with new facilities; therefore, objectively, the project would provide an improved learning environment compared to existing conditions. See also Master Response 2.2.

R55-21 The commenter states that there would be significant impacts to the park if the District constructs the multipurpose building, parking lot, and reconfigured drop-off/pick-up lanes. The commenter states that the community's recreational use and quality of life would be impacted. The commenter states that the drop-off/pick-up lanes would not enhance the outdoor recreational experience and would not solve congestion problems.

See response to comment R55-13.

R55-22 The commenter states that placing the drop-off/pick-up lanes in close proximity to the classrooms would cause health risks.

Air quality impacts, including health risk, is discussed on Page 5.2-14 of the Draft EIR. The EIR concludes that the emissions from project vehicles would not result in a health risk.

R55-23 The commenter states that the multipurpose building, which would be used by the school and for occasional community events, such as voting, would take open space and impact the outdoor recreational experience of the public.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact

any existing or future public recreational uses of the site when not needed for school purposes.

R55-24 The commenter states that the school's teaching garden is already an established outdoor space and does not meet the LWCF Agreement requirements for new outdoor space.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-25 The commenter states that the park conversion is over 20 percent, which includes the prior conversions in 2002–3 and the proposed conversion; thus, the District must comply with the LWCF Agreement.

Please see Master Response in Section 2.1 of this FEIR.

R55-26 The commenter provides three alternatives to the proposed Project. Alternative one would place the proposed multipurpose building outside the 6(f)(3) boundary area and leave the drop-off/pick-up lanes as is. The commenter states that when this alternative was proposed by the community, the District did not consider it, nor did the DEIR propose this as an alternative.

The commenter's statement is inaccurate. After reviewing the proposed alternative, the District replied in writing to the person who submitted the alternative. The proposer may have not been able to fully understand the complexities of this project type, its program needs, or the site constraints. The alternative layout proposed would compromise student safety and security and would not meet the school's program adjacency requirements. It would not increase the amount of school field area and could be more expensive to construct. In addition, the alternative layout also located a building within the 6(f)3 boundary. This is further explained below.

The alternative layout's proposed location for Building K is in an area with a grade change of approximately 8 feet. Locating Building K at the same level as the field areas would require an 8-foot-tall retaining wall along its eastern edge, and the foundation along the west wall of Building E would need to be modified in order to make certain its structural integrity was not compromised. All of this is quite expensive to construct. Locating Building K at the same level as Building E could be achieved in two ways. One option would be to raise the grade in this area by 8 feet. This would need to occur for both the building and its adjacent walkway and patio area used for outdoor instruction and experiments. The grade would then slope down to the field areas. The result would be an encroachment into the flat field areas. The second option would be to construct an 8-foot-tall retaining wall around the entire area to support the building and exterior walkway and patio used for outdoor instruction and experiments. Both options

are quite expensive. In addition, locating this building here isolates these programs and the students using them from the core instructional areas of the campus.

Flipping the multipurpose building with the requisite parking would not reduce the site area required to accommodate both program areas. The parking and pick-up areas would still be required. In addition, moving the location of the multipurpose building could just result in shifting the concern related to impairing views to other structures, and since the proposed location is at a higher elevation than the existing school buildings, it may have the potential to block more views. This location also creates many program adjacency concerns for the school.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

Not all alternatives studied are required to be included in the DEIR.

R55-27 The second alternative proposed by the commenter states that the superintendent's administrative office could be relocated to Ada Harris or off-campus, which would provide additional square footage without needing to encroach on the park. The commenter states that this alternative was suggested, but was not mentioned as an alternative in the DEIR.

The District does not have funds allocated to remodel District offices into classroom spaces and to construct new District office space at a different location. The alternative layout mentioned by the commenter proposed the addition of square footage along the western edge of the current administration building in addition to converting the District offices. This proposed layout locates the addition within the 6(f)3, which is in direct opposition to the commenter's position of not encroaching into the 6(f)3 boundary.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

R55-28 The commenter suggests that the District not build the multipurpose building but expand and modernize the existing multipurpose building, which would cost less. The commenter believes that if the multipurpose building was not structurally or earthquake sound, the District would have used engineering reports to bolster the argument to reconstruct the building. The commenter states that remodeling the existing multipurpose building has been proposed to the District, but that the District dismissed this alternative.

The existing multipurpose building is too small to accommodate the school's educational program and is within the secured perimeter of the campus, which could compromise student safety. Currently, the school is unable to conduct programs for all students to attend at the same time and therefore must conduct the same program multiple times. A new multipurpose building would accommodate all students at once. The public uses the multipurpose building frequently. Sometimes this must occur during school hours, such as when it is used for voting. The building is within the secured perimeter of the campus so when this occurs the public has access to the secured area of the school. This compromises the security of the campus site and places student safety at risk. Building a larger multipurpose building in a location that can be secured independent of the classroom core will accommodate the educational program and enhance student security.

It was determined through the District's lengthy bond planning process that the multipurpose building should be replaced. Measure GG states, "Construct a new multipurpose room and warming kitchen to replace the current 55 year old building." This was confirmed during community workshops at the beginning of the design process. It was further determined that the multipurpose building should be located outside of the secured classroom core in order to provide increased security for the school and its students.

R55-29 The commenter states that the DEIR does not address the District's compliance with the LWCF Agreement, and therefore does not meet criteria for certification, as it does not address the environmental standards of the National Park Service and OGALS.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. Additionally, the project impacts to the LWCF conversion are addressed in Impact 5.8-2 of the DEIR, which determined that preparation of an Environmental Assessment or Environmental Impact Statement would not be required, and a less than significant impact to the LWCF agreement would occur.

R55-30 The commenter provides several exhibits, including 6(f)(3) boundary maps, the LWCF Agreement, and the National Park Service Code, Section 59.3, requirements.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site.

2. Response to Comments

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LETTER R56 – Shad Thielman (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Education v. Open Spaces

2 messages

Shad Thielman [redacted] Mon, Nov 19, 2018 at 3:19 PM
To: CardiffDEIR@cardiffschools.com

Hello,

R56-1 In contrast to what certain parties contend, the proposed design for the Cardiff Elementary remodel does not impose upon nor negate Berkich Park. In fact, the most recent design largely considers open spaces and ensures that Berkich Park and the adjoining dog park will remain. We have an abundance of open spaces in the Encinitas/Cardiff area. Much more so than many suburban areas throughout the state or county, and certainly more than urban areas. Yet, we continue to thwart construction that was elected by the public. Also, we live in a district that can raise 100K - 200K annually for the benefit of the students, however, we allow them to attend school in a building that is equipped with outdated facilities and inadequate space. In addition, the current proposal will also curtail current traffic congestion that takes place during the hours of drop off/ pick up. Considering these facts, the environmental impact of the Cardiff Elementary project poses little threat to our open spaces and far less when compared to the impact of current projects (Rail Trail), or proposed projects (Streetscape) which the current city council and mayor support. The children of Cardiff who receive public education should be afforded the privilege to do so within a safe, modern, and adequate environment. Therefore, the construction for the Cardiff Elementary project should move forward as planned and not be stalled by the continued propaganda of local party politics or the fallacies of environmentalists who claim that the open spaces will be lost. The education of the children should be a higher priority.

Best,
ST
Shad Thielman
[redacted]

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 4:48 PM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R56. Response to Comments from Shad Thielman, dated November 19, 2018.

R56-1 The commenter states that the proposed design does not impose on the park, and that it considers open spaces and ensures that the park and dog park would remain. The commenter indicates that the proposed Project would reduce traffic congestion. The commenter states that the proposed Project poses little threat to open spaces compared to other current projects, such as the Rail Trail. The commenter opines that students should receive an education in a safe, modern, and adequate environment.

The comment is supportive of the project and states that the project would have beneficial impacts. Therefore, the comment is noted and no further response is required.

2. Response to Comments

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LETTER R57 – Leslie Tuchman (4 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Save Berkich National Park Land in Cardiff
3 messages

Leslie Goldberg [redacted] Sun, Nov 18, 2018 at 12:50 AM
To: cardiffDEIR@cardiffschools.com, david_siegenthaler@nps.gov, council@encinitasca.gov

I am opposed to the proposed encroachment of Cardiff Elementary School onto public National Park Land. The beautiful open space and unobstructed ocean views are a precious resource for our community that should not be encroached upon. Every evening at sundown, children play on the fields and groups of residents and visitors stand and watch the sunset at Berkich Park (National Park Land). This land should continue to be preserved in perpetuity as the City of Encinitas and the Cardiff School District both had promised and not be encroached upon by parking lots and buildings.

The current school proposal consists of many single story buildings. By just making one of those buildings into a 2 story structure, both National Parkland and school capacity could be maintained.

Lastly, Cardiff School District was alerted to this encroachment onto parkland over a year ago and could have easily altered their designs to save the park. Instead, they chose to ignore constituents and promote a false narrative regarding their rights and ownership of the present day park. Please see email below from Cardiff School District dated October 11, 2017. In the email, they state: "Recently, Cardiff families and community members have received emails, fliers or postcards, or seen social media posts regarding information about the rebuilding of Cardiff School. These communications have originated from a group of neighbors and contain inaccurate graphics and misinformation..... **Who owns George Berkich Park?**
The entire property, consisting of Cardiff School and the adjacent field space known as George Berkich Park, including the dog park, is owned by the Cardiff School District. It is not a City park. The School District opens the fields and play equipment for public use after school hours and on weekends."

In conclusion, I implore you to save our National Park Land in Cardiff, CA. The design of the school could easily be amended to preserve park land. There should be no encroachment onto National Parkland. The City of Encinitas and the Cardiff School District should continue to be uphold their agreement and preserve this outdoor recreation area in perpetuity. R57-1
Sincerely,
Leslie Tuchman MD
[redacted]

---------- Forwarded message ---------
From: **Cardiff School District** <district.news@cardiffschools.com>
Date: Wed, Oct 11, 2017 at 3:31 PM
Subject: Current Information About Cardiff School Rebuild
To: [redacted]

CARDIFF SCHOOLS

Dear Cardiff School District Families,

Recently, Cardiff families and community members have received emails, fliers or postcards, or seen social media posts regarding information about the rebuilding of Cardiff School. These communications have originated from a group of neighbors and contain inaccurate graphics and misinformation. Although the District sent out a detailed update on September 27th regarding our Measure GG progress, we would like to provide you with additional information and clarification. We have prepared answers to some of the questions we have received over the past couple of weeks and would like to share them with you so that everyone is accurately informed about the rebuilding of Cardiff School.

2. Response to Comments

Please know that this is an exciting time for the Cardiff School District and community and we are proud to present a conceptual site plan for Cardiff School that;

1. Prioritizes Students' Educational Programs
2. Increases Student Safety and Security
3. Preserves George Berkich Park – Including Dog Park, Garden and Brick Building
4. Reconfigures Play Fields and Playground for Expanded School Use
5. Improves Traffic Flow

Additional information, including all news releases and presentations can be found on the Cardiff Schools website at https://www.cardiffschools.com/Page/1768

Why is Cardiff School being rebuilt?

Cardiff School District has been educating students for over 100 years. A significant portion of the buildings on the Cardiff School campus are between 55 to 65 years old and need to be replaced or repaired. In the November 2016 election, 65.9% of Cardiff residents voted and passed a $22 million bond, Measure GG, to rebuild, remodel and repair Cardiff School and replace portables with permanent classrooms.

Is George Berkich Park being removed?

No, the park is not being removed. The field space and playground area are being reconfigured to increase security and enhance field use by the school and community. The dog park, garden and brick building are NOT BEING ELIMINATED.

A multipurpose room and a Kindergarten courtyard are being proposed to the northwest of the administration building, which is the main entrance to the school. This will increase security and allow for the the use of North George Berkich Park during the school day. Currently, the baseball field and adjacent grassy area are unused during the school day. Building the Kindergarten classrooms on the northwest side of campus will allow for an adjacent grassy area for the children to run and play, which the current Kindergarten play area lacks.

R57-1 CONT'D

Who owns George Berkich Park?

The entire property, consisting of Cardiff School and the adjacent field space known as George Berkich Park, including the dog park, is owned by the Cardiff School District. It is not a City park. The School District opens the fields and play equipment for public use after school hours and on weekends.

Is the dog park being removed?

There are no plans to remove the dog park.

Has the District considered how the dogs barking in the park will disrupt the Kindergarten classes?

We do not anticipate that this will be a concern. Currently, garden classes are held directly next to the dog park throughout the day and the garden classes are not disrupted by the adjacent location.

What are the District's top priorities in putting together the conceptual site plan?

The District considers the students' educational program needs and security as the top priorities in the rebuilding of Cardiff School. Building the multipurpose room towards the front office is an important security issue so that the outside public does not have to travel through the school and student classroom hallways to access it. The administration building, including the technology room and library, and the science/STEAM lab were built in 2002, and are not being rebuilt and will remain as the hub of the campus.

Having a separate, secure drop off and pick up for Kindergarten is also important and is addressed by locating the Kindergarten courtyard by the existing brick building.

Moving the existing play structures from the center to the south end of George Berkich Park opens the field for better supervision of students during the school day and watching of soccer games and other activities during community use.

Will the neighbors' views be impacted?

While in the current conceptual site plan the single story auditorium and Kindergarten classrooms are placed on the lowest elevation of the campus, the views of some neighbors on Montgomery Avenue may be affected.

Although the Board and District have and will continue to consider the impact on the ocean views of the residents on Montgomery Avenue and those walking by, our first priorities remain the educational program and safety of our students.

What did Measure GG approve?

Measure GG approved $22 million in funding to rebuild, remodel and repair Cardiff School District facilities to improve the quality of education.

The bond measure did NOT include or approve any architectural plans.

I thought I saw a rendering before the election. Why does the current Site Plan look different?

In order to determine the appropriate amount of money needed to fund the type and level of projects that the Board was considering to put before voters, several possible scenarios were considered. Two of these scenarios were sketched for the sole purpose of developing the necessary cost estimates. These hand drawn renderings were never intended to be used as the Site Plan should the bond measure pass.

Upon successful passage of Measure GG, the District began by formally selecting a Bond Program Manager and Architect to undertake a comprehensive programming, planning and design process, of which an early step is the development of a Site Plan.

R57-1
CONT'D

Why can't we just rebuild on the current footprint?

While we carefully evaluated this option during the development process of the Site Plan, we determined that it is impossible to meet the students' educational program needs within the existing Cardiff School campus footprint. For example, a wing of portable classrooms encroaches on the students' blacktop play area. This wing of classrooms needs to be accommodated as part of the new construction to recapture adequate play area. Also, the current multipurpose room is not large enough to accommodate all of the Cardiff students. An appropriately sized, single-story multipurpose room is planned to address that need.



Conceptual site plan for Cardiff School in Cardiff School District as of September 11, 2017 by Studio E Architects. The conceptual site plan focuses on the program needs of the school to support the education, safety and security of its students and serves as a community resourcefor meetings, events and athletics.

****

Please DO NOT REPLY to this email address. For more information about this email, please contact one of the following as appropriate:

- Principal, Julie Parker
- Principal, Janelle Scheftner
- Superintendent, Jill Vinson

2. Response to Comments

- Cardiff SEA

To update your email address or to remove yourself from this email list, please contact your child's school office:
Cardiff School 760-632-5892
Ada Harris 760-632-5894

****

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Leslie Tuchman
[redacted]

Tiana Hejduk [redacted] Mon, Nov 19, 2018 at 11:26 AM
To: Leslie Goldberg [redacted]
Cc: CardiffDEIR@cardiffschools.com, david_siegenthaler@nps.gov, council@encinitasca.gov

Thanks for sharing Lesli! You are awesome! Thanks for your support.
[Quoted text hidden]

Cardiff DEIR <cardiffdeir@cardiffschools.com> Mon, Nov 19, 2018 at 11:49 AM
To: [redacted]

[Quoted text hidden]

R57-1
CONT'D

R57. Response to Comments from Leslie Tuchman, dated November 19, 2018.

R57-1 This letter is a repeat of comment letter R38.

See responses R38-1 to R38-4.

2. Response to Comments

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LETTER R58– Ben Wall (1 page)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Support for the Cardiff School Construction Plans
2 messages

bwall@bkvalves.com [redacted] Tue, Nov 20, 2018 at 8:04 AM
To: "cardiffdeir@cardiffschools.com" <cardiffdeir@cardiffschools.com>

As a Cardiff community member, and Parent of Cardiff children. One who will be attending Cardiff Elementary next year as a Kindergartener. I am writing on behalf of my family, to express our support of the present rebuild and renovation projects.

Strangers should never be wandering through the campus! Safety of our little ones is paramount. We are pleased the multipurpose room is now close to the parking and away from classrooms. The classroom outdoor learning areas are protected from unwanted intrusions

R58-1

The planned parking area is so much safer. It reduces the chance of accidents; especially during drop off and pickup times. It also relieves the Montgomery Avenue traffic congestion during those times. The needed additional parking spaces will also help.

The safety of our children and the quality of the instructional program is enhanced by the streamlining of the playground and fields. By moving the play structures away from the middle of the field, supervisors have an obstructed view of all activities.

In listening and being sensitive to neighbor's concerns, compromises were made. We would have preferred to have kept some in the plan. However, we applaud that no changes ever comprised the well-being and safety of our children.

Thank you

Ben Wall

B&K Valves & Equipment, Inc.

www.bkvalves.com

[redacted]

Cardiff DEIR <cardiffdeir@cardiffschools.com> Tue, Nov 20, 2018 at 8:14 AM
To: [redacted]

[Quoted text hidden]

2. Response to Comments

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R58. Response to Comments from Ben Wall, dated November 20, 2018.

R58-1 The commenter is supportive of the proposed Project. The commenter states that the proposed Project would reduce accidents and traffic congestion, and would enhance safety and the quality of education.

The District appreciates the support for the project. The comment is noted and no further response is required.

2. Response to Comments

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LETTER R59– Rosemary Kimbal (3 pages)

Subject: FW: Cardiff School

From: Rosemary KimBal [redacted]
Subject: Fwd: Cardiff School
Date: November 27, 2018 at 6:30:03 PM PST
To: Randy Peterson <csdbpm@gmail.com>
Cc: cardiffdeir@cardiffschools.com

Dear Randy Peterson,
I sent this letter on November 19th at 8:21 AM as you can see below. We were given the incorrect email as you can see below. I received email notices of trying for 143 hours to get the email delivered. Today I went to the Cardiff School District Office and Martha called you. She also gave me the above address. At least 5 other letters were sent to this incorrect email.
I hope that our work on this was not in vain over an unfortunate technicality.
Most Sincerely,
Rosemary Kimbal
[redacted]

Begin forwarded message:

From: Rosemary KimBal
[redacted]
Subject: Cardiff School
Date: November 19, 2018 at 8:21:42 AM PST
To: CardiffEIR@cardiffschools.com
Cc: david_siegenthaler@nps.gov,
council@encinitasca.gov

Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

RE: Letter in Opposition to
Cardiff School Draft EIR

To Whom It May Concern:

1

2. Response to Comments

I have lived in Cardiff all of my life. I have seen the open space disappear to be replaced by new construction. There is very little open space left. The George Berkich Park is one of the few places left. The Park is intensely used by the entire community. I enjoy walking around the Park on the grass and driving by the Park in my car. I also enjoy watching the children play on weekends or just enjoying the vista over the green playing fields out to the Pacific ocean from the public street.

R59-1

The School Board and the City of Encinitas signed a joint funding Agreement with the Land and Water Conservation Agreement for money with which to develop the park. The Agreement has a special provision which says that the park open space will be protected "in perpetuity." The School illegally ignored the Agreement in 2003 and destroyed about 15% of the Park with new construction. Their current proposal is to exchange the park open space for their 35,000 sq. ft. of asphalt, an over-sized Multi-purpose room, and the School's teaching gardens. The School claims that this complies with the requirements of a LWCF Agreement for conversion of the Park open space. This is NOT TRUE. The School's proposal does not meet any of the standards of the Agreement for a conversion of the Park.

R59-2

The Draft EIR should not be certified. It is inadequate. It does not address the environmental standards required by the LWCF Agreement. It does not evaluate the Schools outrageous swap proposals or the requirements of the State Parks Manuals, OGALS and the National Park Service Laws.

2

R59-2
CONT'D

I strongly oppose the Schools plans for the Parklands. It is wrong to build any school buildings or any parking on our open space Park.

Yours very truly,
Rosemary KimBal
[redacted]

3

2. Response to Comments

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R59. Response to Comments from Rosemary Kimbal, dated November 27, 2018.

R59-1 The commenter states that there is little open space available, and that the park is one of the few open space areas left in Cardiff. The commenter states that the park is used by the community, and that the City of Encinitas and the District signed the LWCF Agreement to protect the park in perpetuity. The commenter opines that the District has not and is not complying with the requirements of the LWCF Agreement.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The District is aware that the park is used by the community. In accordance with the LWCF agreement and the Civic Center Act, the park would continue to be made available to the community post-construction and outside of school hours.

R59-2 The commenter opines that the DEIR is inadequate, as it does not address the environmental standards required by the LWCF Agreement or the requirements of the State Parks, OGALS, and the National Park Service; therefore, the DEIR should not be certified. The commenter opposes the proposed plans to construct on the park.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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LETTER R60 – Richard Cottrell (3 pages)

Subject: FW: Comments on Cardiff School Draft EIR with receiving server bounce notes

From: Richard Cottrell [redacted]

Subject: Comments on Cardiff School Draft EIR with receiving server bounce notes

Date: November 30, 2018 at 4:01:30 PM PST

To: Randy Peterson <csdbpm@gmail.com <mailto:csdbpm@gmail.com> >

Richard Cottrell [redacted]

Mon, Nov 19, 10:55 AM (11 days ago)
<https://mail.google.com/mail/u/0/images/cleardot.gif>
<https://mail.google.com/mail/u/0/images/cleardot.gif>
to CardiffEIR, david_siegenthaler, council <https://mail.google.com/mail/u/0/images/cleardot.gif>
November 16, 2018

Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

RE:

Dear Cardiff School District,

R60-1 I am a resident of Cardiff. The George Berkich Park is an important green spot in an increasingly densely built community. It is used and enjoyed by all of the community no matter what age. It is pleasure just to walk or drive by the Park and see the green playing area with the ocean vistas beyond.

R60-2 The Land and Water Conservation Agreement which the Cardiff School Board and the City of Encinitas signed ensures that the Berkich Park will be protected "in perpetuity." The School claims that their proposed swap of the park open space for their 35,000 sq. ft. asphalt parking lot, pick up lanes and over-sized Multi-purpose room complies with the requirements of a LWCF Agreement conversion. The School's position is not supportable within the standards of the Agreement or of the federal or state laws.

1

2. Response to Comments

The Draft EIR is inadequate in that it does not address the LWCF Agreement, the Schools outrageous swap proposals and the environmental standards that are demanded by the Agreement.

R60-3

I strongly oppose any encroachment of the Parklands by the School. It is wrong to build any school buildings on our open space Park.

It brings to mind the words "paved paradise and put up a parking lot"

Yours very truly,

Richard Cottrell
[redacted]

5
<https://ssl.gstatic.com/ui/v1/icons/mail/profile_mask2.png>
Mail Delivery Subsystem Sun, Nov 25, 5:20 PM (5 days ago)
Delivery incomplete There was a temporary problem delivering your message to CardiffEIR@cardiffschools.com <mailto:CardiffEIR@cardiffschools.com> . Gmail will retry for 17 more hours. You'll be notifi
<https://ssl.gstatic.com/ui/v1/icons/mail/profile_mask2.png>

Mail Delivery Subsystem <mailer-daemon@googlemail.com <mailto:mailer-daemon@googlemail.com> >

Mon, Nov 26, 12:19 PM (4 days ago)
<https://mail.google.com/mail/u/0/images/cleardot.gif>
<https://mail.google.com/mail/u/0/images/cleardot.gif>
to me
<https://mail.google.com/mail/u/0/images/cleardot.gif>

Message not delivered

There was a problem delivering your message to CardiffEIR@cardiffschools.com. See the technical details below.
LEARN MORE <https://support.google.com/mail/answer/7720>
The response was:

The recipient server did not accept our requests to connect. Learn more at
https://support.google.com/mail/answer/7720 [mail.cardiffschools.com <http://mail.cardiffschools.com/>
172.217.195.121 <http://172.217.195.121/> : timed out] [mail.cardiffschools.com <http://mail.cardiffschools.com/>
2607:f8b0:4003:c0e::79: timed out]

2

---------- Forwarded message ----------
From: Richard Cottrell [redacted]
To: CardiffEIR@cardiffschools.com <mailto:CardiffEIR@cardiffschools.com>
Cc: david_siegenthaler@nps.gov <mailto:david_siegenthaler@nps.gov> , council@encinitasca.gov <mailto:council@encinitasca.gov>
Bcc:
Date: Mon, 19 Nov 2018 10:55:00 -0800
Subject: Comments on Cardiff School Draft EIR

November 16, 2018

Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

RE:

Dear Cardiff School District,

2. Response to Comments

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R60. Response to Comments from Richard Cottrell, dated November 30, 2018.

R60-1 The commenter states that George Berkich Park is an important green space area in the densely built-up community. The commenter states that the park is used and enjoyed by all community members, and that it is enjoyable to look at the green space with the ocean vista beyond the park.

The District is aware of the communal use of the park and its value to the community. The District agrees that the proximity to the ocean and the green space are a valuable asset at the site. DEIR Impact 5.1-1 adequately analyzes the project's impact on views and concludes that the proposed Project would not block public views of the ocean; existing public views of the ocean would be maintained.

R60-2 The commenter states that the City of Encinitas and the District signed the LWCF Agreement which protects the park in perpetuity. The commenter opines that the District's claims that the proposed Project complies with the requirements of the LWCF Agreement conversion, but does not meet the standards of the LWCF Agreement or federal or state laws.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act lands 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R60-3 The commenter deems that the EIR is inadequate and that it does not address the LWCF Agreement. The commenter is opposed to the encroachment of land by the proposed Project.

Please see Master Response in Section 2.1 of this FEIR.

2. Response to Comments

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LETTER R61 – Raymond Elstad (2 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Fwd: Theft of Cardiff School Property... Letter in Opposition to Cardiff School Draft EIR
1 message

Rosemary KimBal [redacted] Fri, Nov 30, 2018 at 2:58 PM
To: Randy Peterson <csdbpm@gmail.com>
Cc: cardiffdeir@cardiffschools.com

Begin forwarded message:

From: Raymond Elstad [redacted]
Subject: Fwd: Theft of Cardiff School Property... Letter in Opposition to Cardiff School Draft EIR
Date: November 30, 2018 at 2:58:00 PM PST
To: Rosemary KimBal [redacted]

---------- Forwarded message ---------
From: **Raymond Elstad** [redacted]
Date: Mon, Nov 19, 2018 at 9:02 AM
Subject: Theft of Cardiff School Property... Letter in Opposition to Cardiff School Draft EIR
To: <CardiffEIR@cardiffschools.com>, <david_siegenthaler@nps.gov>, <council@encinitasca.gov>

Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

RE: Letter in Opposition to Cardiff School Draft EIR

To Whom It May Concern:

R61-1 I have lived in Cardiff by the Sea for 31 years. My home is just above the school, on Rubenstein Dr. I have seen the open space disappear to be replaced by new construction. There is very little open space left. The George Berkich Park is one of the few places left. The Park is intensely used by the entire community. I enjoy walking around the Park on the grass and driving by the Park in my car. I also enjoy watching the children play on weekends or just enjoying the vista over the green playing fields out to the Pacific ocean from the public street.

R61-2 The School Board and the City of Encinitas signed a joint funding Agreement with the Land and Water Conservation Agreement for money with which to develop the park. The Agreement has a special provision which says that the park open space will be protected "in perpetuity." The School illegally ignored the

2. Response to Comments

R61-2 CONT'D

Agreement in 2003 and destroyed about 15% of the Park with new construction. Their current proposal is to exchange the park open space for their 35,000 sq. ft. of asphalt, an over-sized Multi-purpose room, and the School's teaching gardens. The School claims that this complies with the requirements of a LWCF Agreement for conversion of the Park open space. This is NOT TRUE. The School's proposal does not meet any of the standards of the Agreement for a conversion of the Park.

R61-3

The Draft EIR should not be certified. It is inadequate. It does not address the environmental standards required by the LWCF Agreement. It does not evaluate the Schools outrageous swap proposals or the requirements of the State Parks Manuals, OGALS and the National Park Service Laws.

I strongly oppose the Schools plans for the Parklands. It is wrong to build any school buildings or any parking on our open space Park.

Most Sincerely
Raymond Elstad

[redacted]
Cardiff by the Sea
CA 92007

Virus-free. www.avast.com

R61. Response to Comments from Raymond Elstad, dated November 30, 2018.

R61-1 The commenter deems that there are few open space areas left, and that George Berkich Park is one of those few. The commenter states the park is used by the entire community. The commenter states that he enjoys looking at the vista over the fields, to the Pacific Ocean, from the public street.

The District is aware of the communal use of the park and its value to the community. The District agrees that the proximity to the ocean and the green space are a valuable asset at the site. DEIR Impact 5.1-1 adequately analyzes the project's impact on views and concludes that the proposed Project would not block public views of the ocean; existing public views of the ocean would be maintained.

R61-2 The commenter states that the City of Encinitas and the District signed the LWCF Agreement, which protects that park in perpetuity. The commenter states that the District ignored this agreement in 2003 and destroyed approximately 15 percent of the park. The commenter states that the District states that it is compliant with the requirements for the LWCF Agreement for conversion, but the commenter does not agree.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

The realignment of the 6(f)(3) boundary is proposed in response to recognition that the modernization improvements conducted in the early 2000's were not in compliance with the LWCF alignment. As described in the Master Response, OGALS has concurred with District's proposal for a modified boundary map and has presented it to NPS for review and potential final approval.

R61-3 The commenter states that the DEIR should not be certified as it is inadequate and does not address the environmental standards required by the LWCF Agreement. The commenter states that the DEIR does not evaluate the proposed Project with the requirements of the State Parks Manuals, OGALS, and National Park Service Laws. The commenter is opposed to the proposed plans for the park.

See response to R61-1. The commenter does not specify how the project does not address environmental standards required by the LWCF agreement. In addition, the project impacts to the LWCF conversion are addressed in Impact 5.8-2 of the DEIR, which determined that preparation of an Environmental Assessment or Environmental Impact Statement would not be required, and a less than significant impact to the LWCF agreement would occur.

2. Response to Comments

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LETTER R62 – Patricia Frischer (2 pages)

Cardiff DEIR <cardiffdeir@cardiffschools.com>

Fwd: Cardiff School building
1 message

Rosemary KimBal [redacted] Fri, Nov 30, 2018 at 3:01 PM
To: Randy Peterson <csdbpm@gmail.com>
Cc: cardiffdeir@cardiffschools.com

Begin forwarded message:

From: "Patricia Frischer (cox)" [redacted]
Subject: Cardiff School building
Date: November 19, 2018 at 1:16:04 PM PST
To: <CardiffEIR@cardiffschools.com>
Cc: <david_siegenthaler@nps.gov>, <council@encinitasca.gov>

November 19, 2018

VIA E-MAIL: CardiffEIR@cardiffschools.com

Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

RE: Letter in Opposition to Cardiff School Draft EIR

To Whom It May Concern:

R62-1 I have lived in Cardiff for 22 year. I have seen the open space disappear to be replaced by new construction. There is very little open space left. The George Berkich Park is one of the few places left. The Park is intensely used by the entire community. I enjoy walking around the Park on the grass and driving by the Park in my car. I also enjoy watching the children play on weekends or just enjoying the vista over the green playing fields out to the Pacific ocean from the public street.

R62-2 The School Board and the City of Encinitas signed a joint funding Agreement with the Land and Water Conservation Agreement for money with which to develop the park. The Agreement has a special provision which says that the park open space will be protected "in perpetuity." The School illegally ignored the Agreement in 2003 and destroyed about 15% of the Park with new construction. Their current proposal is to exchange the park open space for their 35,000 sq. ft. of asphalt, an over-sized Multi-purpose room, and the School's teaching gardens. The School claims that this complies with the requirements of a LWCF Agreement for conversion of the Park open space. This is NOT TRUE.

2. Response to Comments

R62-2 CONT'D

The School's proposal does not meet any of the standards of the Agreement for a conversion of the Park.

R62-3

The Draft EIR should not be certified. It is inadequate. It does not address the environmental standards required by the LWCF Agreement. It does not evaluate the Schools outrageous swap proposals or the requirements of the State Parks Manuals, OGALS and the National Park Service Laws.

I strongly oppose the Schools plans for the Parklands. It is wrong to build any school buildings or any parking on our open space Park.

Yours very truly,
Patricia Frischer
[redacted]

R62. Response to Comments from Patricia Frischer, dated November 30, 2018.

R62-1 The commenter deems that there is little open space left, and that George Berkich Park is one of those few. The commenter states the park is used by the entire community. The commenter states that she enjoys looking at the vista over the fields, to the Pacific Ocean, from the public street.

The District is aware of the communal use of the park and its value to the community. The District agrees that the proximity to the ocean and the green space are a valuable asset at the site. DEIR Impact 5.1-1 adequately analyzes the project's impact on views and concludes that the proposed Project would not block public views of the ocean; existing public views of the ocean would be maintained.

R62-2 The commenter states that the City of Encinitas and the District signed the LWCF Agreement, which protects that park in perpetuity. The commenter states that the District ignored this agreement in 2003 and destroyed approximately 15 percent of the park. The commenter states that the District states that it is compliant with the requirements for the LWCF Agreement for conversion, but the commenter does not agree.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

R62-3 The commenter states that the DEIR should not be certified as it is inadequate and does not address the environmental standards required by the LWCF Agreement. The commenter states that the DEIR does not evaluate the proposed Project with the requirements of the State Parks Manuals, OGALS, and National Park Service Laws. The commenter is opposed to the proposed plans for the park.

Please see Master Response in Section 2.1 of this FEIR, which addresses the proposed conversion of Land and Water Conservation Fund Act land's 6(f)(3) boundary on the project site. As described in the Master Response, the Project does not negatively impact any existing or future public recreational uses of the site when not needed for school purposes.

2. Response to Comments

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Attachment 1 School Site Design Process

Attachments

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CARDIFF SCHOOL SITE DESIGN PROCESS SUMMARY

The Cardiff School District conducted a very comprehensive planning process both during the development of the District's bond Measure GG and the design of the Cardiff School Modernization and Reconstruction Project. The District has engaged the public and solicited input throughout the process via numerous Community Workshops and other public meetings. Teacher Workshops were also conducted in order to gain insights from teachers and staff at the school. It was public input at the initial Community Workshops conducted prior to the beginning of design that created "Guiding Principles", which establish the foundation for the development of the project's design.

After Measure GG was approved by approximately 66 percent of the vote in November 2016, the District established a Bond Implementation Team (BIT) to be it's planning committee during the design phases. This committee was comprised of two District board members, the District Superintendent, Cardiff School Principal, a Cardiff School teacher and a community member-at-large. Subsequent to the Community Workshop and Teacher Workshop, and in preparation for presentations to the District's Board, the Bond Implementation Team worked closely with the District's architect to study various design options and alternatives. Both the architects and the BIT used the Guiding Principles as the drivers of their design decisions throughout the process.

Numerous District Board presentations also provided for additional community input. Community input at a Board meeting where the initial site design was presented resulted in the project being completely redesigned. The District continued to respond to community input as it further developed the design throughout the design process.

The following is a summary of the process:

In June 2017 prior to beginning the design of the project, the District facilitated two workshops, one for the community and the other for teachers and staff. During the Community Workshop the "Guiding Principles" were created.

GUIDING PRINCIPLES

- *Create a Safe and Secure Environment*
- *Connect the School to the Community: Put Active Uses at the Edges*
- *Prioritize Green Space and Views. Provide Ample Space to Play*
- *Improve Traffic Flow and Safety for Pick-up*
- *Emphasize Sustainability and Environmentally Focused Design*
- *Prioritize Learning Spaces. Create Usable Outdoor Learning Environments, All Suited to their Place*

Following the June workshops the Bond Implementation Team began the conceptual design process with the architects. The architects initially presented Conceptual Bubble Diagrams (see Exhibit 1) for how the site might be developed. Based on feedback provided by the Bond Implementation Team, these diagrams developed into various Conceptual Design Options (see Exhibit 2). The Bond Implementation Team communicated to the architects which of the various elements from these design options they felt best supported the educational program while adhering to the Guiding Principles. The architects took these elements into consideration as they further developed the Conceptual Site Design and presented the Bond Implementation Team with four schemes (see Exhibit 3). The Bond Implementation Team once again evaluated the schemes presented and again communicated to the architects which elements from the four schemes they felt best supported the educational program while adhering to the Guiding Principles.

The architects further developed the Conceptual Site Design (see Exhibit 4) and it was presented at a Community Workshop and a Teacher Workshop in August 2017. While the feedback from the community, teachers and staff

overall was positive, some concerns were expressed. The District and architect noted these and the District instructed the architect to look at ways to mitigate the concerns.

In September 2017 the District met with a few community members who requested a meeting to express concerns about the impact the proposed design may have on their views to the ocean. Again the District instructed the architect to look at ways to mitigate these concerns.

In October 2017 the Conceptual Site Plan was presented to the District's Board for their review (see Exhibit 5). This plan took steps to address concerns regarding views by adjusting the building designs and lowering the buildings on the site below the height of existing buildings. A large contingent of community members expressed concern about the conceptual design. The primary concern was regarding the amount of buildings located between the existing administration building and the existing red brick building near the corner of Montgomery Avenue and San Elijo Avenue and the impact they would have on neighboring views and the feeling that the campus was too spread out. Following this board meeting the District instructed the architect to look at modifying the design to address the community concerns.

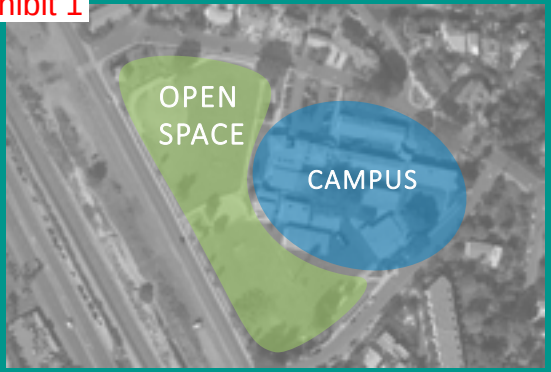
At the November 2017 Board meeting and third Community Workshop the architects presented a completely redesigned Conceptual Site Plan (see Exhibit 6). In order to address the concerns of the majority of the community members, the Conceptual Site Plan was redesigned with the Kindergarten and Extended Day programs being moved from the western side of the campus to the eastern edge of the campus. The District approved this redesign even though the compromises they made meant they would no longer have a direct view from the administration building to the Kindergarten and Extended Day buildings and these two program areas would not have direct access to the field areas. In addition, this compromise to the design resulted in increased construction costs.

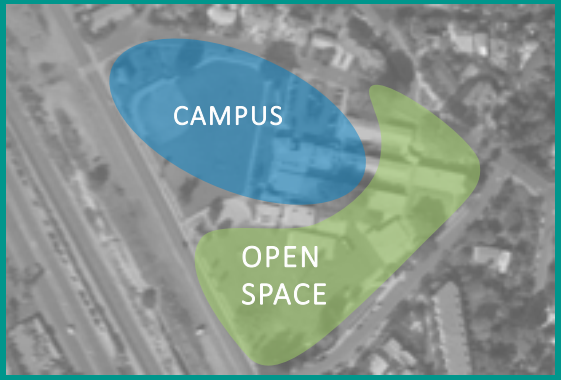
At the December 2017 Board meeting another revised Conceptual Site Plan (see Exhibit 7) was presented that showed a reduction in the length of parking and refined building layout views. These revisions were made in direct response to community concerns regarding the length of the parking lot and pick-up/drop-off areas.

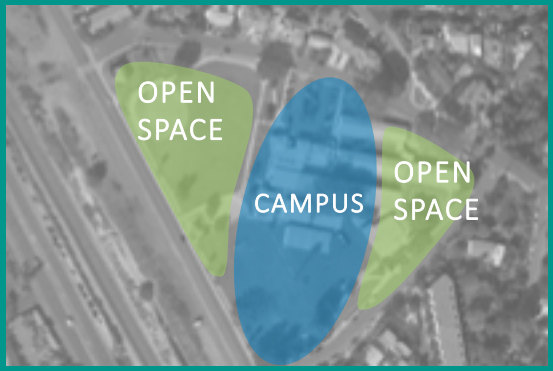
At the February 2018 Board meeting and fourth Community Workshop an updated Proposed Site Plan (see Exhibit 8) was presented. At the conclusion of the February Board meeting and confident the District had the support of the greater Cardiff community, the District moved forward with further development of the project.

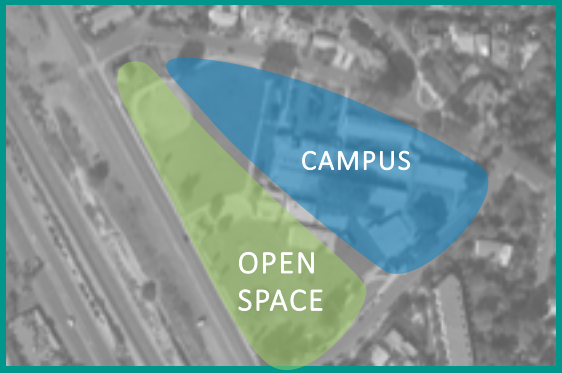
The Site Plan continues to be developed as a result of coordination with governing agencies, including the City of Encinitas. The final schematic Site Plan was presented to the Cardiff School Board is shown in Exhibit 9.

Exhibit 1









Cardiff School Conceptual Bubble Diagrams

Measure GG

CARDIFF SCHOOL DISTRICT
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Exhibit 2









Cardiff School Conceptual Design Options

Measure GG

CARDIFF SCHOOL DISTRICT
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Exhibit 3









Cardiff School Conceptual Site Plan Development

Measure GG

CARDIFF SCHOOL DISTRICT
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Exhibit 4

BUILDING LEGEND

A. Admin. & District Office (Existing)
B. Library (Existing)
C. Multi-Media & Small Group Rooms
D. Conference Room
E. Kindergarten Classrooms – 5
F. General Classrooms – 15
G. Specialty Classrooms – 5
H. Extended Day – 2
I. Multi-Purpose & Music Room
J. Food Service w/ Covered Eating
K. Brick Building (Existing)

OPEN SPACE LEGEND

1. Parking and Drop Off
2. Drop Off (Existing)
3. Garden (Existing)
4. Dog Park (Existing)
5. Kindergarten Court
6. Bluff Terrace
7. Amphitheater
8. Entry Plaza
9. Central Court
10. Exploration / Outdoor Projects
11. Classroom Court
12. Covered Dining
13. Hardcourts
14. Soccer & Play Fields
15. Play Structures
16. Pollinator Garden (Existing)



Cardiff School Campus Conceptual Design

Measure GG

CARDIFF SCHOOL DISTRICT
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Exhibit 5



BUILDING LEGEND

A. Admin. & District Office (existing)
B. Library (existing)
C. Multi-Media & Small Group Rm.
D. Conference Room
E. Kindergarten Classrooms – 5
F. General Classrooms – 15
G. Specialty Classrooms – 5
H. Extended Day – 2
I. Multi-Purpose & Music Room
J. Food Service w/ Covered Eating
K. Brick Building (Existing)

OPEN SPACE LEGEND

1. Parking and Drop Off, 34 spaces
2. Parking, 8 spaces
3. Drop Off (existing, extended), 6 spaces
4. Drop Off (existing), 5 spaces
5. Garden (Existing)
6. Dog Park (Existing)
7. Kindergarten Court
8. Terrace
9. Entry Plaza
10. Central Court
11. Exploration / Outdoor Projects
12. Classroom Court
13. Covered Dining
14. Hardcourts
15. Play Fields
16. Play Apparatus
17. Pollinator Garden (Existing)

OPEN SPACE SUMMARY

- Play Fields **89,340 SF**
- Hard Courts **20,820 SF**
- Play Apparatus **7,760 SF**
- Kinder Play **8,830 SF**

PARKING SUMMARY

- Parking / Drop-Off **45,240 SF**
- Parking Spaces **53**
- Drop-Off **500 LF**

ORIGINAL CONCEPTUAL SITE PLAN

Exhibit 6



BUILDING LEGEND

A. Admin. & District Office (existing)
B. Library (existing)
C. (not used)
D. Conference Room
E. Kindergarten Classrooms – 5
F. General Classrooms – 15
G. Specialty Classrooms – 5
H. Extended Day – 2
I. Multi-Purpose & Music Room
J. Food Service w/ Covered Eating
K. Brick Building (Existing)

OPEN SPACE LEGEND

1. Parking and Drop Off, 33 spaces
2. (not used)
3. Drop Off (existing, extended), 6 spaces
4. Drop Off, 5 spaces
5. Garden (Existing)
6. Dog Park (Existing)
7. Kindergarten Court
8. Terrace / Amphitheatre
9. Entry Plaza
10. (not used)
11. Exploration / Outdoor Projects
12. Classroom Court
13. Covered Dining
14. Hardcourts
15. Play Fields
16. Play Apparatus
17. Pollinator Garden (Existing)

OPEN SPACE SUMMARY

- Play Fields **87,060 SF**
- Hard Courts **20,820 SF**
- Play Apparatus **7,760 SF**
- Kinder Play **9,250 SF**

PARKING SUMMARY

- Parking / Drop-Off **38,840 SF**
- Parking Spaces **44**
- Drop-Off **500 LF**

REVISED CONCEPTUAL SITE PLAN

Exhibit 7



BUILDING LEGEND

A. Admin. & District Office
B. Library
C. (not used)
D. Conference Room
E. Kindergarten Classrooms
F. General Classrooms
G. Specialty Classrooms
H. Extended Day
I. Multi-Purpose & Music Room
J. Food Service w/ Covered Eating
K. Brick Building

OPEN SPACE LEGEND

1. Parking and Drop Off
2. (not used)
3. Drop Off (existing, extended
4. Drop Off
5. Garden
6. Dog Park
7. Kindergarten Court
8. Terrace / Amphitheatre
9. Entry Plaza
10. (not used)
11. Exploration / Outdoor Projects
12. Classroom Court
13. Covered Dining
14. Hardcourts
15. Play Fields
16. Play Apparatus
17. Pollinator Garden

CONCEPTUAL SITE PLAN - 12/14/17

Exhibit 8

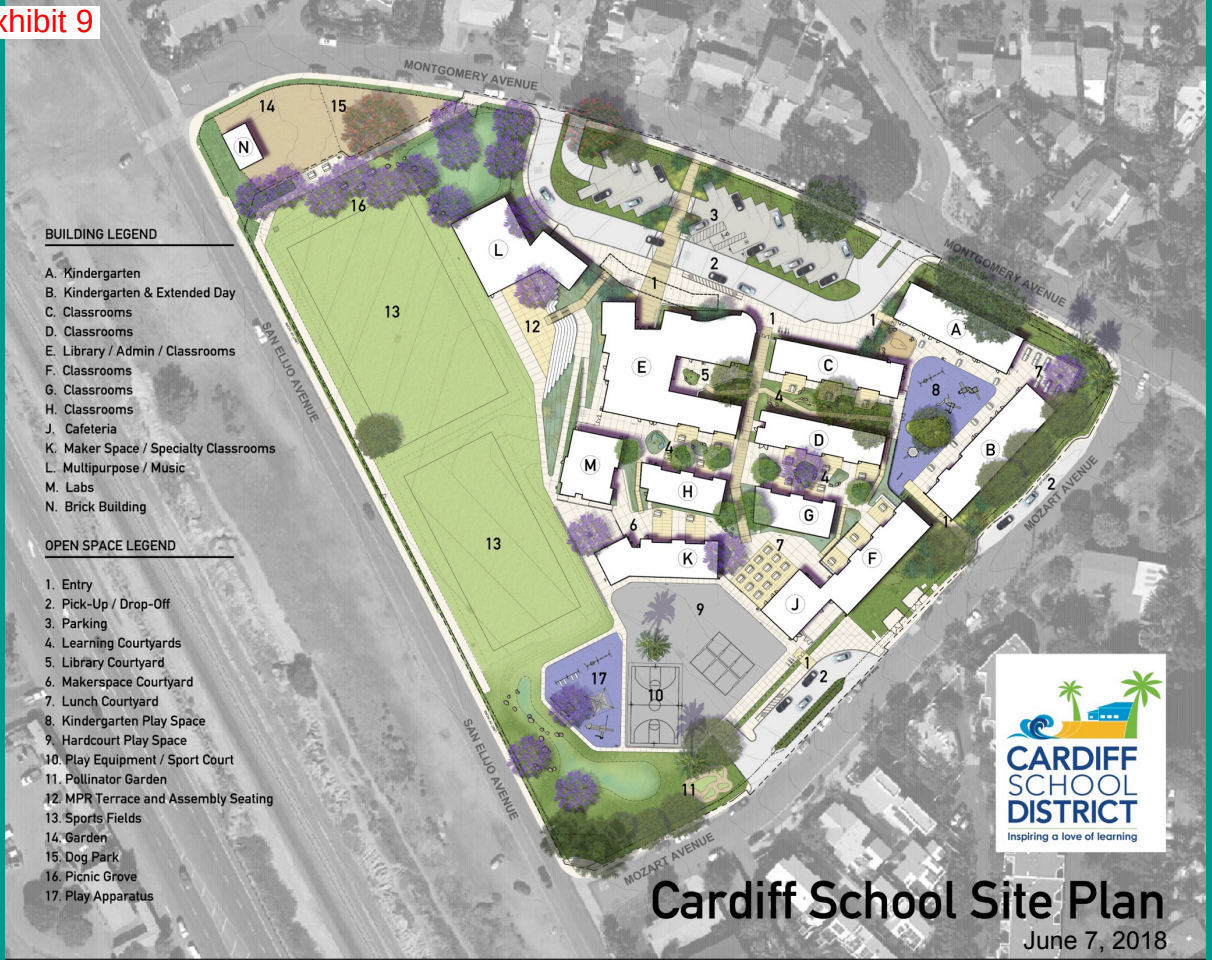


OPEN SPACE LEGEND

A. Entry
B. Drop-Off
C. Parking
D. Learning Courtyards
E. Library Courtyard
F. Makers Space
G. Lunch Courtyard / Flex Space
H. Kindergarten Play space
I. Hardcourt Play space
J. Play Equipment / Sport Court
K. Pollinator Garden
L. MPR Terrace and Amphitheater
M. Sports Fields
N. Community Garden
O. Dog Run
P. Picnic Grove
Q. Playground Grove

PROPOSED SITE PLAN – 2/1/18

Exhibit 9



Cardiff School Site Plan

June 7, 2018

Attachment 2 OGALS Letter

Attachments

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CARDIFF SCHOOL DISTRICT
Inspiring a love of learning

July 17, 2018

Ms. Jean Lacher, Chief
Office of Grants and Local Services
Department of Parks and Recreation
California State Parks
P.O. Box 942896
Sacramento, CA 94296-0001

RE: Cardiff School 6(f)3 Boundary Adjustment

Dear Ms. Lacher,

The Cardiff School District has been the center of the Cardiff-by-the-Sea community since the District was founded in 1913. Cardiff-by-the-Sea, a community founded in 1911, joined with four other communities to become the City of Encinitas in 1986. Although now a part of the City of Encinitas, Cardiff maintains its own, unique identity and Cardiff School, which has been located on the same site since its founding, remains a primary hub for community activity.

Cardiff School is currently planning a major reconstruction. It was during the design process when the District learned that a portion of the school site containing the field and apparatus play areas was to be held as outdoor recreation area in perpetuity per an agreement entered into with the National Park Service (NPS) 25 years ago with both the District and the City of Encinitas as co-signatories to the agreement. The City has been the point of contact with the OGALS since the contract was signed and although we understand the OGALS has periodic communication regarding the agreement, the District never received any of these. As a result the District did not retain knowledge of the agreement and the associated conditions. The District also learned that a classroom building constructed previously is located within this outdoor recreation area, making the site currently out of compliance with the agreement. The portion of the school's site is referred to as George Berkich Park in honor of a past school Principal. It is shown in the attached exhibit entitled *Existing 6(f)3 Boundary on Proposed Site*

Plan. Upon learning of the agreement, the District contacted your office to discuss this issue. The District wants to make certain you know that it is the District's desire to take the requisite steps to comply with the terms of the agreement.

Currently, the District needs to make improvements to portions of the site that falls within the 6(f)3 boundary. While these improvements are required due to educational program needs and to increase school security for student safety, the District and the greater Cardiff community also feel these improvements will greatly enhance the outdoor recreation area and enrich the experience of visitors to George Berkich Park. It is the District's understanding that the process described within the *PARK STEWARDSHIP: A Guide to Permanent Operation and Maintenance* provides a path for how the District can make the desired improvements to the site and achieve compliance with the agreement with the NPS. I am writing to you to explain our circumstances, the reasons for the District's request for a boundary adjustment, and ask for your assistance in navigating the process to attain and maintain compliance. I have attached a site plan entitled *Proposed 6(f)3 Boundary on Proposed Site Plan* showing both the existing 6(f)3 boundary and the District's proposed adjustment to the boundary. This letter explains the history of the site, the planning process the District is currently undertaking, and the enhancements proposed to the outdoor recreation area.

In the early years following its incorporation, the City of Encinitas lacked public facilities for community use so Cardiff School District filled this void by making both Cardiff School buildings and outdoor field areas available for use by the community. In 1991 the District and the City entered into a joint-use agreement whereby the District allowed the City the use of school facilities. The District sought financial assistance from the City in order to make improvements to the recreation areas and it is believed the City sought grant funds from the NPS in 1993.

Since that time the District has been instrumental in assisting the City with developing facilities for community use. The District leased a 10-acre site to the City for use as a sports park for one dollar per year for 12 years until the City was able to afford to purchase the land. In 2002 the District and City amended their joint-use agreement to include Ada Harris School, the only other school in the District. The City has also developed numerous other facilities, including a 44-acre park that opened a few years ago approximately a half mile from Cardiff School.

Although the City has developed many community-based facilities, Cardiff School still acts as a civic hub for the Cardiff community. That is why when the District asked the community to support a bond to pay to replace the 55-65 year old school buildings and provide other upgrades to the school site, the community showed its support with over 66% favorable vote. That's especially noteworthy when you consider there are 706 students in a District with a population of almost 12,000 people.

In planning for the District's bond Measure GG, community and school workshops identified 15 areas of concern to be listed for Cardiff School. Four of those items focused on improving the

school's outdoor recreation areas and supportive facilities and amenities. Those four bullet points state:

- Upgrade and Improve playgrounds and playfields for school and community use; preserve existing mature trees and other landscaping where possible.
- Resurface, repair, and/or replace paved surfaces, play court areas, turf, and other grounds to eliminate safety hazards and improve outside instructional areas.
- Improve handicapped accessibility by making Federal and State-mandated Americans with Disabilities Act (ADA) accessibility upgrades and as mandated by the Division of the State Architect (DSA) including site access, parking, restrooms, relocation of some electrical devices, drinking fountains, playground equipment, etc.
- Make health, safety, and security improvements, such as improving drop-off and pick-up areas, upgrade fencing, and renovate/retrofit the "brick building".

Following the passage of Measure GG in November 2016, the District began the planning process. Prior to design commencing, the District conducted community workshops. As a result, Guiding Principles were developed for the design and planning team to follow during the process. These Guiding Principles are:

- Create a safe and secure environment.
- Connect the school to the community: put active uses at the edges.
- Prioritize green space and views. Provide ample play space.
- Improve traffic flow and safety for pick-up.
- Emphasize sustainability and environmentally focused design.
- Prioritize learning spaces. Create useable outdoor learning environments, all suited to their place.

In addition, specific concerns related to the outdoor recreation area and supportive elements were identified. Some of the concerns specific to community use of the recreation areas are:

- The apparatus area bifurcates the field areas limiting flexibility in the use of the fields.
- The layout of the field and apparatus areas causes safety concerns regarding supervision of children both during school and non-school hours.
- Apparatus equipment is in need of repair or replacement.
- Softball/baseball is seldom played and the skinned infield is not used because it is not a desirable play surface or due to risk of injury from falls on the hard, uneven dirt surface.
- The number of handicap parking spaces and the number of parking spaces overall located with ease of accessibility to the field and play areas needs to be increased.
- Designated drop-off/pick-up areas are inadequate, creating long lines or cause children to be dropped off curbside along San Elijo Avenue, which has a higher speed limit.

Based on the identified needs and the Guiding Principles, all developed with community input, the District moved forward with the architect and created a design that further enhanced the school and site for the benefit of the entire community. The design was presented to the community on numerous occasions, including four community/board workshops and

modifications were made to the design based on feedback. It was during this process that the District became aware of the agreement with the NPS.

Although it wasn't until this time that the District became aware of the agreement, the fact that the proposed changes to the outdoor recreation area are viewed by the greater community as an enhancement to the outdoor recreation area and user experience shows the District's commitment to maintaining the outdoor recreation area for the benefit of the entire community and not just the school.

The proposed changes that impact the existing 6(f)3 boundary are:

- In 2002 a science and art lab building that includes restrooms was constructed within the boundary. This building is approximately 2,850 square feet. It is located in the center of the site. At the same time improvements were made to apparatus play areas. Some play equipment was relocated, along with new play equipment, to another part of the site so a vehicular drop-off/pick-up area could be added along Mozart Avenue.
- Current plans propose a new multi-purpose building consisting of an auditorium, music classroom and restrooms to be located within the boundary. This location allows for the community to be able to access the building at any time of the day without compromising the campus security and student safety. This location also provides direct access to the field areas from the multi-purpose building, as well as from the parking lot, drop-off/pick-up areas, and accessible parking. It also allows for direct supervision from the school administration building. Various locations were studied but were unable to resolve both the educational needs and concerns for student safety. This building is approximately 5,500 square feet in area. It will replace a 55-year old building that is too small and creates safety concerns when used by the public during school hours because of its location. Currently community members and organizations have the ability to use the existing multi-purpose building when the school is not using it. Non-profit organizations such as the Boy Scouts, Girl Scouts and local churches utilize the facilities. The County Registrar of Voters uses it as the neighborhood polling location. Individuals and for-profit organizations can also rent the facility for a fee. This policy will remain in place with the new facility. The multi-purpose building will also serve as support space during numerous community-based activities that occur throughout the year on the adjacent open field areas.
- Current plans propose a portion of a classroom/laboratory building to be located within the boundary. This portion of the building contains a specialty lab that needs to be located near the existing science and art lab building. This building portion is approximately 1,470 square feet.
- Current plans propose a portion of the school's new food service building and supportive outdoor space to be located within the southeastern area of the boundary. This building portion is approximately 720 square feet.

In order to offset for the impact to the outdoor recreation area, the District proposes the boundary be redrawn to omit those portions of the site impacted by the building additions, add

a new parcel of land not currently a part of the 6(f)3 boundary, and adjust the boundary based on proposed changes to the site. These proposed boundary adjustments result in the land area defined in the 6(f)3 increasing approximately 2,047 square feet from approximately 173,173 square feet to approximately 175,220 square feet.

If you reference the attached exhibit, *Proposed 6(f)3 Boundary on Proposed Site Plan,* you will notice the boundary is proposed to be adjusted in four distinct areas. Starting in the northwest corner of the site and moving in a clockwise direction, the four adjustments are described as follows:

1. A new parcel of land owned by the District with a net area of 8,350 square feet is proposed to be added to the 6(f)3 boundary. This parcel is located at the intersection of Montgomery Avenue and San Elijo Avenue, immediately adjacent to the northwest corner of the existing 6(f)3 boundary. This parcel has a gross area of 9,150 square feet. It includes an 800 square foot building that is omitted from the 6(f)3 area calculations.
2. The parking and drop-off/pick-up area located at the main entrance to the open recreation area along Montgomery Avenue is proposed to be added to the 6(f)3 boundary. This adjustment adds approximately 24,400 square feet to the boundary.
3. The boundary is adjusted to omit the multi-purpose building. This adjustment deducts approximately 6,900 square feet from the boundary.
4. The eastern edge of the boundary starting from a point near the southern end of the Outdoor Assembly area and continuing south to Mozart Avenue is proposed to be adjusted to omit the existing and proposed classroom buildings that fall within the existing boundary. This adjustment deducts approximately 25,850 square feet from the boundary.

In addition to increasing the size of the 6(f)3 boundary, the proposed design enhances the outdoor recreation area and the user experience in the following ways:

- The apparatus area that bifurcates the turf fields is proposed to be relocated to the southern end of the site. This allows the fields to function as one contiguous area, providing for greater visibility and supervision and also provides more flexibility for use of the field area.
- The skinned softball/baseball infield is proposed to be covered with grass in support of soccer and other open field activities. The backstop is proposed to remain in order to accommodate softball and/or kickball activities but the infield will be grass in lieu of exposed dirt. This enhancement adds approximately 9,850 square feet of useable grass play surface to the open field areas. The primary organization using the Cardiff School fields is a soccer league for children. The leadership for this league is supportive of the new design and believes it allows more space for more games and practice and increases supervision and security. Other organized teams use the new sports parks because they have multiple fields to better accommodate the activities.
- Picnic areas are proposed to be provided in two locations. One is located north of the multi-purpose building and the other is located south of the apparatus play area.

- The parcel of land to be added in the northwest corner of the site is currently a school garden. It is currently fenced off from the rest of the site and used exclusively for school programs. The District proposes to make this parcel accessible to the community and establish a community-based garden program that coexists with the existing school garden program. A small 800 square foot older building located on this parcel of land is not included in the area calculations. As funds become available, future plans call for this building to support community use for the outdoor recreation area such as a gardening support or gathering/meeting space.
- The restrooms located in the classroom/laboratory building may be made available for use by community organizations reserving the use of the outdoor recreation areas.
- An approximately 3,740 square foot outdoor plaza area is provided along the eastern edge of the field areas. This type of space currently does not exist. It will provide a large plaza for group gatherings adjacent to the field and assembly seating areas.
- An approximately 1,580 square foot outdoor assembly seating is proposed to be added. It will be built into the side of the slope adjacent to the outdoor plaza area. This type of seating currently does not exist. It will provide a large area for seating either for large group functions or for viewing games in the adjacent field areas and utilizes a portion of the site that is currently not used due the slope.
- Parking for approximately 45 vehicles including handicap/van accessible spaces is proposed and will be permanently designated for use by visitors to the open recreation area during non-school hours.
- Drop-off/pick-up space for approximately 10 cars is proposed on site to provide increased safety to children rather than using the adjacent San Elijo Avenue, which has a higher speed limit.
- The multi-purpose building and a portion of the parking along Montgomery Avenue utilize approximately 12,950 square feet of the flat field and sloped berm areas within the 6(f)3 boundary. The addition of the parcel of land at the northwest corner of the site, the conversion of the dirt infield to grass, and the addition of assembly seating in an unusable berm area of the site totals approximately 19,780 square feet. This results in an overall net gain in useable open space of approximately 6,830 square feet.
- A Dog Park has already been accommodated in response to a community request.

As mentioned previously, the Cardiff School District and the City of Encinitas are co-signatories on the agreement with the NPS. The District maintains close communication with City staff and they are aware the District is pursuing this process with the OGALS. The District will act to keep the City apprised of our progress.

I want to make you aware that while the greater Cardiff community has supported the District's plans from the beginning, there were some community members who expressed concerns with the initial design. The District listened to those concerns and made extensive modifications to the design over the span of many months. As a result the majority of those people now support the District's proposed plans.

A few local neighbors still oppose the project because the new multi-purpose building impacts their view to the ocean or they've always opposed the District's bond measure. Since initially communicating their concerns about the impact to their view, they have learned that their personal views are not protected by the City of Encinitas or other agencies. Their strategy has since been to falsely state that the District is "doing away with George Berkich Park". You should expect to hear from them as they have communicated their intent to petition the OGALS to reject the District's proposal. It is important to note that the District is adhering to all City zoning and planning requirements relative to all building design and have taken extra measures to minimize impacts to views by lowering building heights and locating the multi-purpose building on a lower area of the site in order to lessen the impact to neighbors.

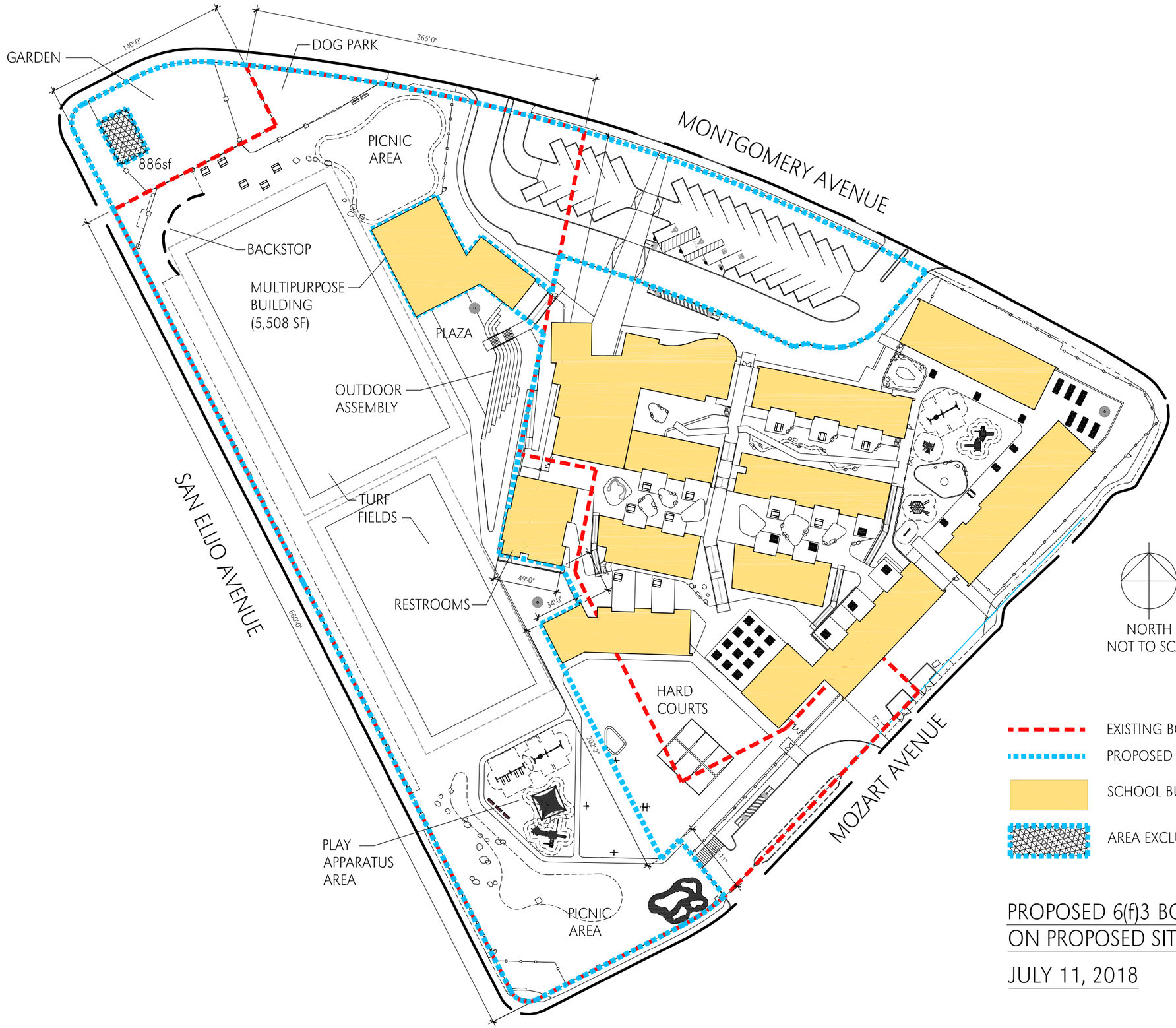
I hope this letter helps explain the work planned for the Cardiff School property. The District looks forward to working closely with the OGALS and the NPS in bringing about a successful resolution to this situation. I will contact you in a couple days to discuss this further.

Best,

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Avenue
Cardiff by the Sea, CA 92007

Enc: Proposed 6(f)3 Boundary on Proposed Site Plan

Cc: Jill Vinson, Cardiff School District
Siena Randall, Cardiff School District
Jennifer Campbell, City of Encinitas
Karen Brust, City of Encinitas
Barbara Baker, Office of Grants and Local Services
Lee Butterfield, Office of Grants and Local Services
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Richard Rendon, Office of Grants and Local Services
Viktor Patiño, Office of Grants and Local Services



CARDIFF SCHOOLS
Inspiring a love of learning

PROPOSED 6(f)3 BOUNDARY ON PROPOSED SITE PLAN

JULY 11, 2018

Jill Vinson, Superintendent

BOARD OF TRUSTEES
Siena Randall, President
David Ross, Clerk
Nancy Orr, Member
Dave Clark, Member
Mark Whitehouse, Member

Notice of Availability for the Draft Environmental Impact Report Cardiff School Modernization and Reconstruction Project

Date: October 5, 2018

To: State Clearinghouse, County Clerk, Responsible Agencies, Organizations, and Interested Parties

From: Cardiff School District, 1888 Montgomery Avenue, Cardiff-by-the-Sea, CA 92007

Subject: Notice of Availability of a Draft Environmental Impact Report (EIR) for the Proposed Cardiff School Modernization and Reconstruction Project

NOTICE IS HEREBY GIVEN that Cardiff School District (District), as lead agency for the project, has completed a Draft EIR in compliance with the California Environmental Quality Act (CEQA). The purpose of this notice is to (1) serve the public Notice of Availability (NOA) of the Draft EIR pursuant to the CEQA Guidelines Section 15087, and (2) advise and solicit comments regarding the content of the Draft EIR.

Project Location

The project site is at Cardiff Elementary School, 1888 Montgomery Avenue, in the beach community of Cardiff-by-the-Sea, City of Encinitas, California. The site is 7.4 acres and roughly triangular in shape. It is surrounded by Montgomery Avenue on the north, Mozart Avenue on the south, and San Elijo Avenue on the west.

Project Description

The proposed project entails demolition of five 1-story buildings, a portion of another building, and eight relocatable classrooms; construction of ten 1-story wood-framed buildings and a two-classroom addition to an existing building; and modernization of two existing buildings. The project would increase the school's building area by 5,289 net square feet, including one new classroom and one specialty lab. The project would also enhance onsite passenger loading and parking. Construction would commence summer 2019 and be completed in approximately 19 months.

Jill Vinson, Superintendent

BOARD OF TRUSTEES
Siena Randall, President
David Ross, Clerk
Nancy Orr, Member
Dave Clark, Member
Mark Whitehouse, Member

Significant Environmental Effects

The project would have significant impacts under the environmental category of biological resources, cultural resources, geology and soils, and tribal cultural resources. The mitigation measures proposed would reduce impacts to a less than significant level. The project site is not on a list of sites enumerated under Government Code Section 65962.5.

Document Availability:

The Draft EIR is available for public review at the following locations:

- Cardiff School District Office: 1888 Montgomery Avenue, Encinitas
- Cardiff-by-the-Sea Library: 2081 Newcastle Avenue, Encinitas
- District website: https://www.cardiffschools.com/MeasureGG

Comments on the Draft Environmental Impact Report

Please provide your written comments, including the specific statutory responsibilities of your agency, as applicable. Public comments on the Draft EIR will be accepted beginning **October 5, 2018**, and ending **November 19, 2018**. Your comments must be received at the earliest possible date but not later than **4:00 PM** on **November 19, 2018**. Please indicate a contact person for your agency or organization and send your comments to:

Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007
E-mail: CardiffDEIR@cardiffschools.com

October 2018 | **Draft Environmental Impact Report**





CARDIFF SCHOOL MODERNIZATION AND RECONSTRUCTION PROJECT

Cardiff School District

PLACEWORKS

Exhibit E

October 2018 | Draft Environmental Impact Report
State Clearinghouse No. 2018051016

CARDIFF SCHOOL MODERNIZATION AND RECONSTRUCTION PROJECT

Cardiff School District

Prepared for:

Cardiff School District
1888 Montgomery Avenue
Cardiff, California 92007
760.632.5890

Prepared by:

PlaceWorks
Contact: Mark Teague, Associate Principal
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ABBREVIATIONS AND ACRONYMS

AAQS	ambient air quality standards
AB	Assembly Bill
AR4	*Fourth Assessment Report: Climate Change 2007* (Intergovernmental Panel on Climate Change)
ATSF	Atchison Topeka and Santa Fe Railroad
bgs	below ground surface
BMP	best management practices
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	climate action plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
cfs	cubic feet per second
CGS	California Geologic Survey
CMP	congestion management program
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel

Abbreviations and Acronyms

DEIR	draft environmental impact report
DMA	drainage management area
DPM	diesel particulate matter
du	dwelling unit
DWR	Department of Water Resources (CA)
EIR	environmental impact report
EPA	United States Environmental Protection Agency
FESA	[Federal] Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
GWP	global warming potential
HCM	Highway Capacity Manual
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers
kW	kilowatt
kWh	kilowatt hour
L_{dn}	day-night noise level
L_{eq}	equivalent continuous noise level
LCFS	low-carbon fuel standard
LCP	local coastal program
LOS	level of service
LWCF	Land and Water Conservation Fund
MBTA	Migratory Bird Treaty Act
mph	miles per hour
MPO	metropolitan planning organization
MS4	municipal separate storm sewer system
MT	metric ton
NAHC	Native American Heritage Commission
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places

Abbreviations and Acronyms

O_3	ozone
OEHHA	California Office of Environmental Health Hazard Assessment
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PSWQMP	Preliminary Stormwater Quality Management Plan
RAQS	regional air quality strategy
RCNM	Roadway Construction Noise Model
RMS	root mean square
RPS	renewable portfolio standard
RTP/SCS	regional transportation plan / sustainable communities strategy
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SANTEC	San Diego Traffic Engineers Council
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SDGE	San Diego Gas & Electric
SB	Senate Bill
SIP	state implementation plan
SLT	screening-level threshold
SO_X	sulfur oxides
STC	sound transmission class
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCR	tribal cultural resource
TIS	traffic impact study
TMA	transportation management area
USFWS	United States Fish and Wildlife Service
V/C	volume-to-capacity ratio
VdB	velocity decibels

Abbreviations and Acronyms

VMT	vehicle miles traveled
VOC	volatile organic compound
WMA	watershed management area
WQIP	water quality improvement plan
ZE	zero emissions

1. Executive Summary

1.1 INTRODUCTION

This draft environmental impact report (DEIR) addresses the environmental effects associated with the implementation of the proposed Cardiff School Modernization and Reconstruction project. The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers. This document focuses on impacts determined to be potentially significant in the Initial Study completed for this project (see Appendix 1-1).

The Cardiff School District (District), as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on City technical personnel from other departments and review of all technical subconsultant reports.

Data for this DEIR derive from onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, review of available studies, reports, data and similar literature, and specialized environmental assessments-–aesthetics, air quality, biological resources, cultural resources, geological resources, greenhouse gas emissions, hydrology and water quality, land use, noise, transportation and traffic, tribal cultural resources, and energy.

1.2 ENVIRONMENTAL PROCEDURES

This DEIR has been prepared pursuant to CEQA to assess the environmental effects associated with implementation of the proposed project, as well as anticipated future discretionary actions and approvals. CEQA established six main objectives for an EIR:

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
2. Identify ways to avoid or reduce environmental damage.
3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
4. Disclose to the public reasons for agency approval of projects with significant environmental effects.
5. Foster interagency coordination in the review of projects.
6. Enhance public participation in the planning process.

1. Executive Summary

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts and alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided.

1.2.1 EIR Format

Chapter 1. Executive Summary: Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the project.

Chapter 2. Introduction: Describes the purpose of this EIR, background on the project, the notice of preparation, the use of incorporation by reference, and Final EIR certification.

Chapter 3. Environmental Setting: A description of the physical environmental conditions in the vicinity of the project as they existed at the time the notice of preparation was published, from local and regional perspectives. These provide the baseline physical conditions from which the lead agency determines the significance of the project's environmental impacts.

Chapter 4. Project Description: A detailed description of the project, including its objectives, its area and location, approvals anticipated to be required as part of the project, necessary environmental clearances, and the intended uses of this EIR.

Chapter 5. Environmental Analysis: Each environmental topic is analyzed in a separate section that discusses: the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the project; the existing environmental setting; the potential adverse and beneficial effects of the project; the level of impact significance before mitigation; the mitigation measures for the proposed project; the level of significance after mitigation is incorporated; and the potential cumulative impacts of the proposed project and other existing, approved, and proposed development in the area.

Chapter 6. Significant Unavoidable Adverse Impacts: Describes the significant unavoidable adverse impacts of the proposed project.

Chapter 7. Alternatives to the Proposed Project: Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project Alternative and a Reduced Intensity Alternative.

Chapter 8. Impacts Found Not to Be Significant: Briefly describes the potential impacts of the project that were determined not to be significant by the Initial Study and were therefore not discussed in detail in this EIR.

Chapter 9. Significant Irreversible Changes Due to the Proposed Project: Describes the significant irreversible environmental changes associated with the project.

Chapter 10. Growth-Inducing Impacts of the Project: Describes the ways in which the proposed project would cause increases in employment or population that could result in new physical or environmental impacts.

Chapter 11. Organizations and Persons Consulted: Lists the people and organizations that were contacted during the preparation of this EIR.

Chapter 12. Qualifications of Persons Preparing EIR: Lists the people who prepared this EIR for the proposed project.

Chapter 13. Bibliography: The technical reports and other sources used to prepare this EIR.

Appendices: The appendices for this document (in PDF format on a CD attached to the front cover) comprise these supporting documents:

- Appendix 1-1: Initial Study and Notice of Preparation
- Appendix 2-1: NOP and Public Scoping Meeting Comments
- Appendix 5.1-1: Photographic Survey
- Appendix 5.2-1: Air Quality Modeling
- Appendix 5.3-1: Campus Tree Evaluation
- Appendix 5.4-1: CHRIS Records Search
- Appendix 5.4-2: Historic Resource Assessment Report
- Appendix 5.4-3: Paleontological Records Search
- Appendix 5.5-1: Geotechnical Investigation
- Appendix 5.7-1: Preliminary SWQMP
- Appendix 5.7-2: Preliminary Drainage Report
- Appendix 5.9-1: Noise Calculations
- Appendix 5.10-1: Traffic Impact Study
- Appendix 5.10-2: Parking Analysis
- Appendix 5.12-1: Energy Calculations
- Appendix 11-1: Agency Coordination

1.2.2 Type and Purpose of This DEIR

This DEIR has been prepared as a "Project EIR," defined by Section 15161 of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3). This type of EIR examines the environmental impacts of a specific development project and should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation.

1.3 PROJECT LOCATION

The project site is at Cardiff Elementary School, 1888 Montgomery Avenue, in the beach community of Cardiff-by-the-Sea, City of Encinitas, California. The site is 7.4 acres and roughly triangular in shape. It is bound by Montgomery Avenue on the north, Mozart Avenue on the south, and San Elijo Avenue on the west.

1.4 PROJECT SUMMARY

The proposed project entails demolition of five 1-story buildings, a portion of another building, and eight relocatable classrooms; construction of ten 1-story wood-framed buildings and a two-classroom addition to an existing building; and modernization of two existing buildings. The project would increase the school's building area by approximately 5,289 net square feet, including one new classroom and one specialty lab. The project would also enhance onsite passenger loading and parking. Construction would commence summer 2019 and be completed in approximately 19 months.

1.5 SUMMARY OF PROJECT ALTERNATIVES

Alternatives 1 and 2 were considered but rejected by the District. Alternatives A and B were selected for analysis. Chapter 7, *Alternatives to the Proposed Project*, analyzes the selected project alternatives in more detail and explains the reasons why Alternatives 1 and 2 were not selected for analysis.

1.5.1 Alternative 1, Maintain Multipurpose Room in Current Location

Under Alternative 1, the proposed improvements to Cardiff Elementary School would be implemented, but the existing multipurpose building would not be demolished and would be maintained at its current location.

1.5.2 Alternative 2, Scheme B Site Plan

Under Alternative 2, the District would construct the improvements proposed under the Scheme B Site Plan, which was presented at the Cardiff School Conceptual Site Design Meeting #2. Alternative 2 proposes to increase the number of classrooms from 25 to 27 and projects that a minimum of 14 classrooms would be needed for interim housing. The Scheme B classroom facilities would also be reconfigured from the proposed project site plan, but would be constructed within generally the same locations. An asphalt hardcourt, kindergarten and extended day care buildings, and a dedicated drop-off and parking area would be constructed over the existing baseball field, and the grass playfield would be extended to the southern portion

of the site near the intersection of Mozart Avenue and San Elijo Avenue. The existing brick building would be converted to a new "coffee spot".

1.5.3 Alternative A, No Project Alternative

Under Alternative A, No Project Alternative, the proposed improvements at the Cardiff School site would not be implemented. The existing facilities at the project site would remain in their current state, and the programs and operation of the site facilities when the Notice of Preparation was prepared are assumed to continue operation at the site.

1.5.4 Alternative B, Reduced Capacity

Alternative B, Reduced Capacity, is a reduced intensity alternative that proposes no net change in the number of classrooms from existing conditions. The improvements as proposed by the project would occur minus one new classroom. The classroom would be reduced either by conversion of a proposed space to a nonclassroom use, or via a redesign of one of the proposed buildings with one less room.

1.6 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the lead agency as to:

1. Whether this DEIR adequately describes the environmental impacts of the project.
2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the proposed land use changes are compatible with the character of the existing area.
4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
5. Whether there are other mitigation measures that should be applied to the project besides the Mitigation Measures identified in the DEIR.
6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

1.7 AREAS OF CONTROVERSY

In accordance with Section 15123(b)(2) of the CEQA Guidelines, the EIR summary must identify areas of controversy known to the lead agency, including issues raised by agencies and the public.

Prior to preparation of the EIR, the Notice of Preparation and Initial study were distributed for comment between May 8, 2018, and June 6, 2018. A summary of the NOP comments received are in Chapter 2, *Introduction* (see Tables 2-1, *Agency Responses*, and 2-2, *Public Comments*).

Agency letters and public comments received in response to the NOP included requests to address existing conditions, air quality, aesthetics, biological resources, cultural and historical resources, hydrology, land use and planning, noise, traffic and transportation, tribal cultural resources, alternatives, and other general considerations for development of the site.

1.8 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table 1-1 summarizes the conclusions of the environmental analysis contained in this EIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented.

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 AESTHETICS			
5.1-1 The proposed project would not substantially alter public views of scenic vistas, scenic corridors or vista points.	Less Than Significant	No mitigation measures required	Less Than Significant
5.1-2 The proposed project would alter the visual appearance of the site, but would not substantially degrade the existing visual character or quality of the surrounding area.	Less Than Significant	No mitigation measures required	Less Than Significant
5.2 AIR QUALITY			
5.2-1 Construction of the project would not exceed the SDAPCD significance thresholds or substantially contribute to the nonattainment designations of the SDAB.	Less Than Significant	No mitigation measures required	Less Than Significant
5.2-2 Operation of the project would not exceed the SDAPCD significance thresholds or substantially contribute to the nonattainment designations of the SDAB.	Less Than Significant	No mitigation measures required	Less Than Significant
5.2-3 Construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant	No mitigation measures required	Less Than Significant
5.2-4 Operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant	No mitigation measures required	Less Than Significant
5.3 BIOLOGICAL RESOURCES			
5.3-1 Development of the proposed project could impact four special-status bat species – Mexican long-tongued bat, Yuma myotis, western mastiff bat, and western red bat – and could impact protected nesting birds. One of the species of ornamental trees to be removed	Potentially Significant	BIO-1 A preconstruction nesting bird survey shall be conducted by a qualified biologist (i.e., one with experience conducting nesting bird surveys) to ensure potential impacts to nesting bird species do not occur during the breeding season. The survey shall comply with the conditions in the MBTA and California Fish and Game Code	Less Than Significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
is a special-status species, Torrey pine. Project development would involve replacement of Torrey Pines.		with methods accepted by the US Fish and Wildlife Service and the California Department of Fish and Wildlife to protect active bird/raptor nests. To the extent feasible, vegetation/tree clearing shall take place outside the general avian breeding season (February 1 through August 31). If vegetation clearing and/or tree removal cannot occur outside the general avian breeding season, then a preconstruction survey for avian nesting shall be conducted by a qualified biologist on the project site and areas within 500 feet of the site, within seven calendar days prior to the start of construction. If the biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. If the biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the biologist shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified biologist: work may proceed if it is (1) at least 500 feet from raptor nests; (2) at least 300 feet from federal- or state-listed bird species' nests; and (3) at least 100 feet from nonlisted bird species' nests. Encroachment into the buffer area around a known nest shall only be allowed if the biologist determines that the proposed activity would not disturb the occupants of the nest. A qualified biologist shall conspicuously	

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures		Level of Significance After Mitigation
			mark the buffer so that vegetation clearing and/or tree removal/trimming does not encroach into the buffer until the nest is no longer active (i.e., the nestlings fledge, the nest fails, or the nest is abandoned, as determined by a qualified biologist). All recommendations provided by the biologist shall be complied with.	
		BIO-2	No less than 7 days and no more than 14 days prior to beginning ground disturbance and/or demolition, a qualified wildlife biologist will conduct surveys for special-status bats on two days, during the appropriate time of day to maximize detectability, to determine if bat species are roosting near the work area. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, mistnetting, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat). The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required. If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. If roosts are identified in structures onsite and must be removed, the bats will be excluded from the roosting site before the facility is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed prior to implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., while females in maternity	

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures		Level of Significance After Mitigation
			colonies are nursing young). If roosts must be removed, the project applicant shall provide bat houses constructed on- or off-site in locations and settings where bats would be likely to use them. If bat houses are required, the District shall consult with the wildlife biologist regarding the design, materials, locations, and settings of the bat houses.	
5.4 CULTURAL RESOURCES				
5.4-1 Development of the project could impact an identified historic resource.	Potentially Significant	CUL-1	Prior to start of construction, the Cardiff School District shall retain a qualified historic architect or architectural historian (with experience in preparing rehabilitation plans) to assist in developing plans for the future use and function of the Little Brick Building. The District shall provide documentation to the public prior to application for a building permit that the plans for the building meet the requirements of The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings.	Less Than Significant
5.4-2 Development of the project could impact archaeological resources.	Potentially Significant	CUL-2	Prior to the start of construction, Cardiff School District shall retain a qualified archaeologist to monitor ground-disturbing activities. The archaeologist shall attend a meeting with the grading contractor, engineering geologist, grading engineer, and school authorities to establish a protocol for monitoring during all earth-disturbing activities. The meeting shall briefly summarize the prehistoric and historic use of the land, describe the types of cultural resources that may be encountered in the project area, and outline steps to follow in the event a discovery is made. The training shall be developed and presented by a registered professional archaeologist (RPA) and may run concurrently with	Less Than Significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures		Level of Significance After Mitigation
			other environmental training (biological, paleontology, safety training, etc.). The training may be videotaped or presented in an informational brochure for future use by field personnel not present at the start of the project phase. The RPA shall have the authority to stop grading or construction work within 25 feet of any discovery of potential historical or archaeological resources in order to test, analyze, and make a finding of significance under Section 15064.5 of the California Environmental Quality Act Guidelines; develop a plan for recovery, analysis, report, and curation of the recoveries, as appropriate; and report to an accredited and permanent scientific institution, such as the South Central Coastal Information Center and San Diego Natural History Museum.	
5.4-3 The proposed project could destroy paleontological resources.	Potentially Significant	CUL-3	Prior to the start of construction, the Cardiff School District shall retain a qualified paleontologist to determine if grading and excavation activities will encounter older Quaternary paralic deposits. If it is determined that older Quaternary paralic deposits will not be encountered, no additional work is required. If it is determined that construction could encounter older Quaternary deposits, the qualified paleontologist shall provide training to the construction staff, including but not limited to the grading contractor, engineering geologist, grading engineer, and school authorities to outline steps to follow in the event that a discovery is made. The paleontologist shall establish a protocol for monitoring during all earth-disturbing activities. The training shall be developed and presented by the paleontologist and may be videotaped or presented in an informal brochure for future use by field personnel not present at the start of the project phase.	Less Than Significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures		Level of Significance After Mitigation
			During construction, the paleontologist shall have the authority to halt construction activities to allow a reasonable amount of time to identify potential resources. If paleontological resources are discovered, the construction crew shall immediately cease work in the vicinity of the find. The paleontologist shall prepare a recovery plan in accordance with the Society of Vertebrate Paleontology guidelines (1996), which may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination, and a report of findings. Necessary and feasible recommendations in the recovery plan can also be provided by the lead agency and shall be implemented before construction activities resume at the site where the resources were discovered. Any discovered resources shall be curated with the facilities at the San Diego Natural History Museum.	
5.5 GEOLOGY AND SOILS				
5.5-1 Project development could expose people and structures to hazards from collapsible soils and expansive soils.	Potentially Significant	GEO-1	The proposed project shall be designed and constructed in accordance with the geotechnical engineering recommendations presented in Construction Testing & Engineering's Geotechnical Investigation Proposed Improvements to Cardiff School, subsequent geotechnical studies prepared for the proposed project, and recommendations provided by the geotechnical engineer. These recommendations address site preparation and grading, excavation, fill placement and compaction, onsite materials, and foundation and slab design to ensure potential soil hazards are remedied and the project adheres to the California Building Standards Code.	Less Than Significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.5-2 Project development would not expose people or structures to substantial hazards from liquefaction or ground subsidence.	Less Than Significant	No mitigation measures required	Less Than Significant
5.6 GREENHOUSE GAS EMISSIONS			
5.6-1 The proposed project would not generate an increase in GHG emissions, either directly or indirectly, that would cause a significant impact on the environment.	Less Than Significant	No mitigation measures required	Less Than Significant
5.6-2 The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less Than Significant	No mitigation measures required	Less Than Significant
5.7 HYDROLOGY AND WATER QUALITY			
5.7-1 Development pursuant to the proposed project would increase the amount of impervious surfaces on the site. The project includes proposed biofiltration basins that would reduce post-project runoff flow rates to below existing rates	Less Than Significant	No mitigation measures required	Less Than Significant
5.7-2 During the construction phase of the proposed project, there is the potential for short-term unquantifiable increases in pollutant concentrations from the site. After project development, the quality of storm runoff (sediment, nutrients, metals, pesticides, pathogens, and hydrocarbons) may be altered.	Less Than Significant	No mitigation measures required	Less Than Significant

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.8 LAND USE AND PLANNING			
5.8-1 Project implementation would not conflict with applicable plans and policies adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant	No mitigation measures required	Less Than Significant
5.8-2 Project implementation would not conflict with the Land Water Conservation Fund Act.	Less Than Significant	No mitigation measures required	Less Than Significant
5.9 NOISE			
5.9-1 Construction activities would result in temporary noise increases in the vicinity of the proposed project.	Less Than Significant	No mitigation measures required	Less Than Significant
5.9-2 Project implementation would not result in long-term operation-related noise that would exceed local standards	Less Than Significant	No mitigation measures required	Less Than Significant
5.9-3 The project would not create substantial groundborne vibration and groundborne noise.	Less Than Significant	No mitigation measures required	Less Than Significant
5.10 TRANSPORTATION/TRAFFIC			
5.10-1 Project-related trip generation and student relocation during construction phasing would not impact levels of service for the existing area roadway system.	Less Than Significant	No mitigation measures required	Less Than Significant
5.10-2 Project-related trip generation in combination with existing and proposed cumulative development would not exceed CMP performance standards.	Less Than Significant	No mitigation measures required	Less Than Significant
5.10-3 The proposed project would provide adequate parking.	Less Than Significant	No mitigation measures required	Less Than Significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.10-4 Project circulation improvements have been designed to adequately address potentially hazardous conditions, such as long queues and emergency access.	Less Than Significant	No mitigation measures required	Less Than Significant
5.11 TRIBAL CULTURAL RESOURCES			
5.11-1 The project site is not listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources.	Less Than Significant	No mitigation measures required	Less Than Significant
5.11-2 Tribal cultural resources on the project site are not anticipated to be identified by the lead agency or a California Native American Tribe.	Potentially Significant	TCR-1 The RPA shall also monitor for potential tribal cultural resources. If tribal cultural resources are recovered, the RPA shall contact the liaisons for the local Native American tribes, including their Native American monitors, to assess the find and as appropriate return the artifact to the appropriate tribe(s).	Less Than Significant
5.12 ENERGY			
5.12-1 Construction activities would not result in wasteful, inefficient, and unnecessary consumption of energy or have excessive energy requirements.	Less Than Significant	No mitigation measures required	Less Than Significant
5.12-2 Operation of the school does not create a land use and pattern that cause wasteful, inefficient, and unnecessary consumption of energy or create buildings that would have excessive energy requirements.	Less Than Significant	No mitigation measures required	Less Than Significant

1. Executive Summary

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2. Introduction

2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

California Environmental Quality Act (CEQA) requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. This draft environmental impact report (DEIR) has been prepared to satisfy CEQA and the CEQA Guidelines. The environmental impact report (EIR) is the public document designed to provide decision makers and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce or avoid environmental damage and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth-inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

The lead agency means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment" (Guidelines § 21067). The Cardiff School District (District) has the principal responsibility for approval of the Cardiff School Modernization and Reconstruction Project. For this reason, the District is the CEQA lead agency for this project.

The intent of the DEIR is to provide sufficient information on the potential environmental impacts of the proposed Cardiff School Modernization and Reconstruction Project to allow the District to make an informed decision regarding approval of the project. Specific discretionary actions to be reviewed by the District are described in Section 4.3, *Intended Uses of the EIR*.

This DEIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code, §§ 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, §§ 15000 et seq.)

The overall purpose of this DEIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the development and operation of the proposed project. This DEIR addresses effects that may be significant and adverse; evaluates alternatives to the project; and identifies mitigation measures to reduce or avoid adverse effects.

2.2 NOTICE OF PREPARATION AND INITIAL STUDY

Per CEQA Guidelines Section 15082, the District determined that an EIR would be required for the proposed project and issued a Notice of Preparation (NOP) of an Environmental Impact Report on May 8, 2018 (see Appendix 1-1). The NOP identifies the scope of the environmental issues to be addressed in the DEIR, based on an Initial Study that evaluated 17 environmental resource categories. Issues considered Potentially Significant are addressed in this DEIR, and those identified as Less Than Significant or No Impact are not. Refer to the initial study in Appendix 1-1 for discussion of how the initial determinations were made.

Public outreach for the NOP included its distribution by the following methods:

- The NOP was posted on May 7, 2018, at the San Diego County Assessor/Recorder/County Clerk.
- The NOP was published on May 8, 2018, in *The Daily Transcript* newspaper.
- The NOP was distributed to 28 local and regional agencies.
- The NOP and Initial Study were distributed to 15 state agencies through the Governor's Office of Planning and Research, State Clearinghouse.
- The NOP and Initial Study were available for review at:
  - Cardiff School District, 1888 Montgomery Avenue, Cardiff, CA 92007.
  - Cardiff-by-the-Sea Branch Library, 2081 Newcastle Avenue, Cardiff, CA 92007.
  - Cardiff School District website: https://www.cardiffschools.com.

Copies of the written comments on the NOP are included in Appendix 2-1 of this EIR. Four agencies submitted written responses and 31 public comment letters were received during the NOP review period. Agency comments are summarized in Table 2-1, *Agency Responses;* references to the EIR sections where the raised issue is addressed are included. Table 2-2, *Public Comments*, summarize the issues submitted in writing by the public.

Table 2-1 Agency Responses

Agency	Comment Summary	Issue Addressed In:
Viejas Band of Kumeyaay Indians	• The Viejas Band of Kumeyaay Indians stated that the project area may contain sacred sites to the Kumeyaay people. • The Viejas Band of Kumeyaay Indians requests that: – All NEPA/CEQA/Native American Graves Protection and Repatriation Act laws be followed. – The Viejas Band of Kumeyaay Indians be contacted on any changes or inadvertent discoveries. – Sacred sites be avoided with adequate buffer zones.	DEIR 5.4, Cultural Resources DEIR 5.11, Tribal Cultural Resources Initial Study 5.5, Cultural Resources (Appendix 1-1)

Table 2-1 Agency Responses

Agency	Comment Summary	Issue Addressed In:
Native American Heritage Commission (NAHC)	• The NAHC recommends consulting with legal counsel about compliance with AB 52 and SB 18 as well as other applicable laws. • The NAHC states that lead agencies shall consult with all California Native American tribes affiliated with the geographic area of the proposed project. • The NAHC provides recommendations for cultural resources assessments to adequately assess the existence and significance of tribal cultural resources. Recommendations include: – Contacting the appropriate regional California Historical Research Information System. – Preparing a professional archaeological report detailing findings and recommendations of the records search and field survey, as required. – Contacting the NAHC for a Sacred Lands File search and a Native American Tribal Consultation List. – Being aware that lack of surface evidence of archaeological resources does not preclude their subsurface existence.	DEIR 5.4, Cultural Resources DEIR 5.11, Tribal Cultural Resources
Department of Toxic Substances Control (DTSC)	• The DTSC states that the EIR should identify and determine whether current or historical uses at the project site may have resulted in any release of hazardous wastes/substances. • The DTSC states that the preparation of a Phase I Environmental Site Assessment may be necessary to identify recognized environmental conditions (REC). • The DTSC recommends environmental oversight under the DTSC school program to ensure the school is safe. • The DTSC states that if there are RECs in the project area, then proper investigation, sampling, and remedial actions are overseen by regulatory agencies prior to any construction.	Initial Study 5.8, Hazards and Hazardous Materials (Appendix 1-1)
Governor's Office of Planning and Research (OPR)	• The OPR distributed the NOP to the following agencies: – California Coastal Commission – Office of Historic Preservation – Department of Water Resources – Fish and Wildlife Region 5 – Native American Heritage Commission – California Department of Education – Public Utilities Commission – California Highway Patrol – Caltrans, District 11 – California Department of Resources, Recycling and Recovery – State Water Resources Control Board, Division Drinking Water #14 – Department of Toxic Substances Control – Department of Fish and Wildlife, Marine Region	N/A

2. Introduction

Table 2-2 Public Comments

Topic Area	Comment Summary
General Comments	• The current school footprint is more than required to offer a quality education for children. • Various areas of the Initial Study/NOP require more scrutiny: Cardiff enrollment, increase in square footage; reduction in George Berkich Park, addition of only 2 rooms (25 to 27 rooms); construction phasing and ongoing heavy construction where George Berkich Park is used for construction laydown; environmental factors pertaining to aesthetics, land use and planning, transportation and traffic, and noise; oversight of the LWCF agreement; and impact of reducing park space to young and old athletes. • Lack of traffic supervision during pick up/drop-off periods results in congestion and residents being blocked from entering/exiting their driveways. • Lack of sidewalks mean that people often park without concern for residents' accessibility, which would be problematic in the event of an emergency. • Demolition and construction would increase greenhouse gases; a more environmentally sensitive approach could have included repurposing existing structures. • Have studies been done on the effects on the neighborhood of construction traffic and noise and the new traffic pattern as a result of the new entrance? • What is the impact of air quality and noise on children due to relocating the classrooms near the busy street?
Communication	• Poor interaction between community and school board. • Segments of the community feel alienated due to the District's tactical maneuvering. • Feedback from the community is being ignored. • How has the information pertaining to the project been made available to the public who do not have children at Cardiff Elementary or Ada Harris? • Why are citizens asked for their input if it does not necessarily change or prevent a proposed project? The CPP process is flawed; the proposed project should be delayed until there is a guarantee that citizens' feedback will make a difference in the proposed project. • It is inadequate to put a link to the NOP on the bottom of an unchanged webpage. An email list should be created so that subscribers would receive an email when important documents are updated. • The public comment period was too brief. • The District provides little or no advance notice of meetings, and the public is generally not informed of meeting changes unless one follows the school website regularly. • Details of proposals are not made public or discussed openly, and the Board approves proposals without discussion. The Board does not permit the public to ask questions, and the Board is not required to answer the public's questions. The process by which the Board addresses the public's questions, such as comment, must be given to Siena Randall, President of School Board, prior to meetings, and the format of meetings is unfair and demeaning. • There was no public notice or call for potential school board candidates. • There has been no report issued by the Citizens Oversight Committee to the public. • An internal memo sent to staff and teachers of Ada Harris and Cardiff Elementary stated that plans are finalized and all construction documents are to be approved during June 2018. The public has not been presented official illustrations other than conceptual designs. The official financial program has not been made available to the public.
LWCF	• The LWCF agreement protects "in perpetuity" the George Berkich park footprint for the enjoyment of everyone, not organized groups. • Valuable open space that is federally protected is being taken away. • The District's proposal fails to mention that the proposed project must undergo environmental review under NEPA. • The District must complete NPS Form 10-904 for environmental review of the converted and replacement sites, for OGAL's review.

Table 2-2 Public Comments

Topic Area	Comment Summary
	• The proposed EIR does not address the project's impacts on context, according to NEPA, and ignores the requirements for LWCF grant compliance. • Failure to complete all mandatory reviews would not be time nor cost efficient. • The City is a signatory on the LWCF agreement and should be concerned if the District is going to ignore the LWCF agreement. The destruction of the LWCF-protected parkland is unacceptable.
George Berkich Park	• There is limited parks/open free space within the beachside Cardiff community. Glen Park is not flat. Will the new fields be open to anyone at any time? • Increasing the school's boundary within the park and potentially restricting access that used to be open to the public affects inclusion. • Refrain from construction [at] the current open field areas. • Research suggests that physical activity improves cognitive learning; therefore, taking away space from the fields would affect this. • The recent proposal that paves over a significant portion of green space is an issue that impacts everyone. • The EIR should further discuss the school's proposed taking of the park. • Loss of park space would have an adverse physical effect on the environment. • Building in the park would destroy precious open space. No buildings should be constructed on the park. • How is the District addressing the agreement with the LWCF? • The park is a community asset that promotes healthy lifestyles and socialization. The park can increase property values. Building on the park would destroy this asset. • There would be a potentially significant impact to recreation as the proposed project encroaches onto the park, which would impact the public's use of the park during non-school hours. This would result in impacts to offsite parks and recreational facilities. • Consideration must be given to environmental impacts arising from the designation of replacement property as required under the conversion provisions of the LWCF, which must be reasonably equivalent in usefulness and location. Since no replacement property has been identified, environmental impacts have yet to be determined. • The destruction of the park is not in the best interest of anyone, and a compromise on retaining the park without paving or constructing view-blocking structures on the park should be made.
Measure GG	• Property owners are funding Measure GG, which is being used to fund the proposed project. The District needs to take this into consideration and make decisions that are best for everyone. • Measure GG Bond stated provisions [to] completely demolish Cardiff School [have] been dishonest, and the non-transparent procedures have manipulated the public's understanding. • Money spent on the school is excessive and greedy, considering that the school accommodates approximately 300 K-3 graders and is not a K-5/K-6 school that would accommodate 500-600 students. • The Bond that was passed was for the school to upgrade and enhance existing structures, not redesign the layout and encroach on park space. • The project was passed for rebuilding the school, not for reducing parkland. • The measure was to make improvements to the existing structures, not to increase the school's footprint. • There is opposition to Measure GG, which does not state that the project would be built on the park. Building on preserve land could result in litigation, which would impact the District's budget. • How did the bond proposal change from updating plumbing and roofing to becoming an entirely new campus for just a few grades? • The current proposal is different from the Bond that was voted on several years ago.

Table 2-2 Public Comments

Topic Area	Comment Summary
Site Design	• The design plan dated May 10, 2018, is an improvement from the previous design. However, will this design be kept, or would there be additions/changes to elevations and boundaries? • The proposed design would impact residents' views, quality of life, property values, and traffic. • The new structures would impact scenic ocean vistas. • An elevation drawing should be provided as the current renderings do not delineate the heights of buildings. • The park should be preserved, and an alternative design where buildings do not extend along Mozart Avenue, and increased traffic congestion along Montgomery Avenue does not occur should be considered. • The design does not fulfill its stated objectives. • Increase in impervious surfaces will impact water quality and burden existing inadequate drainage systems. • The expanded drop-off zone will increase vehicular traffic. The design should be modified to reduce impervious areas and redirect vehicular traffic to a new drop-off zone along San Elijo Avenue. • The proposed project is oversized and exceeds what is needed for the school; what makes Cardiff special is that it is not overbuilt. • People enjoy the small town feel of Cardiff and the greenery. Preserve the current park/open field concept. • The proposed location of the play structures would pave open space. These structures should be relocated and the open space in the park should be preserved. • Trees will have to be removed for construction, is there no workaround? Are Torrey Pines protected? What is the legality and environmental impact of tree removal/removal of Torrey Pines? • The open space should be maintained, the buildings should be reconfigured with a tighter footprint to ensure open space is preserved, and all mature trees should be saved. • The proposed project is out of character with the neighborhood and will negatively impact property values, and the new Building L would result in the loss of park space.

2.3 ENVIRONMENTAL SCOPING MEETING

Pursuant to Public Resources Code Section 21083.9 and CEQA Guidelines Sections 15082(c)(1) and 15206(b)(4)(C), the project is considered a project of areawide significance. Accordingly, an environmental scoping meeting was held on June 12, 2018. This meeting also fulfilled requirements of the City of Encinitas Citizen Participation Program. A summary of the meeting and copies of the presentation, sign-in sheet, and verbal and written comments are in Appendix 2-1 of this EIR. Table 2-3, *Scoping Meeting Comments*, includes verbal and written comments received at the meeting.

Table 2-3 Scoping Meeting Comments

Topic Area	Comment Summary
Verbal Comments	
Views	• Views have been reduced over the years, and the view corridor from residents' homes has diminished. Views from Montgomery Avenue have been addressed, but now buildings are moving down Mozart Avenue, which is affecting the view corridor. • In addition to new buildings, there seem to be new trees too. The farther you move trees along San Elijo Ave, the more likely views will be blocked. Is there any consideration as to what type of trees would be planted, such as height and whether you can see between the trees? For the residents on Mozart Avenue, the large ficus tree blocks views and it does not get trimmed. Can there be a consistent planting of trees so that views are not blocked, and so that the property/neighborhood is enhanced and there is consistency with the neighborhood? There is a haphazard selection of trees, currently.
Traffic	• There are now three proposed drop-off areas. The school cannot even maintain one. People are parking in front of residents' homes, which is blocking access to driveways. No one is directing traffic during drop-off times. • Is there a third entry proposed on San Elijo? • Has the number of parking spaces, current and proposed, been addressed? Inviting more cars, through the increase in parking, on residential streets, should be addressed in the EIR.
LWCF	• The community's understanding is that the park is dedicated. The park's square footage will be greatly reduced, what is the square footage of the proposed reduction? The NOP provides square footages of the proposed buildings, why is the park's proposed square footage not determined? The City has been approached with a land conversion plan. • Biological resources are one of the environmental issues to be analyzed. The District has provided outdoor education for the students, it would be great if this were continued with the kinds of parks and plants. • The flowchart is helpful in terms of identifying where the process is currently. The site plan has to be in its final stage before it gets to the EIR. Before the final EIR, would all the work with NPS and OGALS have to be resolved? Does the situation with OGALS have to be resolved before the completion of the NEPA process? Is the conversion of the LWCF plan part of the NEPA process? Are the EIR and the EIS of NEPA related? Where are the NEPA recommendations in the flow chart? • How large is the park, and what is the square footage of the impervious surfaces (existing vs. proposed)? • It is important to acknowledge the District for giving the public the opportunity to provide feedback. The District has done a good job in addressing the public's issues/concerns. The park is a resource to the community. The footprint of the school is limited. Everyone's desires cannot be satisfied. There can still be some fine-tuning with the project. Everyone should engage in compromise and dialogue. • The community's understanding of the agreement is that if the school is going to take away some of the land, then the school needs to give back some land too. Is the plan to try and get an exception for that, and override the agreement?
Site Design	• When the DEIR is published, will the final site plan be published in the DEIR or will the final site plan be produced as a result of the comments from the DEIR? • The multipurpose building is a two-story building. The community's understanding is that the multipurpose building will be open for public use. How are the facilities going to improve the students' education?

Table 2-3 Scoping Meeting Comments

Topic Area	Comment Summary
Written Comments	
General	• Community is concerned that delay will cost tax payers money and will decrease funds available for non-building expenses. • The materials and presentation presented at the joint environmental scoping and CPP meeting were concise and informative. A few residents are looking forward to a new and modernized school. • The EIR process is somewhat unclear—what are the other agencies; is the school approving its own EIR? Discussion of views was not presented which was in EIR document. • What is the impact of additional parking on Montgomery (more cars on residential streets)? • Is there a third entry on San Elijo Avenue? If not, why? • Will the Canary Palm to be set in pavement survive or be protected? And Torrey Pines? • The park should not be paved or built on. There should be more green space and less concrete. How much green space is being lost? • Please clarify the number and type of new trees which will be planted in the park and school grounds, including maximum height, bulk, and mass. • What efforts will be taken to mitigate the loss of ocean views from adjacent neighbors caused by the planting of trees on park and school grounds?

2.4 SCOPE OF THIS DEIR

The scope of the DEIR was determined based on the District's initial study, comments received in response to the NOP, and comments received at the scoping meeting. Pursuant to Sections 15126.2 and 15126.4 of the CEQA Guidelines, this DEIR identifies potentially significant adverse impacts and recommends mitigation that would eliminate these impacts or reduce them to less than significant. The information in Chapter 3, *Environmental Setting*, establishes the basis for analyzing future, project-related environmental impacts in Chapter 5, *Environmental Analysis*.

2.4.1 Impacts Considered Less Than Significant

During preparation of the Initial Study, the District determined that seven environmental impact categories were not significantly affected by or did not affect the proposed Cardiff School Modernization and Reconstruction Project. These categories are not discussed in detail in this DEIR.

- Agriculture and Forestry Resources
- Hazards and Hazardous Materials
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems

2.4.2 Potentially Significant Adverse Impacts

The District determined that 12 environmental factors have potentially significant impacts if the proposed project is implemented.

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation and Traffic
- Tribal Cultural Resources
- Energy

2.4.3 Unavoidable Significant Adverse Impacts

Unavoidable adverse impacts may be considered significant on a project-specific basis, cumulatively significant, and/or potentially significant. The District must prepare a Statement of Overriding Considerations before it can approve the project, attesting that the decision-making body has balanced the benefits of the proposed project against its unavoidable significant environmental effects and has determined that the benefits outweigh the adverse effects, and therefore the adverse effects are considered acceptable. The project would not result in unavoidable significant adverse impacts.

2.5 FINAL EIR CERTIFICATION

This DEIR is being circulated for public review for 45 days. Interested agencies and members of the public are invited to provide written comments on the DEIR to the District address shown on the title page of this document. Upon completion of the public review period, the District will review all written comments received and prepare written responses for each. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from comments. The FEIR will be presented to the District Board of Education for potential certification as the environmental document for the project. All persons who comment on the DEIR will be notified of the availability of the FEIR and the date of the public hearing before the District.

The DEIR is available to the general public for review at various locations:

- Cardiff School District, 1888 Montgomery Avenue, Cardiff
- Cardiff-by-the-Sea Branch Library, 2081 Newcastle Avenue, Cardiff
- Cardiff School District website: https://www.cardiffschools.com

2.6 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires agencies to adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code 21081 or adopted a Negative Declaration pursuant to 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration. The Mitigation Monitoring Program for the Cardiff School Modernization and Reconstruction Project will be completed as part of the Final EIR, prior to consideration of the project by the Cardiff School District Board of Education.

3. Environmental Setting

3.1 INTRODUCTION

This section provides a "description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, ... from both a local and a regional perspective" (Guidelines § 15125[a]), pursuant to provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines The environmental setting provides the baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the proposed project.

3.2 REGIONAL ENVIRONMENTAL SETTING

The proposed project is in the beach community of Cardiff-by-the-Sea in the City of Encinitas, which is surrounded by the City of Carlsbad to the north, the City of Solana Beach to the south, unincorporated areas of San Diego County to the east, and the Pacific Ocean to the west. Figure 3-1, *Regional Location*, shows the project site in its regional context.

3.3 LOCAL ENVIRONMENTAL SETTING

3.3.1 Project Site

The project is proposed at 1888 Montgomery Avenue. The project site is roughly triangular in shape and encompasses the entire Cardiff School property. It is surrounded by Montgomery Avenue on the north, Mozart Avenue on the south, and San Elijo Avenue on the west. Figure 3-2, *Local Vicinity,* is a map of the surrounding area, and Figure 3-3, *Aerial Photograph*, is a satellite view of the proposed site.

The project site is approximately 7.4 acres and includes Assessor's Parcel Numbers (APNs) 260-3400-100 and 260-3400-200. The site gently slopes down from east to west toward the ocean; elevations range from 98 feet above mean sea level on the eastern side of campus to 78 feet above mean sea level on the western side.

3.3.1.1 FACILITIES

The site includes school buildings on the eastern portion and open space and field areas on the west. The campus's 40,465 net square feet of building area includes 19 instructional classrooms, programmatic laboratories (art, learning, and computer), a library/media center, school and District administration offices, a multipurpose building, and a kitchen with outdoor lunch court. The administration building, library/media center, and academic labs/rooms were constructed in 2001; the portable classrooms were installed between 1985 and 1995; the multipurpose building was constructed in 1962; and the remaining permanent classroom buildings were built between 1950 and 1960. Figure 3-4, *Existing Site Plan*, shows the site plan of the existing facilities.

3. Environmental Setting

Outdoor recreational uses include baseball and soccer fields in the northwest and southwest corners of the campus, respectively; three areas with playground structures and swings, one between the two fields and two on the eastern side of the site for the school's kindergarten program; and a blacktop play area east of the soccer field.

A brick building—likely built in the late 1930s—is at the northwest corner of the site, near the corner of San Elijo Avenue and Montgomery Avenue. The District acquired the building and property (APN 260-3400-100) in 2001 and uses it for storage. The school also operates a vegetable garden east of the brick building and a pollinator garden near the corner of Mozart Avenue and San Elijo Avenue. An informal dog park—operated by community members—is on Montgomery Avenue, next to the vegetable garden.

3.3.1.2 ACCESS AND PARKING

The main entrance to the campus is through the school's parking lot on Montgomery Avenue. Vehicular access is via two 1-way driveways. The parking lot contains 29 stalls and an approximately 80-foot-long passenger loading area adjacent to the administration building that can safely accommodate two vehicles at a time. Two other passenger loading areas are on Mozart Avenue. Figures 3-5a and 3-5b, *Site Photographs,* show photos of the existing campus.

3.3.1.3 OPERATIONS

Cardiff School is one of two schools operated by the District. Cardiff School offers kindergarten and grades 1 through 3. The District also operates Ada Harris School at 1508 Windsor Road, approximately one mile east of the project site. Ada Harris School offers programs for grades 3 through 6.

Cardiff School follows the District's attendance calendar. During the fall, the kindergarten bell schedule starts at 8:15 AM and ends at 12:15 PM. Beginning January, the kindergarten program is extended to full-day and class ends at 2:35 PM. Grades first through third start school at 8:15 AM and end at 2:35 PM every day, except Wednesday, which follows a minimum day schedule that ends at 12:15 PM.

Based on a classroom count of 19 and the District's classroom loading ratio of 22 students per classroom, Cardiff School has a maximum seating capacity of 418 students. In April 2018, Cardiff School enrolled 347 students in kindergarten through 3rd grade. Its highest enrollment of 440 students occurred during the 2001-02 school year; over the last 10 school years the school has maintained an average enrollment of 367 students. Table 3-1, *Cardiff School 10-Year Enrollment History*, shows the 10-year enrollment history of Cardiff School.

Table 3-1 Cardiff School 10-Year Enrollment History

School Year	Enrollment
2017–18	347
2016–17	337
2015–16	376
2014–15	361
2013–14	366
2012–13	395
2011–12	384
2010–11	377
2009–10	364
2008–09	366
10-Year Average Enrollment:	**367**

Source: CDE 2018

The District also operates an extended daycare program on the campus to accommodate families that require care of students before and after the school bells. These are the same students enrolled at Cardiff School.

The District owns the entire project site and allows community use of the dog park during the school day. When the facilities are not in use by the District, community use is allowed through a joint use agreement with the City of Encinitas and via the Civic Center Act.[1] Organized uses at the site include Cardiff Soccer and other sports practices, numerous after-school enrichment classes and programs, summer camps, and evening community meetings.

3.3.2 Surrounding Land Uses

The project site is in a residential community interspersed with low-density single- and multifamily residences. The site is roughly 500 feet east of the Pacific Ocean and surrounded by:

- **North:** Montgomery Avenue is north of the campus and lined with single-family residences.
- **East:** Single-family residences are to the east along Montgomery Avenue and Mozart Avenue.
- **South:** Mozart Avenue is south of the campus. Single- and multifamily residences are along Mozart Avenue.
- **West:** San Elijo Avenue borders the campus on the west. San Elijo Avenue parallels the North County Transit District Rail easement, U.S. Highway 101 (South Coast Highway), and the beach. The Coastal Rail Trail, parallel and east of the train tracks, is currently under construction.

[1] Sections 38130 et seq. of the California Education Code, known as the Civic Center Act, state that every public school in the state must make available a "civic center" for community use. Specific uses and users of the civic center are in the Education Code.

3.4 ZONING, GENERAL PLAN, LOCAL COASTAL PLAN

The City of Encinitas General Plan Land Use designation for the project site is Public/Semi-Public (Encinitas 2013a). The site is zoned P/SP (Public/Semi-Public). The P/SP land use is for activities operated by governmental agencies, including school districts (Encinitas 2017a). The site is also in a Special Study Zone and Coastal Bluff Overlay Zone (Encinitas 2017b). According to the City of Encinitas General Plan, the Special Study zone is inclusive of all special study overlays and does not have established development standards—the City designates development standards for each overlay within a Special Study zone. Surrounding land use designations include: Residential R8 (5.01–8.00 dwelling units [du]/acre [ac]) and Residential R11 (8.01–11.00 du/ac) to the north; transportation corridor (TC) to the west; Residential R8 to the south; and Residential R8 and R11 to the east. Figure 3-6, *Land Use Designation and Zoning,* shows the site and surrounding uses.

3.5 LAND AND WATER CONSERVATION FUND

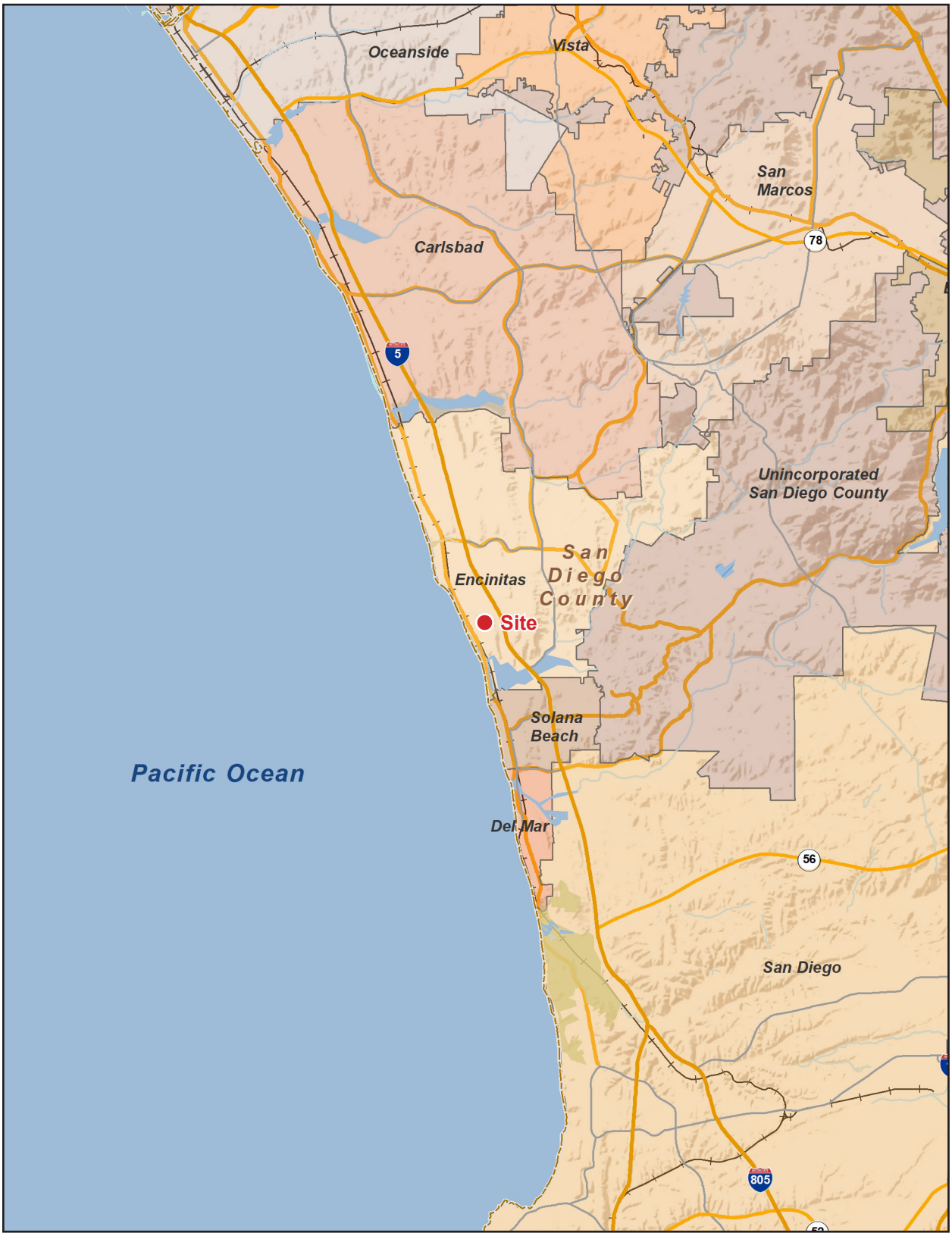
A portion on the western side of the project site—developed with school fields and outdoor recreational improvements—operates and is maintained as public outdoor recreational space when not used by Cardiff School. This area is protected under Section 6(f)(3) of the Land and Water Conservation Fund (LWCF) Act, which is a federal grant that funds improvements for the purposes of maintaining the country's natural areas, water resources, and cultural heritage, and of providing recreation opportunities, which was the purpose of the LWCF-grant applied on the project site in the 1990s. Grant recipients are required to maintain the LWCF-improved area as outdoor recreational space for perpetuity. Figure 3-7, *Existing 6(f)(3) Boundary Map,* shows the LWCF-boundary on the project site. As shown, an entire school building and a portion of another building are within the 6(f)(3) boundary; these improvements were made in the early 2000s.

3.6 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Cumulative impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (14 C.C.R § Section 15130[b]). Cumulative impacts are the change caused by the incremental impact of the project evaluated in the EIR together with the incremental impacts from closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Figure 3-1 - Regional Location

3. Environmental Setting

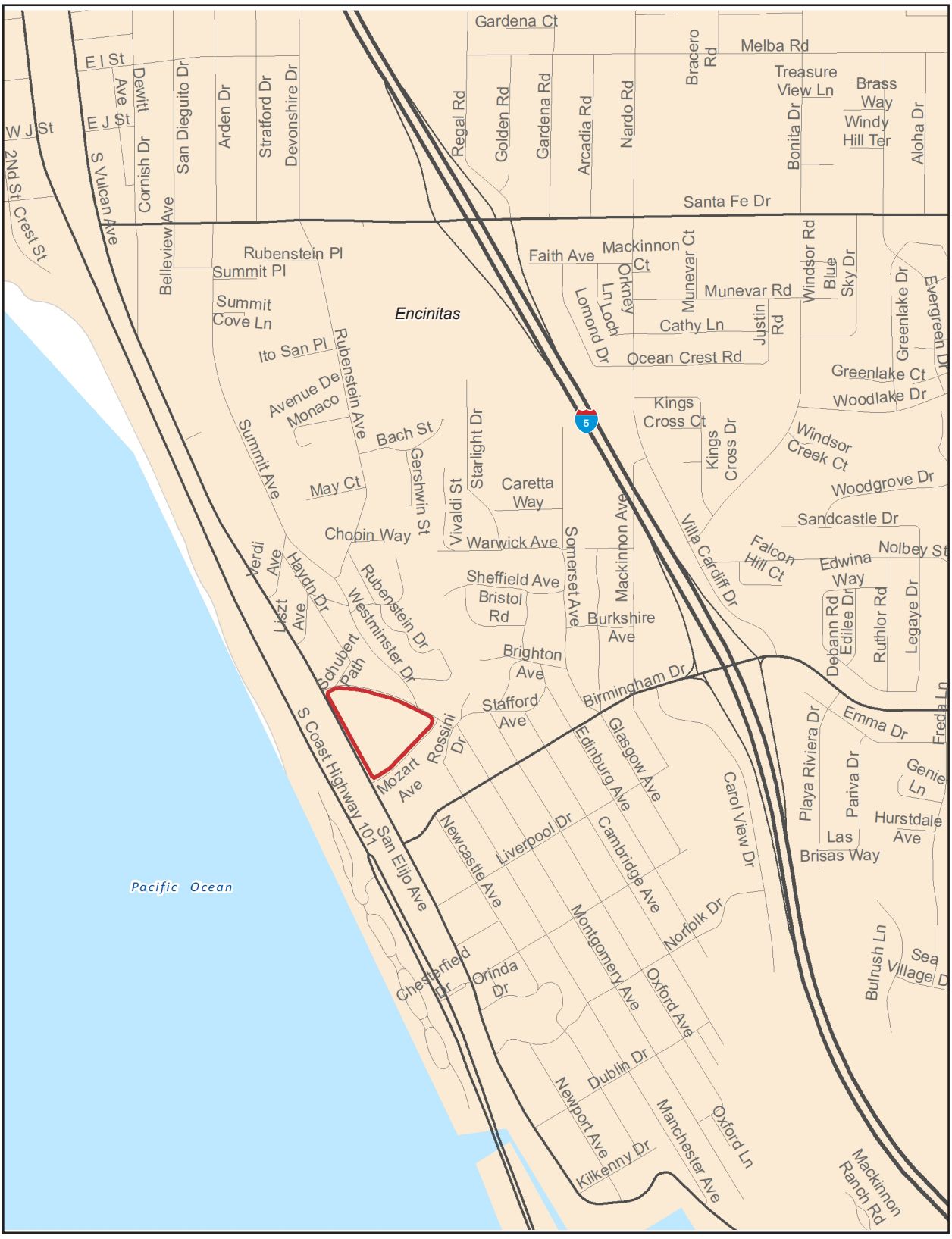


Source: ESRI, 2017

3. Environmental Setting

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Figure 3-2 - Local Vicinity
3. Environmental Setting



Source: ESRI, 2017

3. Environmental Setting

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Figure 3-3 - Aerial Photograph
3. Environmental Setting



Project Site

0 350
Scale (Feet)

Source: Google Earth, 2017

3. Environmental Setting

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Figure 3-4 - Existing Site Plan

3. Environmental Setting



Source: Studio E Architects, March 8, 2018.

3. Environmental Setting

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Figure 3-5a - Site Photographs
3. Environmental Setting



View of the school entrance and parking lot from Montgomery Avenue.



View of the western passenger loading zone on Mozart Avenue.



View of the eastern passenger loading zone on Mozart Avenue.

3. Environmental Setting

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Figure 3-5b - Site Photographs
3. Environmental Setting



View of the playground from San Elijo Avenue. Existing fields are to the left and right.



View of the brick building at northwest corner of the campus. Behind the building is the school's vegetable garden and a dog run used by the community.



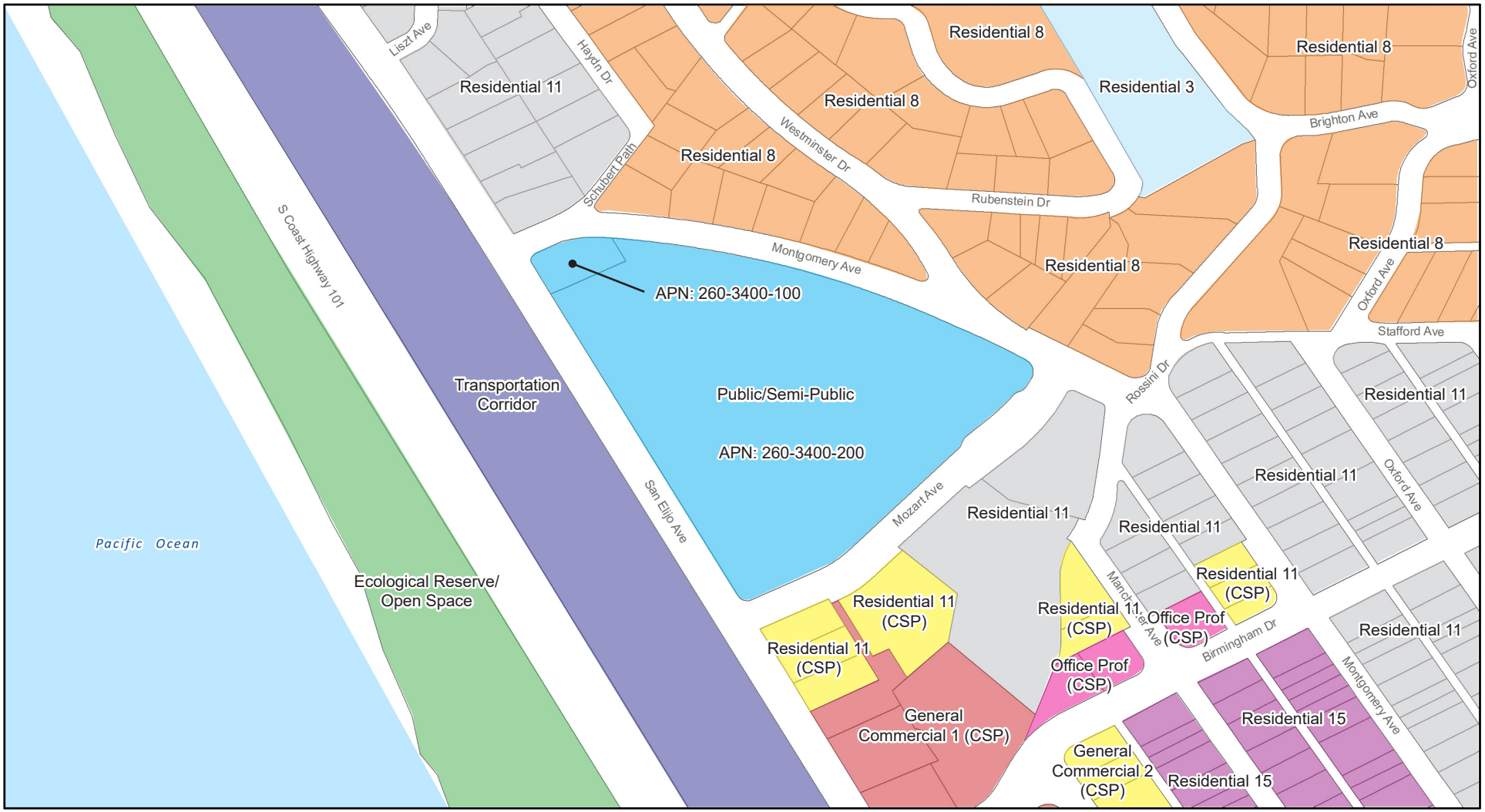
View of the playground at northeast corner of the site. This playground would be removed and a new play area would be constructed to the left.

3. Environmental Setting

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Figure 3-6 - Land Use Designation and Zoning

3. Environmental Setting



Source: ESRI, 2018

3. Environmental Setting

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Figure 3-7 - Existing 6(f)(3) Boundary Map



Existing 6(f)(3) Boundary

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Scale (Feet)

Source: Google Earth Pro, 2018

3. Environmental Setting

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Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable. It further states that this discussion shall reflect the level and severity of the impact and likelihood of occurrence, but not in as much detail as the project.

The information used in an analysis of cumulative impacts comes from one of two sources:

A. A list of past, present, and probable future projects producing related cumulative impacts, including, if necessary, projects outside of the control of the agency.

B. A summary of projections in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, that described or evaluated regional or area-wide conditions contributing to the cumulative impact.

The cumulative impact analyses in this EIR use a combination of sources A and B. Depending on the environmental category, the cumulative impact analysis may use either source. Some impacts are site specific, such as cultural resources, and others may have impacts outside the District boundaries, such as regional air quality.

A list of approved and reasonably foreseeable projects near the project site are listed in Table 3-2, *Related Cumulative Projects*. Figure 3-8, *Related Cumulative Projects*, shows where these projects are relative to the project site. Please refer to sections in Chapter 5, *Environmental Analysis*, for a discussion of the environmental impacts associated with cumulative development.

Table 3-2 Related Cumulative Projects

Project Name	Location	Project Type
1. Coastal Rail Trail	Between the North County Transit District rail lines and San Elijo Avenue	Pedestrian and bicycle path
2. Verdi/Liszt Avenue Undercrossing Project	Between Verdi Avenue and Liszt Avenue	Pedestrian undercrossing
3. North County Transit District (NCTD) Double Track Project	NCTD rail from Birmingham Drive to Solana Beach	Railroad lane expansion
4. Scripps Hospital Master Plan	Northwest corner of Santa Fe Drive and I-5 freeway	Master Plan
5. I-5 North Coast Corridor Project	I-5 freeway from Lomas Santa Fe Drive (Solana Beach) to State Route 78 (Oceanside)	Freeway widening with new carpool lanes
6. San Elijo Lagoon Restoration	San Elijo Lagoon	Wetland restoration

3.7 REFERENCES

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Figure 3-8 - Related Cumulative Projects

3. Environmental Setting



1 Coastal Rail Trail

2 Verdi/Liszt Avenue Undercrossing

3 NCTD Double Track Project

4 Scripps Hospital Master Plan

5 I-5 North Coast Corridor Project

6 San Elijo Lagoon Restoration Project

0 1,200
Scale (Feet)

Source: ESRI, 2017

3. Environmental Setting

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4. Project Description

4.1 STATEMENT OF OBJECTIVES

Objectives for the Cardiff School Modernization and Reconstruction project will aid decision makers in their review of the project and associated environmental impacts:

1. Implement facility improvements at Cardiff School per the District's Guiding Principles for electorate-approved Measure GG:
    a. Create a safe and secure environment.
    b. Connect the school to the community: place community and active uses along the school's perimeter.
    c. Prioritize green space and public views; provide ample play space.
    d. Improve traffic flow and safety for pick-up.
    e. Emphasize sustainability and environmentally focused design.
    f. Prioritize learning spaces; create useable outdoor learning environments.
2. Replace portable classrooms with permanent classroom facilities.
3. Renovate/retrofit the "Little Brick Building."
4. Maximize use of limited District funds.
5. Maximize use of District-owned property.
6. Regain and maintain compliance with the Land and Water Conservation Fund agreement.

4.2 PROJECT CHARACTERISTICS

"Project," as defined by the CEQA Guidelines, means "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is… (1) An activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures…" (14 Cal. Code of Reg. 15378[a]).

The proposed project is the modernization and reconstruction of the Cardiff School site to facilitate a safe and secure campus that better aligns with the current instructional program. The proposed project would address the most critical physical needs of the buildings and grounds at the campus through building replacement, renovation, modernization, and reconfiguration. The project entails modernization, demolition,

and removal of existing structures and vegetation onsite, and construction of new school facilities. The proposed improvements would be funded by Measure GG, which was approved by the District's constituents in November 2016, and state bond dollars through the state school facilities program.

4.2.1 Building Improvements

Existing Building Demolition

The proposed project would include demolition of five 1-story buildings, a portion of a sixth building, and eight relocatable classrooms. These buildings are on the eastern side of the campus. A demolition plan showing buildings proposed for demolition is included as Figure 4-1, *Demolition Plan*. In total, approximately 7,200 square feet of kindergarten buildings, 16,460 square feet of classroom space, and 3,560 feet of multipurpose space would be demolished.

New Building Construction

The proposed design maintains the school buildings in the eastern portion of the campus. Other than the multipurpose building, the new buildings would be south and east of Building E (i.e., existing District/School administration, library, and special program spaces that would remain in place) and within the general footprint of existing building structures. Figure 4-2, *Site Plan*, shows the locations of the school buildings on the project site.

- **Multipurpose Building.** The multipurpose building would be relocated from the southeast to the north part of the campus, between the grass playfield and main parking lot and loading area. The new location would ensure that members of the public do not walk through the campus when the building is used by the public during the school day, such as on Election Day. A 5,529-square-foot multipurpose building would replace the existing 3,560-square-foot facility. In addition to expanded space to accommodate school assemblies and programs, the multipurpose building would include a music classroom, stage, audio/visual storage, restrooms, and a storage room.

- **Classroom Building.** All existing classroom buildings would be demolished. The reconstructed classroom buildings would remain on the eastern side of the campus and in the general area of the existing buildings. The project would include 20 classrooms in Buildings A to H, including 5 kindergarten classrooms and 2 extended-day rooms in Buildings A and B in the eastern corner of the campus (see Figure 4-2, *Site Plan*).

- **Special Program Buildings.** Specialty program classes would be in Buildings K and M, west of the classroom buildings and east of the grass playfields. Building K would include maker space/art lab, reading group room, and special education resource room. Building M would include a learning lab, science/STEAM lab, and restrooms.

Figure 4-1 - Demolition Plan

4. Project Description



Buildings to Be Demolished

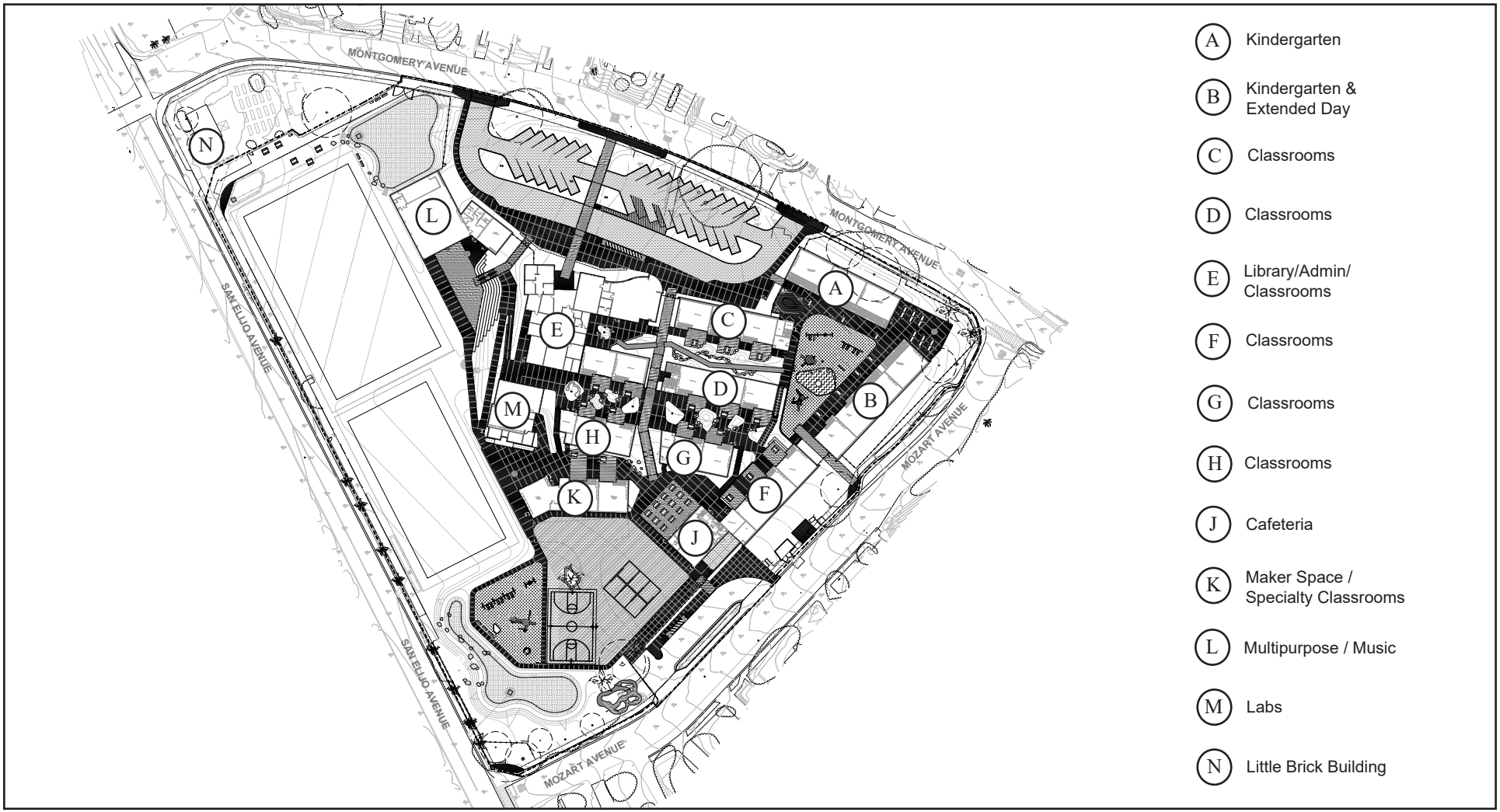
0 150
Scale (Feet)

Source: Studio E Architects, March 8, 2018.

4. Project Description

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Figure 4-2 - Site Plan
4. Project Description



Source: Spurlock Landscape Architects; Studio E Architects, June 6, 2018.

4. Project Description

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- **Food Service Building and Lunch Court.** A 1,805-square-foot food service building would replace the existing 1,580-square-foot building. The new food service building and lunch court would be constructed in the southeastern part of the site between the hardcourts and classroom buildings. The food service building would include a dry storage room, queuing area, restrooms, PE equipment storage, and maintenance and electric rooms. A lunch court would be north of the food service building.

Table 4-1, *Proposed Uses and Spaces*, compares the existing and proposed square footages of all campus structures.

Table 4-1 Proposed Uses and Buildings Spaces

Building Name	Existing Square Footage (NSF)	Proposed Square Footage (NSF)	Difference in Square Footage (NSF)
District Administration Office (Building E)	1,375	1,375	0
School Administration Office (Building E)	3,190	3,190	0
Library/Media Center (Building E)	3,510	3,510	0
Kindergarten Instruction Areas (Buildings A & B)	7,200	6,500	-700
Classroom Instruction Areas (Buildings C-H, K, and M)	19,250	23,045	3,795
Multi-Purpose Building (Building L)	3,560	5,529	1,969
Food Service Building (Building J)	1,580	1,805	225
Brick Building (Building N)	800	800	0
Total (NSF)	**40,465**	**45,754**	**5,289***

NSF = net square feet

* The Notice of Preparation shows a proposed increase of 4,760 square feet. Refinements of the proposed project increased the size of the project by 529 square feet. The new total of 5,289 square feet is analyzed in this EIR.

Modernization of Existing Buildings

- **Library/Media Center.** An Information Technology (IT) Office/Workroom would be created by constructing a wall in the library.

- **Science/Art Lab.** Modify casework and cabinets to convert the facility from its existing joint use to a dedicated science lab.

- **Administration and Specialty Classroom.** Upgrades to interior finishes.

4.2.2 Parking and Circulation

The school's parking lot/onsite passenger loading area off Montgomery Avenue would be expanded. The existing ingress and egress driveways would be removed, and two new driveways would be constructed on either side of Westminster Drive.

- The westernmost driveway would provide ingress only to an approximately 250-foot-long passenger loading area in the front of the school. The one-way, student-loading loop would also allow vehicles to

access a new parking lot or exit the loop via the easternmost driveway. The driveway would allow for the safe curbside pick-up and drop-off of students and accommodate required fire truck access. When not used for passenger loading, the curbside can accommodate nine vehicles for parallel parking.

- A separate ingress-only driveway would connect directly to the westernmost driveway providing vehicular access into the one-way parking lot between the passenger loading driveway and Montgomery Avenue. Exit out of the parking lot would be onto the easternmost driveway immediately east of the passenger loading area. The parking lot would include 31 onsite parking stalls.

- The sidewalk on Montgomery Avenue would follow the passenger loading zone. A raised-ADA walkway would bifurcate the parking lot and passenger loading area in order to provide ADA access from the lot and Montgomery Avenue to the school's main entrance.

The two existing passenger loading areas along Mozart Avenue would remain. The western passenger loading area is within District property; the curb would be striped for five parallel parking spaces, and the proposed project would include a total of 45 onsite parking spaces.

4.2.3 Outdoor Uses

Landscape

Site clearance for the proposed project would require removal of 37 trees from the campus, due to the trees' poor condition and/or because the trees are on the sites of proposed improvements and installation of a new landscape planting plan that includes 44 trees, shrubs, and a variety of other plants such as sod. The landscape plan includes about 3.1 acres of landscaping, that is approximately 43 percent of the project site (see Figures 4-3, *Planting Plan*, and 4-4, *Planting Plan Legend*).

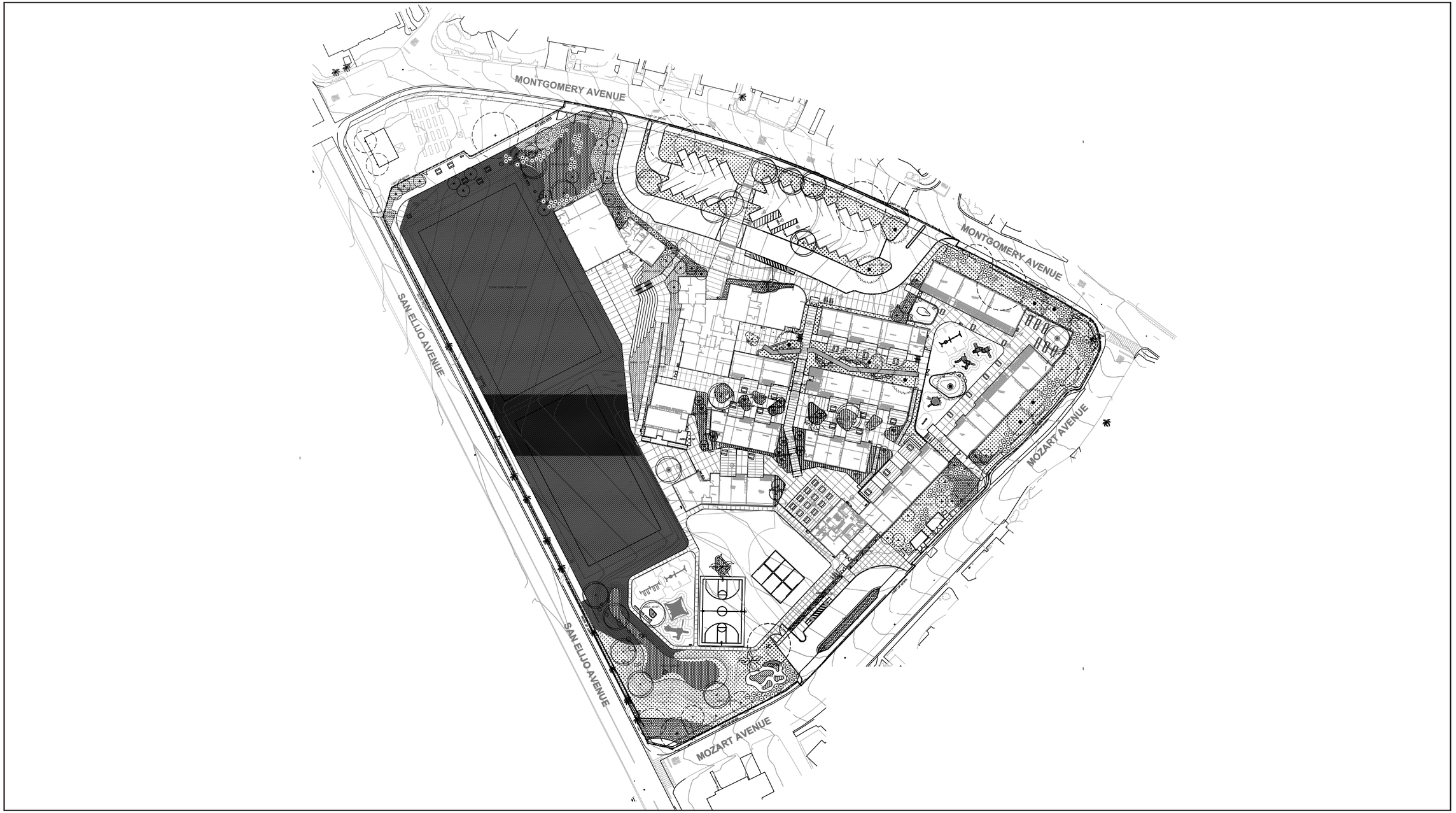
Turf Fields

The existing baseball field would be removed, and two natural turf soccer fields would be installed along San Elijo Avenue. Existing access points would remain on Montgomery Avenue and Mozart Avenue. The access point along San Elijo Avenue would be relocated farther south, adjacent to the hardcourt area.

Hardcourt

A new hardcourt play area would be constructed near the existing hardcourt along Mozart Avenue. The hardcourt would be repaved and repainted and include markings for a full basketball court and various hardcourt games such as foursquare and construction of wall ball courts.

Figure 4-3 - Planting Plan
4. Project Description



Source: Studio E Architects, 2018

4. Project Description

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Figure 4-4 - Planting Plan Legend
4. Project Description

PLANT LEGEND

SYMBOL		COMMON NAME
TREES		
	EXISTING TREE TO REMAIN	
	EVERGREEN CANOPY TREE, SUCH AS	
	CUPRESSUS MACROCARPA	MONTEREY CYPRESS
	PINUS HALEPENSIS	ALEPPO PINE
	PINUS TORREYANA	TORREY PINE
	MEDIUM TREE, SUCH AS	
	MORUS ALBA	MULBERRY
	RHUS LANCEA	AFRICAN SUMAC
	METROSIDEROS EXCELSA	NEW ZEALAND CHRISTMAS TREE
	SMALL ACCENT TREE, SUCH AS	
	ARBUTUS UNEDO	DWARF STRAWBERRY TREE
	JUNIPERUS CHINENSIS 'TORULOSA'	HOLLYWOOD JUNIPER
	MELALEUCA NESOPHILA	PINK MELALEUCA
	TEACHING GARDEN TREE, SUCH AS	
	CITRUS SPP	CITRUS TREE
	MALUS DOMESTICA 'ANNA'	ANNA APPLE
	FEIJO SELLOWIANA	PINEAPPLE GUAVA

SYMBOL	BOTANICAL NAME	COMMON NAME
SCREENING PLANTING		
	BACCHARIS PILULARIS	COYOTE BUSH
	CISTUS X HYBRIDUS	ROCKROSE
	HETEROMELES ARBUTIFOLIA	TOYON
	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE
	RHAMNUS CALIFORNICA 'EVE CASE'	COFFEEBERRY
	RHUS INTEGRIFOLIA	LEMONADE BERRY
BUFFER PLANTING		
	CAREX DIVULSA	BERKELEY SEDGE
	FESTUCA MAIREI	ATLAS FESCUE
	MALOSMA LAURINA	LAUREL SUMAC
	MUHLENBERGIA RIGENS	DEER GRASS
	ROSMARINUS SPP.	UPRIGHT ROSEMARY
COASTAL BLUFF PLANTING		
	ARTEMISIA SPP.	COASTAL SAGEBRUSH
	BELLADONNA AMARYLLIS	NAKED LADIES BULB
	CAREX SPISSA	SAN DIEGO SEDGE
	DUDLEYA BRITTONII	GIANT CHALK DUDLEYA
	ENCELIA CALIFORNICA	COASTAL SUNFLOWER
	ERIOGONUM SPP.	CALIFORNIA BUCKWHEAT
	ISOMERIS ARBOREA	BLADDERPOD
	MUHLENBERGIA RIGENS	DEER GRASS
	SALVIA SPP.	SAGE

ENTRY ACCENT PLANTING

	AEONIUM SPP.	AEONIUM
	AGAVE SPP.	AGAVE
	ALOE SPP.	ALOE
	BULBINE FRUTESCENS	BLUBINE
	COTYLEDON SPP.	PIG'S EAR
	DUDLEYA BRITTONII	DUDLEYA
	LEUCADENDRON SPP.	CONEBUSH
	LIMONIUM PEREZII	SEA LAVENDER

DISCOVERY GARDEN PLANTING

	FRAGRANT POLLINATOR PLANTS	
	CISTUS SPP.	ROCKROSE
	GERANIUM SPP.	GERANIUM
	LAVANDULA SPP.	LAVANDER
	TRACHELOSPERMUM JASMINOIDES	STAR JASMINE
	TULBAGHIA VIOLACEA	SOCIETY GARLIC
	EDIBLE PLANTS	
	ALLIUM SCHOENOPRASUM	CHIVES
	ALOYSIA CITRIODORA	LEMON VERBENA
	CYNARA SCOLYMUS	ARTICHOKE
	FRAGARIA CHILOENSIS	BEACH STRAWBERRY
	PUNICA GRANATUM 'NANA'	DWARF POMEGRANATE
	ROSMARINUS OFFICINALIS	ROSEMARY
	THYMUS VULGARIS	THYME
	ANIMAL PLANTS	
	ACACIA DUNNII	ELEPHANT EAR WATTLE
	AGAVE ATTENUATA	FOXTAIL AGAVE
	ANIGOZANTHUS SPP.	KANGAROO PAW
	BUDDLEJA SPP.	BUTTERFLY BUSH
	LEONOTIS LEONURUS	LION'S TAIL
	MIMULUS SPP.	MONKEYFLOWER
	MUHLENBERGIA RIGENS	DEER GRASS
	NEPETA CATARIA	CATNIP
	STACHYS BYZANTINA	LAMB'S EAR

SPORT FIELDS

	SOD	
	PLATINUM TE PASPALUM	

BIOSWALE PLANTING

	CAREX SPP.	SEDGE
	CHONDROPETALUM TECTORUM	SMALL CAPE RUSH
	DIANELLA CAERULEA CASSA BLUE	BLUE FLAX LILY
	DIETES BICOLOR 'LIZ'S SELECTION'	YELLOW WILD IRIS
	IRIS DOUGLASIANA	DOUGLAS IRIS
	JUNCUS EFFUSUS	SOFT RUSH
	LEYMUS CONDENSATUS	CANYON PRINCE WILD RYE
	PLATINUM TE PASPALUM	SOD

VINES

	CLEMTAS ARMANDII	EVERGREEN CLEMATIS
	LEONICERA PERICLYMENUM	HONEYSUCKLE

OTHER

	LIMIT OF WORK
	PROPERTY LINE

Source: Studio E Architects, 2018

4. Project Description

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Play Structures

The existing play structure that bisects the two fields and restricts supervision of the fields would be relocated to the south side of the site, near the intersection of San Elijo Avenue and Mozart Avenue. The new playground would include a jungle gym and other play equipment. Kindergarten play structures at the eastern corner of the site—near the intersection of Montgomery and Mozart Avenue—would be replaced with new facilities, constructed between Buildings A and B (see Figure 4-2, *Site Plan*).

4.2.4 Drainage and Utility Improvements

Drainage

The proposed project would involve reconstruction and modifications to existing site drainage to accommodate changes in runoff direction and volume as a result of the proposed improvements. The proposed drainage and hydromodification improvements include:

- The driving area within the proposed parking lot along Montgomery Avenue would be constructed with permeable pavers.
- Two partial infiltration basins would be installed in the northern and southwestern parts of the site. Each basin would include a storm drain inlet surrounded by landscaping.
- The field space with its permeable turf surface would be considered a self-mitigating area.
- Three curb outlet cuts are proposed along the western side of the site to direct excess runoff onto San Elijo Avenue.

Utilities

The new structures would meet current code requirements for electrical systems and would be more efficient than the existing buildings. New underground electrical lines would connect site facilities to underground cable/electrical lines at the property lines near Montgomery and Mozart Avenues. The new buildings would also meet current fire codes, including automatic sprinkler system, fire extinguishers, and 1- and 2-hour-rated fire protection walls. The existing fire hydrant at the center of campus near Montgomery Avenue would remain, and new fire service connections would be installed throughout the campus. In addition, the new buildings would be connected to the existing underground sewer lines near the site's northern and southern boundaries.

4.2.5 Other Improvements

- Fencing would be installed around the core campus buildings to limit public access to the classroom portions of the main school ground; field access would be maintained from the street.

- A new outdoor assembly seating area and plaza would face the main soccer field and ocean, south of the multipurpose building.
- New picnic areas would be located north of the multipurpose building and west of the parking lot on Montgomery Avenue.
- The little brick building would be retrofitted to comply with current seismic standards and standards of The Secretary of the Interior's Standards for the Treatment of Historic Properties. The building may also be renovated to allow for use by the District for parent or teacher gatherings and special events.
- New flooring and paint would be provided for all facilities constructed in 2001.
- Night-time security lighting would be installed in the parking lots and the interior of campus.

4.2.6 School Operation

The project would increase the number of classrooms from 19 to 20. Using the District's loading factor of 22 students per classroom, the enrollment capacity would increase by 22 seats, from 418 to 440 seats. Table 4-2, *Classrooms and Program Labs,* shows the existing and proposed number of classrooms and resource labs. Cardiff School's operating dates and hours would remain the same.

Table 4-2 Classrooms and Program Labs

	Room Type	Existing Rooms	Proposed Rooms
Classrooms	Kindergarten	6	5
	Grades 1–3	13	15
	Total	**19**	**20**
Program Labs and Other Instructional Areas	Learning Lab	1	1
	Science Lab	1	1
	STEAM Lab/Maker Space	-	1
	RAD Room (Reading Groups)	1	1
	Special Ed Resource Room	1	1
	Extended Day/Preschool[1]	2	2
	Total	**6**	**7**
Total Classrooms and Special Program Rooms		**25**	**27**

[1] The two extended-day/preschool rooms are not considered classrooms because they are only used before and after school.

4.2.7 Project Construction

Project construction would be phased over an approximately 19-month period, commencing after the District receives required permits and approvals in the summer 2019 and ending in December 2020. Figure 4-5, *Construction Phasing,* illustrates the proposed schedule.

Figure 4-5 - Construction Phasing



Source: Studio E Architects, 2018

4. Project Description

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- **Phase 1A**, June 2019 to August 2019. Demolish existing parking lot and buildings in the eastern portion of the campus; construct new parking lot and loading area along Montgomery Avenue.

- **Phase 1B**, June 2019 to August 2020. Construct new classroom, multipurpose, and food service buildings and eastern playground improvements; retrofit little brick building; improve some or all playfields, play structures, and hardcourt areas at the northwest corner of the site.

- **Phase 2A**, June 2020 to August 2020. Reconfigure existing field space and install new play structures on the western side of the site.

- **Phase 2B**, June 2020 to December 2020. Demolish remaining buildings near the center of the campus; construct new replacement buildings; modernize existing buildings; improve remaining fields and play areas.

Kindergarten and first grade would remain at Cardiff School during construction activities. Second and third grades would be relocated to Ada Harris School. Second grade would return to Cardiff School in August 2020. Third grade would return to Cardiff School in August 2021. No interim portable classrooms would be installed during construction activities.

Construction laydown/material staging would take place near the construction areas. Staging would be at the baseball field for construction of the parking lot, multipurpose building, and retrofitting of the little brick building. Access would mainly be via Montgomery Avenue at the proposed driveway entrances during improvements to the new parking lot and multipurpose building. Staging for the remaining new building construction would be on the school's blacktop area with access from Mozart Avenue near San Elijo Avenue. Construction activities would include building and asphalt demolition and excavation, site preparation and rough grading, utility trenching, fine grading, building construction, architectural coating, asphalt paving, finishing, and landscaping.

A construction worksite traffic control plan would be prepared and implemented by the District. The plan would identify haul routes, hours of construction, protective devices, warning signs, and access. The active construction and staging areas would be on the campus and clearly marked with barriers to separate public access from the construction zone.

Construction Best Management Practices

Construction of the proposed improvements would be conducted with implementation of best management practices to further reduce the effects of noise and vibration on interior classroom environments during construction. During construction of the proposed improvements, a 0.75-inch thick 12-foot tall plywood barrier would be positioned near the construction areas closest to buildings occupied by students. The location and duration of the fence barrier erection would be determined on an as-needed basis by the construction contractor depending upon the construction phase and proximity to the active classrooms.

Additionally, the following BMPs would be included:

a. At least 30 days prior to commencement of demolition or any other construction activities, notification shall be given to all residents within 500 feet of the project site regarding the planned construction activities. The notification shall include a brief description of the project, the activities that would occur, and the planned duration of activity. The notification shall also include the telephone number of the District's authorized representative to respond in the event of a noise or vibration complaint.

b. Prior to the beginning of construction activities, a sign shall be posted at the entrance to the job site, clearly visible to the public, that contains a contact name and telephone number of the District's authorized representative to respond in the event of a vibration complaint. If the authorized representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the District.

c. To the extent feasible, route all construction-related trips (including worker commuting, material deliveries, and debris/soil hauling) so as to minimize traffic through the neighborhood.

d. All heavy construction equipment used on the proposed project shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust muffles, air intake silencers, and engine shrouds no less effective than as originally equipped by the manufacturer.

e. Where feasible, use electrically powered equipment instead of pneumatic or internal combustion powered equipment.

f. Where feasible, all stationary noise-generating equipment shall be located as far away as possible from neighboring property lines.

g. Prohibit unnecessary idling of internal combustion engines.

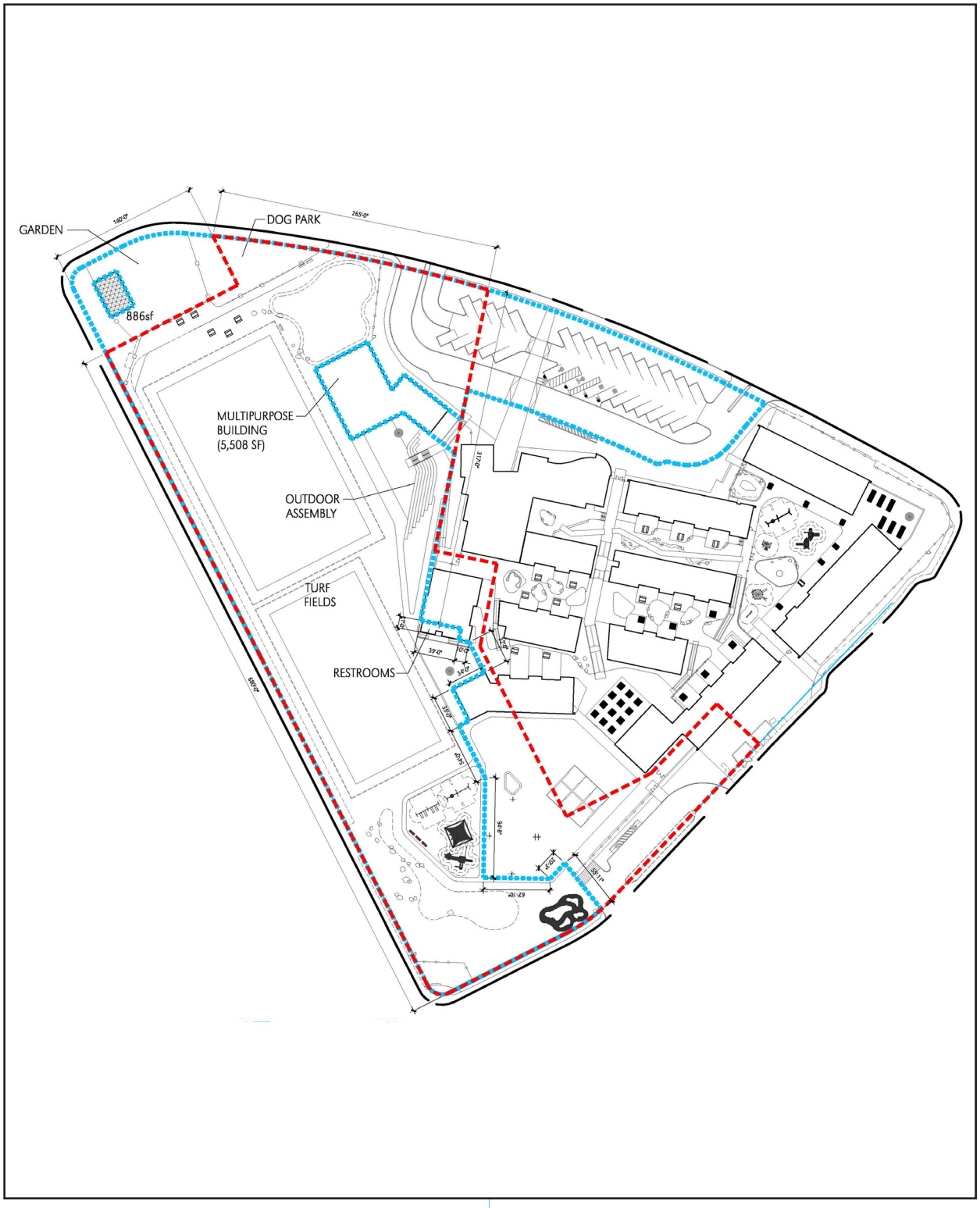
h. The use of noise producing signals, including horns, whistles, alarms, and bells will be for safety warning purposes only.

4.2.8 Conversion of 6(f)(3) Boundary

Development of the proposed school buildings would encroach into the 6(f)(3) boundary and require approval of a minor boundary change to the 6(f)(3) area by the National Park Service. The 6(f)(3) boundary area would continue to be on the west side of the campus; the proposed boundary change would modify its eastern perimeter. The proposed modified 6(f)(3) boundary would include two turf fields, outdoor assembly seating area, picnic areas, dog park, vegetable and pollinator gardens, play apparatus area, and parking along Montgomery Avenue. All buildings—including the brick building and proposed multipurpose building—would be excluded from the modified 6(f)(3) boundary area. As shown in Figure 4-6, *Proposed 6(f)(3) Boundary Map,* the proposed 6(f)(3) boundary adjustment would increase the public space by 2,047 sf, from 173,173 sf to 175,220 sf.

Figure 4-6 - Proposed 6(f)(3) Boundary Map

4. Project Description



Source: Studio E Architects, 2018

4. Project Description

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4.3 INTENDED USES OF THE EIR

This Draft EIR is a project DEIR that examines the environmental impacts of the proposed project. This DEIR addresses actions by the District and other responsible agencies to implement the proposed project. It is the intent of this DEIR to evaluate the environmental impacts of the proposed project, thereby enabling the District, responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements. Table 4-3 shows the anticipated approvals and reviews for this project.

Table 4-3 Lead and Responsible Agencies

Lead Agency	Discretionary Action
Cardiff School District	Certification of the EIR
	Adoption of the MMRP and Findings of Fact, and Approval of the Project
Responsible Agencies	**Action**
National Park Service and California State Parks Office of Grants and Local Services	Approval of 6(f)(3) Minor Boundary Change
City of Encinitas	Approval of Coastal Development Permit
	Approval by Public Works Department of offsite improvements, including changes to driveways on Montgomery Avenue
San Diego Regional Water Quality Control Board	Approval of water quality management plan, NPDES Permit, and possible Section 401 Water Quality Certification
Reviewing Agencies	**Action**
California Coastal Commission	Review of DEIR and Coastal Development Permit
California Department of Education	Review School District and Program for compliance with California Code of regulations, Education Code, and Public Resources Code
California Department of General Services, Division of the State Architect	Review Building and Construction Plans for structural safety, fire and life safety, and access compliance
California Department of Transportation	Review of DEIR for cumulative impacts to Caltrans facilities
City of Encinitas Fire Department	Review of Fire/Life Safety per DSA, including 1) access for emergency rescue and patient transport; 2) access roads, fire lane markings, pavers, and entrances; 3) fire hydrant location and distribution; 4) fire flow
Local Native American Tribes	Review and coordination of Native American tribal monitoring program
North County Transit District	Review of DEIR and cumulative project impacts
San Diego Air Pollution Control District	Review and file submittals for Rule 51, Nuisance, Rule 55, Fugitive Dust Control, Rule 67.0.1, Architectural Coatings

4. Project Description

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5. Environmental Analysis

Chapter 5 examines the environmental setting of the proposed project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter has a separate section for each environmental issue area that was determined to need further study in the EIR. This scope was determined in the initial study and notice of preparation (NOP), which were published May 8, 2018 (see Appendix A), and through public and agency comments received during the NOP comment period from May 8, 2018, to June 6, 2018 (see Appendix B). Environmental issues and their corresponding sections are:

- 5.1 Aesthetics
- 5.2 Air Quality
- 5.3 Biological Resources
- 5.4 Cultural Resources
- 5.5 Geology and Soils
- 5.6 Greenhouse Gas Emissions
- 5.7 Hydrology and Water Quality
- 5.8 Land Use and Planning
- 5.9 Noise
- 5.10 Transportation and Traffic
- 5.11 Tribal Cultural Resources
- 5.12 Energy

Sections 5.1 through 5.12 provide a detailed discussion of the environmental setting, impacts associated with the proposed project, and mitigation measures designed to reduce significant impacts where required and when feasible. The residual impacts following the implementation of any mitigation measure are also discussed.

The initial study also determined that certain issues under an environmental topic would not be significantly affected by implementation of the project. These issues are not discussed further in this EIR.

Organization of Environmental Analysis

To assist the reader with comparing information between environmental issues, each section (5.1 – 5.12) is organized as follows:

- 5.X.1 Environmental Setting
  - 5.X.1.1 Regulatory Background
  - 5.X.1.2 Existing Conditions

5. Environmental Analysis

- 5.X.2 Thresholds of Significance
- 5.X.3 Environmental Impacts
- 5.X.4 Cumulative Impacts
- 5.X.5 Applicable Regulations and Standard Conditions
- 5.X.6 Level of Significance Before Mitigation
- 5.X.7 Mitigation Measures
- 5.X.8 Level of Significance After Mitigation
- 5.X.9 References

In addition, Chapter 1, *Executive Summary,* includes a table that summarizes all impacts by environmental issue.

Terminology Used in This Draft SEIR

The level of significance is identified for each impact in this DEIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

- **No impact.** The project would not change the environment.
- **Less than significant.** The project would not cause any substantial, adverse change in the environment.
- **Less than significant with mitigation incorporated.** The EIR includes mitigation measures that avoid substantial adverse impacts on the environment.
- **Significant and unavoidable.** The project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level.

5.1 AESTHETICS

This section of the EIR evaluates the potential for project development to impact aesthetic resources on and near the project site. Specifically, the analysis in this section evaluates the proposed Cardiff School Modernization and Reconstruction project's potential impacts to scenic corridors and vista points, as well as the visual character and quality of the site and surroundings. Impacts to scenic resources and light and glare were identified as less than significant in the Initial Study, included as Appendix 1-1 to this DEIR.

The term "aesthetics" usually implies a subjective effect or a personal opinion. To the extent possible, this section attempts to evaluate the project objectively to address its visibility from the surrounding area; development impacts on the scenic value of vistas and scenic landscapes; the style and visual similarity of structures to each other and their surrounding environment; and the scale, height, and massing of the proposed structures compared to other structures in the area. Contrary to scenic vistas and landscapes, in which there is an assumed consensus on their scenic value, a building considered "beautiful" in itself may intrude in an area because it is much larger than any surrounding building or it may interrupt a panoramic view. A building considered "ugly" may be compatible with neighbors of the same scale, color, materials, setbacks, and architectural style. The natural landscape, topography, and introduced landscaping contribute to the aesthetic environment. Together, the built and natural environments combine to create overall visual character and quality of the project area.

Terminology

Aesthetic impact assessment generally deals with the issue of contrast or the degree to which elements of the environment differ visually. Aesthetic features vary by environment, which ranges in character from urban to rural to wildlands. Adverse visual effects can include the loss of natural features or areas, the removal of urban features with aesthetic value, or the introduction of contrasting urban features into natural areas or urban settings.

Aesthetics. Under CEQA, the term "aesthetics" pertains to the perceived visual quality of an area characterized by one or more visual elements such as open space, scenic views, or architecture type. Aesthetically significant features occur in a diverse array of environments, from urban centers to rural agricultural lands to natural woodlands.

5.1.1 Environmental Setting

5.1.1.1 REGULATORY SETTING

Federal

Federal Coastal Act

The Federal Coastal Zone Management Act of 1972 established a federal coastal management policy, which promotes the effective management, beneficial use, protection, and development of the nation's coastal zones to balance the natural, environmental, and aesthetic resource needs with commercial and economic growth.

This policy provided encouragement and assistance to coastal states for enactment of coastal programs that achieved wise use of the land and water resources of the coastal zone.

State

California Coastal Act of 1976

The California Coastal Act, codified in Public Resources Code (PRC), Division 20, Sections 30000 et seq., is the primary law that governs the decisions of the Coastal Commission and outlines, among other things, standards for development within the coastal zone.

Section 30251 of the PRC requires that scenic and visual qualities of coastal areas be considered and protected as resources of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas; to minimize the alteration of natural land forms; to be visually compatible with the character of surrounding areas; and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas—such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government—shall be subordinate to the character of its setting.

Local

City of Encinitas Local Coastal Plan

The Encinitas Local Coastal Plan, approved by the California Coastal Commission, is incorporated into the City of Encinitas General Plan and includes policies related to the preservation of key viewpoints and prominent viewing areas, protection and enhancement of coastal views, and consideration of scenic and visual qualities of coastal areas as resources of high public importance.

City of Encinitas General Plan

The Land Use element of the General Plan identifies the City's goals and policies for land use and character for development projects, such as emphasis on scale and context-sensitive design. The Resource Management element provides policies that pertain to landscaping, native vegetation, and natural resources. Policies address views, visual character, building sites and designs, and landscape design. The following summarized policies—excerpted from City of Encinitas General Plan—are applicable to aesthetic and visual resources.

Land Use Element

- **Policy 2.7.** Implement mechanisms to ensure the preservation of significant environmental areas of the City. These mechanisms might include establishing development standards encouraging developers to maximize open space, transfers of development rights (TDRs), land banking, purchase, etc.

- **Policy 6.5.** The design of future development shall consider the constraints and opportunities that are provided by adjacent existing development.

- **Policy 6.6.** The construction of very large buildings shall be discouraged where such structures are incompatible with surrounding development. The building height of both residential and nonresidential structures shall be compatible with surrounding development, given topographic and other considerations, and shall protect public views of regional or statewide significance.

- **Policy 7.3.** Although common themes for each of the communities may be established, each community may also promote variety in the design of individual projects.

- **Policy 7.10.** Both residential and non-residential development shall be limited to a maximum height of two stories and 30 feet. Limited exceptions for non-residential development may be allowed, but only for designated specific sites as developed and adopted through area specific plans.

- **Policy 8.** Within residentially designated areas, lot averaging and PRDs may be allowed to preserve areas of unique topographic features, riparian woodlands, and other significant open space areas of importance to the community based on the following criteria: - Lot averaging and PRDs shall only be used to create a quality development, but shall not increase the overall density of the subdivision; - the areas of open space shall be determined and preserved in perpetuity; - no further subdivisions of land within lot-averaged subdivisions shall occur.

- **Policy 8.6.** Significant natural features shall be preserved and incorporated into all development. Such features may include bluffs, rock outcroppings, natural drainage courses, wetland and riparian areas, steep topography, trees, and views.

- **Policy 9.4.** Encourage all landscaping along major arterials to enhance, harmonize with, and not detract from the natural features of the surrounding area.

Resource Management Element

- **Policy 4.10.** The City will develop a program to preserve views that also preserves the appropriate vegetation and removes obstacles that impact views. Trees and vegetation which are themselves part of the view quality along the public right-of-way will be retained.

- **Policy 9.6.** Require landscaping in the design of new residential, commercial, and industrial areas and buildings as detailed in the City Zoning Code regulations.

- **Policy 10.5.** The City will control development design on Coastal Mixed Chaparral and Coastal Sage Scrub environmentally sensitive habitats by including all parcels containing concentrations of these habitats within the Special Study Overlay designation.

- **Policy 13.2.** The City shall plan for compatible land uses within and adjacent to recreation areas, natural preserves, and agricultural areas.

- **Policy 13.4.** Minimize visual pollution by establishing design review standards.

5.1.1.2 EXISTING CONDITIONS

Landform

The project is in the beach community of Cardiff-by-the-Sea, in the City of Encinitas. The Pacific Ocean forms the City's western boundary. The City's landform ranges from sea level at the beach to an elevation of approximately 720 feet along its eastern boundary. Due to its sloped and varying topography, ocean views are best observed from higher elevations of the City. The project site is located in a Coastal Bluff Overlay Zone and a Special Study Overlay (Encinitas 2017). According to Chapter 30.34.020 of the Encinitas Municipal Code, the Coastal Bluff Overlay Zone states that "the design and exterior appearance of buildings and other structures visible from public vantage points shall be compatible with the scale and character of the surrounding development and protective of the natural scenic qualities of the bluffs" (Encinitas 2018). The Special Study Overlay is designated for preserving environmentally significant areas as well as indicating areas where development standards will be more stringent to minimize potential hazards to future development (Encinitas 2013).

Scenic Resources

Scenic resources can be man-made or natural features, landscapes, vistas, corridors, and viewsheds, and may include rock outcrops, trees, and historic buildings that are visually or aesthetically pleasing. The Pacific Ocean, approximately 500 feet to the west of the project site, is the most prominent scenic resource in the City. The City of Encinitas Design Guidelines state: "A significant public view is a view of a significant feature (ocean, lagoon or backcountry) as viewed from public parks and General Plan designated vista points and scenic view corridors" (Encinitas 2005a).

Scenic Corridors and Vista Points

The Land Use element in the City of Encinitas General Plan states that the Scenic/Visual Corridor Overlay is used to identify areas where significant aesthetic and visual resources need to be taken into consideration before new development proceeds, in order to ensure that significant viewsheds are retained (Encinitas 2013). Natural scenic features that can be observed in the City include the San Elijo Lagoon, located in the Scenic/Visual Corridor Overlay, which is approximately 0.85 mile southeast of the project site (Encinitas 2017). Moreover, due to the City's urban nature, green space is highly valued. The Encinitas Community Park, which is in the Scenic/Visual Corridor Overlay, is approximately 0.40 mile northeast of the project site (Encinitas 2017). Encinitas Community Park features multiuse fields and other recreational facilities for community use. The park is identified as a vista point in Policy 4.1 of the Resource Management element in the City of Encinitas General Plan (Encinitas 2011).

San Elijo Avenue and Highway 101, south of Cardiff Beach State Park to Santa Fe Drive, are designated as Scenic Highway/Visual Corridor viewshed (Encinitas 2011). This viewshed is approximately 290 feet west of the project site. Additionally, Manchester Avenue, from San Elijo Avenue to Encinitas Boulevard, is also designated as Scenic Highway/Visual Corridor (Encinitas 2011).

Cardiff Beach State Park, which is approximately 0.5-mile south of the project site, is a designated Vista Point. The south parking lot is identified as a vista point, in Policy 4.3 of the Resource Management element of the City of Encinitas General Plan (Encinitas 2011).

Figure 5.1-1, *Vista Points and Scenic Corridors*, illustrates the locations of City-designated corridors and vista points in relation to the project site.

Visual Character

The City of Encinitas is an urbanized beach city that is surrounded by the City of Carlsbad to the north, the City of Solana Beach to the south, and unincorporated areas of San Diego County to the east. Prominent visual features located in the City of Encinitas include San Elijo Lagoon, which is approximately 0.85 mile southeast of the project site and the Pacific Ocean, which is 500 feet west of the project site.

Project Site

The project site is triangular in shape and located in a predominantly single-family residential neighborhood with one- and two-story homes. In addition to the single-story school buildings, the school campus is improved with asphalt hardscape, landscaping with shrubbery and ornamental trees, a hardcourt area, playgrounds, a baseball field, a soccer field, and a community garden. The little brick building onsite was constructed in the 1940s; the permanent school buildings onsite were constructed between 1950 and 1960, excluding the administration building, library/media center, and academic labs/rooms, which were constructed in 2001; and the portable classrooms were installed between 1985 and 1995. Most of the buildings and portable structures on the campus are rectangular-massed, one-story, and cream-colored with grey roofing, white trimmed windows, and blue painted doors. The two-story little brick building is constructed out of red-colored bricks and has two white doors and one red door. The project site is surrounded by chain-link fencing. Figure 5.1-2a and 5.1-2b, *Site Photographs*, shows the existing visual character of the project site.

Surrounding Area

The project site is in a densely developed beach community. The homes that face the project site are developed with various architectural styles, such as Spanish and coastal styled homes that feature flat and gabled roofs. A number of residences have been renovated with coastal contemporary architectural styles. The buildings are one- to three-story and have small set-backs from their front property lines. Several of the properties have little to no front yard space, although vegetation, such as hedges and trees, as well as walls are along the street frontage.

The entire perimeter of the school property is bordered by sidewalks. On Montgomery Avenue, there are only sidewalks on the southern side of the street, on the side where the school is situated. Similarly, Mozart Avenue features sidewalks on the northern side of the street, on the side of the school property, and there is approximately 310 feet of sidewalk on the side opposite to the school. There is minimal vegetation around the perimeter of the school, with 10 trees planted within the City's right-of-way on San Elijo Avenue. Figure 5.1-3, *Surrounding Residences*, shows the visual character of the surrounding residential uses.

A photographic survey was prepared for the proposed project and is included in its entirety as Appendix 5.1-1 to this Draft EIR.

5.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

AE-1 Have a substantial adverse effect on a scenic vista.

AE-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

AE-3 Substantially degrade the existing visual character or quality of the site and its surroundings.

AE-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

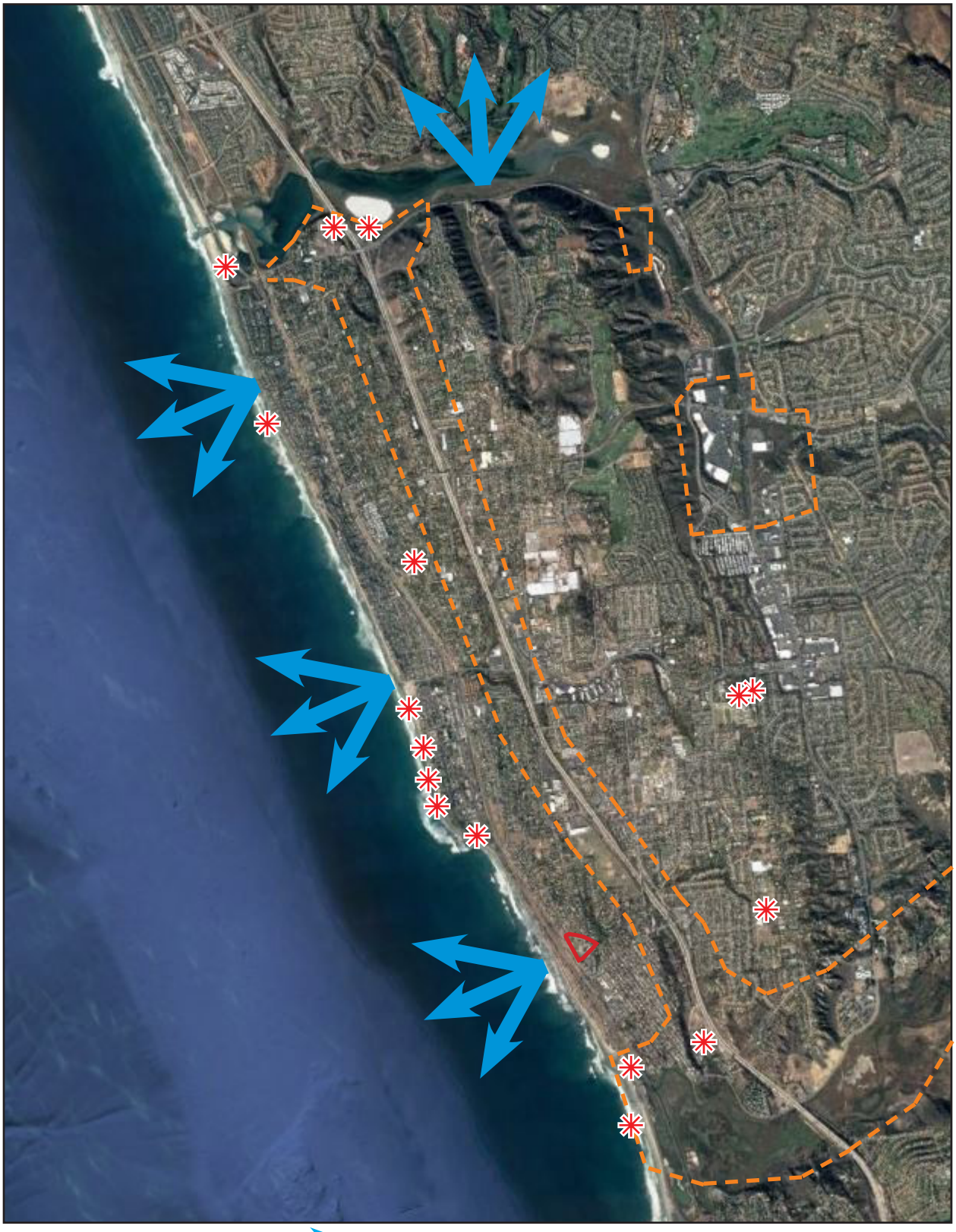
The Initial Study, included as Appendix 1-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold AE-2.
- Threshold AE-4.

These impacts will not be addressed in the following analysis.

Figure 5.1-1 - Vista Points and Scenic Corridors

5.1 Aesthetics



Source: City of Encinitas General Plan, 2011.

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Figure 5.1-2a - Site Photographs
5.1 Aesthetics



View of the school entrance and parking lot from Montgomery Avenue.



View of the southern student loading area on Mozart Avenue.



View of the northern student loading area on Mozart Avenue.

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Figure 5.1-2b - Site Photographs
5.1 Aesthetics



View of the playground from San Elijo Avenue. Existing fields are to the left and right.



View of the brick building at northwest corner of the campus. Behind the building is the school's vegetable garden and a dog run used by the community.



View of the playground at northeast corner of the site. This playground would be removed and a new play area would be constructed to the left.

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Figure 5.1-3 - Surrounding Residences
5.1 Aesthetics



View of the residences to the northwest at the intersection of Montgomery Avenue and Schubert Path. Note the residences are at a higher grade than Montgomery Avenue.



View of the residences to the north from the existing driveway entrance to the site. Note the various heights and architectural styles of the residences.



View facing west from Mozart Avenue of the residences to the south of the site. The residences have different architectural styles and heights, similar to other homes in the area.

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5.1.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.1-1: The proposed project would not substantially alter public views of scenic vistas, scenic corridors or vista points. [Threshold AE-1]

Impact Analysis:

Scenic Resources

The project site is situated in a single-family residential neighborhood in an urbanized beach community. Due to the dense development and varying topography, there are limited expansive scenic views of City-designated visual features. The Pacific Ocean, approximately 500 feet to the west, is a visual resource that can be observed at and near the project site.

Mozart Avenue

The Pacific Ocean can be seen from Mozart Avenue near the southern drop-off location, as shown in Photograph 1 of Figure 5.1-4, *Views from Mozart Avenue*. Between the south drop-off and the intersection of Mozart Avenue and Montgomery Avenue, the existing buildings, landscaping, and playground equipment along Mozart Avenue completely block views of the Pacific Ocean across the project site (see Photograph 2 of Figure 5.1-4). As shown on Figure 4-2, *Site Plan*, classrooms, cafeteria, pollinator garden, and recreational facilities (hardcourt play space, play equipment/sport court, play apparatus) would be located along this same stretch of Mozart Avenue. Construction of the new cafeteria and maker space/specialty classrooms, shown as items J and K in Figure 4-2, will expand the school building into an area that currently allows partial views of the Pacific Ocean. The new buildings will extend approximately 120 feet into the view area and will be 19.5 feet tall. Building K is approximately 200 feet from Mozart Avenue at its nearest point and extends further away from Mozart Avenue to the north.

Montgomery Avenue

Portions of the Pacific Ocean can be seen from Montgomery Avenue from the proposed loading area at the northern portion of campus, as shown in Photographs 1 and 2 of Figure 5.1-5, *Views from Montgomery Avenue,* but views are intermittently impaired by trees, buildings, and fencing along the road. As shown in Photograph 1 of Figure 5.1-5, the existing buildings and trees partially impair views of the Pacific Ocean across the project site. As shown in Figure 4-2, *Site Plan*, the project would remove two of the three trees and the existing building in the foreground of Photograph 1; the project would increase westward views from this portion of Montgomery Avenue. As shown in Photograph 2 of Figure 5.1-5, views to the west toward the Pacific Ocean include a grass playfield that is partially impaired by trees. The project would remove one of the three trees, but would construct the multipurpose building near the center of the foreground of Photograph 2. The multipurpose building is approximately 21.25 feet in height and would extend approximately 75 feet into the view area. Views of the Pacific Ocean would continue to be intermittently

impaired along Montgomery Avenue, but not altered such that views would be substantially changed from existing conditions.

Vista Points

Encinitas Community Park

Scenic views visible from Encinitas Community Park would not be significantly impacted by the implementation of the proposed project due to varying topographies and elevations between the two sites—the highest elevation at the park and project site are approximately 220 feet and 95 feet, respectively. The expansive size of the park offers various viewing points, and the area between the park and the project site consists of residences and vegetation. Therefore, it is unlikely that project implementation would have adverse impacts on the scenic views that are visible from Encinitas Community Park.

Cardiff State Beach

The beach and parking lot are to the west of the project site. Views of the Pacific Ocean are visible to the west of the project site. Therefore, the implementation of the project would have no impacts on this vista point.

Scenic Corridors

The City of Encinitas General Plan implements regulations for developments within the designated Scenic/Visual Corridor, which include regulations on building height, bulk, roof line, and color and scale to ensure there is no obstruction, limitation, or degradation of existing views (Encinitas 2011). The project site is not situated in a scenic/visual corridor (Encinitas 2017).

Manchester Avenue, from San Elijo Avenue to Encinitas Boulevard

The project site is situated to the west of this scenic highway/visual corridor. The implementation of the proposed project would have a less than significant impact on views visible from this scenic corridor due to the varying topographies and elevations, residences, and vegetation between this corridor and the project site. Moreover, the placement of the proposed buildings would roughly be within the same footprint, therefore reducing impacts to changes in views. Building heights would adhere to zoning regulations and would not exceed height restrictions.

San Elijo Avenue and Highway 101, South of Cardiff Beach State to Santa Fe Drive

This scenic corridor is approximately 290 feet west of the project site and separates the project site from the Pacific Ocean. Views of the Pacific Ocean are visible to the west of this corridor. Therefore, since the proposed project is to the east of the Pacific Ocean, project implementations would not impact views from this corridor.

Figure 5.1-4 - Views from Mozart Avenue
5.1. Aesthetics



View to the northwest at the southern drop-off point on Mozart Avenue. The new cafeteria would replace the existing portable classrooms to the right in the photo.



View from Mozart Avenue facing northwest across the existing school toward the Pacific Ocean. As shown in the photograph, the combination of buildings and trees block all views of the ocean.

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Figure 5.1-5 - Views from Montgomery Avenue



View to the west of the Pacific Ocean near the egress of the proposed driveway improvements. Note that existing views towards the ocean are partially impaired by trees and classroom buildings.



View from Montgomery Avenue facing west near the existing student loading driveway. The two larger trees on the right would remain.

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Conclusion

Construction of the proposed project would not use large cranes or other equipment consistent with high-rise development in urban areas. Rather, the construction of the buildings will use ground-based equipment similar to concrete trucks, back hoes, bull dozers, dump trucks, paving equipment, etc. While this equipment will be visible from both Mozart and Montgomery Avenues, the equipment will be mobile, staged away from both avenues (outside of the construction area), and would therefore have a less than significant impact on scenic resources.

The views from the vista points would not be impacted by the construction of the project due to their respective locations. Encinitas Community Park is separated from the project site by residences, vegetation, and varying elevations and topographies. Likewise, Cardiff State Beach is situated to the west of the project site, thus westward views of the Pacific Ocean would not be hindered from this vista point. The project would have a less than significant impact on views visible from the scenic corridor near Manchester Avenue since there are varying topographies and elevations, residences, and vegetation between the viewshed and project site. Moreover, views of the Pacific Ocean from the scenic corridor near San Elijo Avenue would not be impacted since the project site is to the east of this corridor.

Therefore, the proposed project improvements would not substantially alter directional views of scenic resources, vista points, or scenic corridors; thus, potential project impacts to these scenic features would be less than significant.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.1-1 would be less than significant.

Impact 5.1-2: The proposed project would alter the visual appearance of the site, but would not substantially degrade the existing visual character or quality of the surrounding area. [Threshold AE-3]

Impact Analysis: Project implementation would alter the existing appearance of the project site both during and after construction.

Construction

Construction activities include building and asphalt demolition and excavation, site preparation and rough grading, utility trenching, fine grading, building construction, architectural coating, asphalt paving, finishing, and landscaping.

- **Phase 1A, June 2019 to August 2019.** Demolish existing parking lot and buildings in the eastern portion of the campus; construct new parking lot and loading area along Montgomery Avenue.

- **Phase 1B, June 2019 to August 2020.** Construct new classroom, multipurpose, and food service buildings and eastern playground improvements; retrofit brick building; improve some or all playfields, play structures, and hardcourt areas at the southwest corner of the site.

- **Phase 2A, June 2020 to August 2020.** Reconfigure existing field space and install new play structures on the western portion of the site.

- **Phase 2B, June 2020 to December 2020.** Demolish remaining buildings near the center of the campus; construct new replacement buildings; modernize existing buildings; improve remaining fields and play areas.

Construction is anticipated to commence in June 2019 and end in December 2020. In order to reduce unappealing sights of the worksite during construction activities, tarps, fences, and other construction barrier methods may be utilized. Although the fence, tarp, and other potential construction barrier methods may not be aesthetically appealing, they would reduce views of the worksite, which could be disorderly and unkempt and create a greater impact on the visual quality of the site than a fence and tarp.

Operation

Exterior Finishes

After construction, the appearance of the project site would be enhanced with new, modern school facilities designed in a modern coastal architectural style. The exterior finishing of the buildings would include cement plastering with an acrylic top coat and sand finishing, and sheet metal roofing. The brick building would be retrofitted, and the exterior of the brick building would remain as is.

Height of Buildings

The existing school buildings range in height from 15 to 19 feet above ground elevation. The building closest to Montgomery Avenue is the existing Administrative and Library Building, shown as Building E on Figure 4-2, *Site Plan*. This building is 15 feet tall and is at a grade roughly equal to the sidewalk along Montgomery Avenue and the student drop-off area. The tallest building in the proposed project will be the multiuse building, shown as Building L on Figure 4-2. This building will be approximately 22 feet high and is proposed north and west of the existing administrative building. However, because of the grade differential of the site at this location, Building L will be 9 feet below the existing administrative building. As a result, the top of new Building L will appear to be approximately 2 feet below the existing administrative building.

The height of the proposed buildings would be similar to and compatible with the surrounding residences. The proposed buildings' setback from the adjoining roadways and architectural features help break up the buildings' mass, so that they are compatible in scale to the surrounding developments and are similar to the existing conditions of the site. The proposed features would reduce the buildings' appearance as bulky, overbearing, and/or out-of-place. They would be architecturally interesting and compatible with the overall visual characteristics of the surrounding coastal neighborhood.

Location of Buildings

The locations of most of the proposed buildings would be placed within the same footprint that the existing buildings are currently situated, with the exception of the play equipment/sport court, play apparatus, multipurpose building, the cafeteria, and the kindergarten/extended day building.

The play equipment/sport court and play apparatus would be relocated from in between the two sports fields, to the southern corner of the project site, south of the sports fields. Therefore, relocating the play equipment/sport court and play apparatus would alter the visual appearance of the project site by increasing views of the western portion of the project site, but would not substantially impact the quality of the surrounding area.

The multipurpose building would be located in between the northern sports field and the northern parking lot. Although approximately 9 feet below the grade along Montgomery Avenue, the building will result in an approximately 75-foot obstruction of views to the Pacific Ocean across this portion of the site. The obstruction is similar to the view obstructions presented by the existing school buildings in other areas of the site. As shown on Figure 4-2, there is no building on either side of proposed Building L to obstruct views of the ocean. Photos 1 and 2 of Figure 5.1-6, *Viewshed of Building L*, show the views that would be obstructed by the proposed Building L. As shown in Photo 2, existing landscaping at the western edge of the project site along San Elijo Avenue currently obstructs view to the west.

The cafeteria would be to the northwest of Mozart Avenue and to the east of the hardcourt play space. Locating the cafeteria on this portion of the project site would alter the visual appearance of the project site, since this portion of the site is currently a hardcourt play space. However, the cafeteria would be next to other buildings, would be constructed of similar materials, and would not detract from the visual appearance of the site.

The kindergarten/extended day building would be parallel to Mozart Avenue, on the northeastern portion of the project site. Under existing conditions, the kindergarten play space is parallel to Mozart Avenue. The kindergarten play space would be to the east of the proposed kindergarten/extended day building. Therefore, the visual appearance of the project site would be altered; however, the location of the kindergarten/extended day building would not degrade the existing visual character of the surrounding area.

Figure 4-2, *Site Plan*, illustrates the locations and configurations of the proposed buildings and facilities on the project site.

Conclusion

Although the visual qualities of the project site during construction would not appear better than the existing condition of the property, the construction worksite would be partially hidden by a construction barrier that would be removed once construction is completed. Because the finished project would include landscaping and planting of trees, new buildings with siding, paint, and windows, and the remodel of existing buildings to match the new construction, this temporary impact will be eliminated with completion of the project.

Once constructed, the proposed design, including the heights and exterior finishes, of the new campus and buildings would blend in with the design of the surrounding structures and coastal neighborhood. Moreover, the locations of the buildings result in a campus similar to the existing school and would not significantly change the aesthetic of the site. Therefore, although project implementation would alter the visual appearance of the site, the improvements would not substantially degrade the visual character and quality of the project site and surrounding area.

The proposed project will affect public views of the Pacific Ocean from Montgomery and Mozart Avenues. As discussed above, the new multipurpose building roof line is lower in height in relation to the existing administration building roof line because the multipurpose building will be located on a portion of the site that is approximately nine feet lower than the administration building. Although located lower on the site, this new building will partially obstruct views of the Pacific Ocean along a limited portion of Montgomery Avenue, and from the first floor of some of the homes that face the school across Montgomery Avenue. The multipurpose building will not obstruct views of the pacific above the first floor of the adjacent homes. Views from Montgomery and Mozart Avenues are currently partially obstructed by existing landscaping along San Elijo Avenue and in San Elijo State Park and the views to the ocean are across the nearby highway, railroad tracks and the adjacent dirt easements. While the new multipurpose building will obstruct views from the public roadway, the width of the obstruction is small compared to the remainder of the project frontage along Montgomery Avenue, and the views to the west will remain available to the public from the public school property. Therefore, although the new building will obstruct views of the Pacific Ocean, the extent of obstruction is not considered substantial, and therefore this impact is less than significant.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.1-2 would be less than significant.

5.1.4 Cumulative Impacts

The geographic context for the analysis of cumulative aesthetics and visual resources impacts includes developments in the City of Encinitas, Cardiff-by-the-Sea, and surrounding communities. The proposed project's physical impacts are localized and would take place within the footprint of the Cardiff School campus. The improvements would be compatible with surrounding uses, in that the buildings would not be taller or wider than other buildings surrounding the project site or in the city. Alone and/or combined with proposed developments in the area, the proposed structures would not substantially alter public views of scenic vistas or scenic corridors.

5.1.5 Existing Regulations and Standard Conditions

- Federal Coastal Act
- California Coastal Act of 1976
- California Coastal Commission Regional Interpretive Guidelines
- City of Encinitas Local Coastal Plan
- City of Encinitas General Plan

Figure 5.1-6 - Viewsed of Building L
5.1. Aesthetics



View to the west of the Pacific Ocean near the existing student loading driveways. Building L would be constructed in the background over a portion of the grass playfield.



View from the western portion Montgomery Avenue facing the Pacific Ocean. Note the existing landscaping along San Elijo Boulevard (background) obstructs views of the ocean.

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5.1.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.1-1: and 5.1-2.

5.1.7 Mitigation Measures

No mitigation measures are required.

5.1.8 Level of Significance After Mitigation

Impacts would be less than significant.

5.1.9 References

Encinitas, City of. 2005. Design Guidelines. Planning Commission and City Council. http://ci.encinitas.ca.us/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Design%20Review%20Guidelines.pdf.

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5.2 AIR QUALITY

This section of the Draft Environmental Impact Report (Draft EIR) evaluates the implementation of the Cardiff School Modernization Project ("proposed project") to impact air quality. This evaluation is based on the methodology recommended by the San Diego Air Pollution Control District (SDAPCD). The analysis in this section is based on buildout of the proposed project, as modeled using the California Emissions Estimator Model (CalEEMod) and trip generation provided by IBI Group (see Appendix 5.10-1 to this DEIR). The criteria air pollutant emissions modeling for construction and operational phases is included in Appendix 5.2-1 of this DEIR.

5.2.1 Regulatory Framework

Ambient air quality standards (AAQS) for criteria air pollutants have been adopted and are periodically updated by state and federal agencies. In addition, both the state and federal governments regulate the release of toxic air contaminants (TACs). The planning area is within the San Diego Air Basin (SDAB). Land use is subject to the rules and regulations imposed by SDAPCD, the California AAQS adopted by the California Air Resources Board (CARB), and National AAQS adopted by the US Environmental Protection Agency (EPA). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

5.2.1.1 FEDERAL AND STATE

Ambient Air Quality Standards

The Clean Air Act was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollutants. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.2-1, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter

(PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Table 5.2-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm[2]	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	*	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.

Table 5.2-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Hydrogen Sulfide	1 hour	0.03 ppm	*	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	*	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016.
Notes: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
1 California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California AAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2 National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
4 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were maintained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ also were maintained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
5 On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

Tanner Air Toxics Act and Air Toxics Hots Information and Assessment Act

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and to reduce exposure to them. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health" (17 CCR § 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the

federal Clean Air Act (42 U.S. Code § 7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate "toxics best available control technology" to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR Chapter 10, § 2485**, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- **13 CCR Chapter 10, § 2480**, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- **13 CCR § 2477 and Article 8**, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Air Pollutants of Concern

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that AAQS have been established for them. VOC and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

The primary and secondary criteria air pollutants and their known health effects are described here.

- **Carbon Monoxide** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005; USEPA 2018). The SDAB is designated in attainment of CO criteria levels under the California and National AAQS (SDAPCD 2017).

- **Volatile Organic Compounds** are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (SCAQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O_3, SDAPCD has established a significance threshold (see Section 5.2.4.1, *San Diego Air Pollution Control District Thresholds*).

- **Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_X produced by combustion is NO, but NO reacts quickly with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO_2 is only potentially irritating. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO_2 exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO_2 exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO_2 concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (SCAQMD 2005; USEPA 2018). The SDAB is designated an attainment area for NO_2 under the National and California AAQS (SDAPCD 2017).

- **Sulfur Dioxide** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO_2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing.) At lower concentrations and when combined with particulates, SO_2 may do greater

harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (SCAQMD 2005; USEPA 2018). The SDAB is designated attainment for SO_2 under the California and National AAQS (SDAPCD 2017).

- **Suspended Particulate Matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (SCAQMD 2005). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), have human health implications, because ultrafine particulates' toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (SCAQMD 2013). However, the EPA and CARB have not yet adopted AAQS to regulate these particulates. Diesel particulate matter (DPM) is classified by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[1] environmental damage,[2] and aesthetic damage[3] (SCAQMD 2005; USEPA 2018). The SDAB is a nonattainment area for $PM_{2.5}$ under the California AAQS and unclassifiable under the National AAQS. For PM_{10}, the SDAB is also designated a nonattainment area under the California AAQS and an attainment area under the National AAQS (SDAPCD 2017).

- **Ozone** is commonly referred to as "smog" and is a gas that is formed when VOCs and NO_X, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3

[1] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.

[2] Particulate matter can be carried over long distances by wind and settle on ground or water, making lakes and streams acidic, changing the nutrient balance in coastal waters and large river basins, depleting the nutrients in soil, damaging sensitive forests and farm crops, and affecting the diversity of ecosystems.

[3] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (SCAQMD 2005; USEPA 2018). The SDAB is designated nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (SDAPCD 2017).

- **Lead** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (SCAQMD 2005; USEPA 2018). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. The SDAB is designated as in attainment under both the California and National AAQS (SDAPCD 2017). Because emissions of lead are found only in projects that are permitted by SDAPCD lead is not an air quality of concern for the proposed project.

Toxic Air Contaminants

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.

Community Risk

To reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated

health risks when siting sensitive receptors near existing pollution sources. CARB's recommendations were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity substantially increases exposure and the potential for adverse health effects. Three carcinogenic TACs constitute the majority of the known health risks from motor vehicle traffic—DPM from trucks and benzene and 1,3 butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

5.2.1.2 REGIONAL

Air Quality Management Plan

To ensure continued progress toward clean air and to comply with state and federal requirements, the SDAPCD in conjunction with CARB and San Diego Association of Governments, prepared the San Diego Regional Air Quality Strategy (2016 RAQS). The 2016 RAQS employs up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

Regional RAQS were first adopted for the SDAB in 1992. The first, second, third, fourth, fifth, and sixth RAQS revisions were in 1995, 1998, 2001, 2004, 2009, and 2016. The current 2016 Triennial Revision of the RAQS, adopted in December 2016, is an update of the 2009 RAQS. Overall, the amended and new rules considered in this RAQS Revision are estimated to reduce NO_x by approximately 1.2 tons per day and VOC by approximately 0.3 tons per day. The 2016 RAQS provides additional reductions of ozone precursor emissions relative to the 2009 RAQS and, therefore, is more effective in improving air quality.

The SDAPCD also is required to submit separate attainment plans to demonstrate to the EPA how the San Diego Air Basin will achieve compliance with the Federal Clean Air Act for nonattainment designations. These plans include:

- 2016 Attainment Plan – 8-Hour Ozone (2008 Standard)
- 2012 Maintenance Plan – 8-Hour Ozone (1997 Standard)
- 2007 Attainment Plan – 8-Hour Ozone (1997 Standard)
- 2005 Wildfire Natural Events Action Plan
- 2002 Maintenance Plan – 1-Hour Ozone (1979 Standard)

SDAPCD Rules and Regulations

All projects are subject to SDAPCD rules and regulations in effect at the time of activity, including:

- **Rule 51, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.

Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 55, Fugitive Dust Control.** This rule is intended to reduce the amount of fugitive emitted from commercial construction or demolition activities. Specifically, this rule limits the amount of visible dust emissions discharged into the atmosphere beyond the property line and also imposes requirements to minimize visible roadway dust associated with transport trucks, erosion, or track-out/carry-out.

- **Rule 67.0.1, Architectural Coatings.** This rule limits the VOC content of architectural coatings used on projects in the SDAPCD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the SDAPCD must comply with the current VOC standards set in this rule.

5.2.2 Environmental Setting

5.2.2.1 SAN DIEGO AIR BASIN

The SDAB includes the entire County of San Diego. Emissions sources within the SDAB are primarily in the western region, and dispersion of air pollutants is highly affected by the region's climate and geography. The climate in the project area is dominated by the strength and position of the semipermanent high pressure center over the Pacific Ocean near Hawaii. This high pressure center creates cool summers, mild winters, and infrequent rainfall, and drives the cool, daytime breezes, maintaining a comfortable level of humidity and ample sunshine.

Inversions

The influence of this semipermanent high-pressure system results in strong high-altitude temperature inversions associated with warm descending air. The subsidence inversions in the SDAB generally occur during the warmer months (May through October) as descending air from the Pacific high-pressure cell comes into contact with cool marine air. The inversion layer in the SDAB is approximately 2,000 feet (610 meters) above mean sea level between May and October. During the winter months (November through April), the temperature inversion rises to approximately 3,000 feet (914 meters) above mean sea level. Inversion layers are important elements of local air quality because they inhibit the dispersion of pollutants, resulting in a temporary degradation of air quality. On days without inversions or on days of winds averaging over 15 mph, smog potential is greatly reduced in the SDAB.

Temperature and Precipitation

The annual average temperature varies little throughout the 4,225-square-mile basin. The overall climate is Mediterranean, with average temperatures reaching 92°F in the summer and 38°F in the winter. High temperatures are often accompanied by very low relative humidity (often less than 20 percent). The Western Regional Climate Center maintains historical climate information for the western US. The closest

meteorological monitoring station to the project site is in Solana Beach; however complete temperature information for that station was not available. Therefore, data from the San Diego Sea World, California Monitoring Station (ID No. 047741) was used. The average low is reported at 47.9°F in December and the average high is 72.7°F in August (WRCC 2018).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. The total average annual precipitation is 9.58 inches as measured by the Western Regional Climate Center, and the majority of precipitation occurs between November and April (WRCC 2018).

Wind

Wind patterns across the south coastal region are characterized by westerly onshore winds during the day and occasional easterly breezes at night as a result of cold air drainage. Wind speed is somewhat greater during the dry summer months than during the rainy winter season. The offshore flow is less persistent in the winter, when occasional hot, dry Santa Ana winds blow from the east with great force.

5.2.2.2 SDAB NONATTAINMENT AREAS

The RAQS provides the framework for the SDAB to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan. Areas that meet ambient air quality standards are classified as attainment areas, and areas that do not meet these standards are classified as nonattainment areas. Following are descriptions of the attainment classifications; the attainment status for the SDAB is in Table 5.2-2, *Attainment Status of Criteria Pollutants in the San Diego Air Basin*:

- ***Unclassified:*** a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- ***Attainment:*** a pollutant is in attainment if the CAAQS for that pollutant was not violated at any site in the area during a three-year period.
- ***Nonattainment:*** a pollutant is in nonattainment if there was at least one violation of a state AAQS for that pollutant in the area.
- ***Nonattainment/Transitional:*** a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

Table 5.2-2 Attainment Status of Criteria Pollutants in the San Diego Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	Revoked
Ozone – 8-hour	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Unclassified[1]
$PM_{2.5}$	Nonattainment[2]	Attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
All others	Attainment/Unclassified	No federal standard

Source: SDAPCD 2017.
[1] At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated unclassifiable.
[2] The SDAB is designated nonattainment for fine particulate matter due to the 8-hour ozone nonattainment designation. $PM_{2.5}$ is precursor to ozone formation.

5.2.2.3 EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the vicinity of the proposed project site are best documented by measurements taken by the SDAPCD. The SDAPCD air quality monitoring station closest to the project site is the Del Mar-Mira Costa College Monitoring Station, which monitors O_3 and NO_2. Data for PM_{10}, and $PM_{2.5}$ are obtained from the San Diego-Kearney Road Monitoring Station, and SO_2 and CO data is from the San Diego-1110 Beardsley Street Monitoring Station. The most current five years of data monitored at these monitoring stations are in Table 5.2-3, *Ambient Air Quality Monitoring Summary*.

Table 5.2-3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	2012	2013	2014	2015	2016
Ozone[1]					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	0	0	1	1	0
State 8-Hour > 0.070 ppm (days exceed threshold)	2	0	4	2	1
Federal 8-Hour > 0.075 ppm (days exceed threshold)	2	0	2	1	0
Max. 1-Hour Conc. (ppm)	0.088	0.076	0.100	0.098	0.079
Max. 8-Hour Conc. (ppm)	0.078	0.069	0.087	0.078	0.071
Carbon Monoxide[3]					
State 8-Hour > 9 ppm (days exceed threshold)	0	*	*	*	*
Federal 8-Hour ≥ 9 ppm (days exceed threshold)	0	*	*	*	*
Max. 8-Hour Conc. (ppm)	1.81	*	*	*	*
Nitrogen Dioxide[1]					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.057	0.067	0.051	0.051	0.053
Sulfur Dioxide[3]					
State 24-Hour ≥ 0.04 ppm (days exceed threshold)	0	0	*	*	*
Federal 24-Hour ≥ 0.14 ppm (days exceed threshold)	0	0	*	*	*
Max 24-Hour Conc. (ppm)	0.001	0.001	*	*	*

Table 5.2-3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	2012	2013	2014	2015	2016
Coarse Particulates (PM_{10})[2]					
State 24-Hour > 50 µg/m³ (days exceed threshold)	0	0	0	0	0
Federal 24-Hour > 150 µg/m³ (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. (µg/m³)	35.0	39.0	39.0	37.0	36.0
Fine Particulates ($PM_{2.5}$)[2]					
Federal 24-Hour > 35 µg/m³ (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. (µg/m³)	20.1	22.0	20.2	25.7	19.4

Source: CARB 2017.
ppm: parts per million; µg/m³: micrograms per cubic meter
Notes: * Data not available.
[1] Data from the Del Mar – Mira Costa College Monitoring Station.
[2] Data from the San Diego – Kearny Road Monitoring Station.
[3] Data from the 1110 Beardsley Street Monitoring Station.

5.2.2.4 EXISTING EMISSIONS

Cardiff School currently operates with 367 students on campus. The buildings associated with these limited developed land uses are assumed to currently generate criteria air pollutant emissions from mobile-source emissions from vehicle trips, natural gas use for energy, and heating and from area sources such as consumer cleaning products. Table 5.2-4, *Existing Daily Emissions Inventory*, shows the average daily emissions inventory associated with the existing elementary school.

Table 5.2-4 Existing Daily Emissions Inventory

Phase	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	<1	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	<1	<1	2	<1	<1	<1
Total	**<1**	**<1**	**2**	**<1**	**<1**	**<1**

Source: CalEEMod Version 2016.3.2.25 Based on highest winter or summer emissions using 2017 transportation emission rates. Totals may not equal 100 percent due to rounding.

5.2.2.5 SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable

air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

The nearest offsite sensitive receptors to Cardiff School are the surrounding residences to the north and east across Montgomery Avenue.

5.2.3 Thresholds of Significance

In order to establish acceptable criteria for determining significance each question listed under the State CEQA Guidelines Appendix G must be addressed. Implementation of the proposed project would have a significant effect on the environment with respect to air quality if it would:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

AQ-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

AQ-4 Expose sensitive receptors to substantial pollutant concentrations.

AQ-5 Create objectionable odors affecting a substantial number of people.

The Initial Study, included as Appendix 5.2-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold AQ-1
- Threshold AQ-5

5.2.3.1 SAN DIEGO AIR POLLUTION CONTROL DISTRICT THRESHOLDS

Regional Significance Thresholds

The quantitative screening-level thresholds (SLTs) and guidelines for determining significance are discussed below. For CEQA purposes, these SLTs can be used to demonstrate that a project's total emissions (e.g. stationary emissions, fugitive emissions, and emissions from mobile sources) would not result in a significant impact to air quality. Table 5.2-5, *County of San Diego Air Quality Significance Thresholds*, lists regional emissions thresholds used in the analysis. SDAPCD recommends that an ambient air quality (i.e., localized) analysis be performed for pollutants when onsite emissions from construction or operational activities would equal or exceed the regional significance criteria identified in Table 5.2-5.

Table 5.2-5 County of San Diego Air Quality Screening-Level Thresholds

Air Pollutant	Threshold
Volatile Organic Gases (VOC)[1]	75 lbs/day
Nitrogen Oxides (NO_X)	250 lbs/day
Carbon Monoxide (CO)	550 lbs/day
Sulfur Oxides (SO_X)	250 lbs/day
Coarse Inhalable Particulates (PM_{10})	100 lbs/day
Fine Inhalable Particulates ($PM_{2.5}$)[2]	55 lbs/day

Source: San Diego County 2007.
Notes: Based on SDAPCD Regulation 2, 20.2 (d) (2): Operational Emission Thresholds, and SDAPCD Regulation 20.3.
[1] Threshold for VOCs based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley.
[2] EPA 2005.

CO Hotspot Analysis

The significance of localized project impacts depends on whether the project would cause substantial concentrations of CO. Prior to 1998 the SDAB was designated nonattainment for CO under the California AAQS and National AAQS. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SDAB and in the state have steadily declined. In 1998, the SDAPCD was designated in attainment for CO under both the California and National AAQS and was under a 10-year federal maintenance plan for CO as a result of its redesignation. The current version of the maintenance plan is the "2004 Revision to the California State Implementation Plan (SIP) for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas," which was approved as an SIP revision in January 2006.

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017). Therefore, the potential for CO hotspots to be generated in the SDAB is extremely low because of the improvements in vehicle emission rates and control efficiencies. Typical projects would not expose sensitive receptors to substantial pollutant concentrations, and analysis of CO hotspots is not warranted.

Health Risk Analysis

Whenever a project would require use of chemical compounds that have been identified in SDAPCD Rule 1200; placed on CARB's air toxics list pursuant to AB 1807, the Air Contaminant Identification and Control Act (1983); or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by SDAPCD. Table 5.2-6, *SDAPCD Toxic Air Contaminants Incremental Risk Thresholds*, lists SDAPCD's TAC incremental risk thresholds for operation of a project. The purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478)). CEQA does not require analysis of the proposed project's environmental effects from siting sensitive receptors. However, the environmental document must analyze the impacts of environmental hazards on future users when a proposed project exacerbates an existing environmental hazard or condition. Residential, commercial, school,

office, and recreational uses do not use or generate substantial quantities of TACs, and these thresholds are typically applied to new industrial projects.

Table 5.2-6 SDAPCD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Individual Cancer Risk	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 1.0 excess cancer cases
Hazard Index (project increment)	≥ 1.0

Source: SDAPCD Rule 1210.

5.2.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.2-1: Construction of the project would not exceed the SDAPCD significance thresholds or substantially contribute to the nonattainment designations of the SDAB. [Threshold AQ-2 and AQ-3]

Impact Analysis: The following describes project-related impacts from short-term construction activities of the project. Air quality impacts of the proposed project were evaluated based on the County of San Diego's Guidelines for Determining Significance, Air Quality (SDAPCD 2007).

Short-Term Construction-Related Air Quality Impacts

Construction activities would result in the generation of air pollutants, primarily 1) exhaust emissions from off-road diesel-powered construction equipment; 2) dust generated by ground-disturbing construction activities; 3) exhaust emissions from on-road vehicles; and 4) off-gas emissions of VOCs from asphalt, paints, and coatings.

Construction activities would occur over an approximately 19-month period. During construction, approximately 147 students would be relocated to Ada Harris Elementary School for the 2019-2020 school year, and approximately 50 students would be relocated during the 2020-2021 school year. At buildout of the project, these students would return to Cardiff School. Thus, temporary student housing during construction would not increase the total number of trips to the project site. Results of the construction emissions modeling are shown in Table 5.2-8, *Maximum Daily Construction Emissions*. As shown in the table, the maximum daily criteria air pollutant emissions from construction-related activities would be less than the County's regional significance threshold values. Therefore, construction activities would not result in a cumulatively considerable net increase in criteria pollutants. Air quality impacts from project-related construction activities would be less than significant.

5. Environmental Analysis
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Table 5.2-7 Maximum Daily Construction Emissions

Source	Maximum Daily Emissions (lbs/day)[1]					
	VOC	NOx	CO	SO_2	PM_{10}[2]	$PM_{2.5}$[2]
Year 2019						
1A Demolition + Haul	4	39	23	<1	3	2
1A Site Preparation	4	46	23	<1	10	6
1A Site Prep + 1A Demo + Haul	8	85	46	<1	13	8
1A Grading	3	29	17	<1	4	3
1A Grading + 1A Demo + Haul	6	68	40	<1	7	5
1A Trenching	<1	4	4	<1	<1	<1
1A Trenching + 1A Demo + Haul	4	42	27	<1	3	2
1A Concrete Curb	1	13	13	<1	<1	<1
1A Concrete Curb + 1A Demo + Haul	5	51	39	<1	3	3
1A Concrete Curb + 1B Site Prep	6	59	36	<1	11	7
1B Site Preparation	4	46	23	<1	10	6
1B Site Prep + 1A Canopy Installation	5	52	29	<1	11	7
1B Site Prep + 1A Concrete Sidewalks	6	59	36	<1	11	7
1B Rough Grading + Haul + 1A Landscaping	5	60	34	<1	8	6
1B Rough Grading + Haul	5	60	34	<1	8	6
1B Utility Trenching	<1	4	4	<1	<1	<1
1B Building Construction	3	23	19	<1	2	1
Year 2020						
1B Building Construction (BC)	2	21	19	<1	2	1
1B BC + 1B Paving	4	33	31	<1	2	2
1B BC + 1B Paving + 1A Painting	25	35	34	<1	3	2
1B BC + 2 Demolition + Haul	5	49	35	<1	4	3
1B BC + 2 Site Preparation	4	41	30	<1	3	2
1B BC + 2 Grading + Haul	5	47	29	<1	6	4
1B BC + 2 Trenching	3	25	22	<1	2	1
1B BC + 2 BC	5	39	34	<1	3	2
1B BC + 2 BC + 1B Paving + 1B Painting	27	53	49	<1	4	3
1B BC + 2 BC + 1B Paving + 1B Painting	8	32	30	<1	2	2
2 BC + 1B Painting	6	20	18	<1	1	1
2 BC + 2 Paving	4	30	28	<1	2	2
Maximum Daily Emissions	27	85	49	<1	13	8

Table 5.2-7 Maximum Daily Construction Emissions

Source	Maximum Daily Emissions (lbs/day)[1]					
	VOC	NOx	CO	SO_2	PM_{10}[2]	$PM_{2.5}$[2]
County of San Diego Screening-Level Threshold	**75**	**250**	**550**	**250**	**100**	**55**
Exceeds Threshold	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.25. Highest winter or summer emissions are reported.
[1] Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults.
[2] Includes implementation of fugitive dust control measures required by SDAPCD under Rule 55, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping.

Impact 5.2-2: Operation of the project would not exceed the SDAPCD significance thresholds or substantially contribute to the nonattainment designations of the SDAB. [Threshold AQ-2 and AQ-3]

Impact Analysis: The following describes project-related impacts from long-term operation of the project. Air quality impacts of the proposed project were evaluated based on the County of San Diego's Guidelines for Determining Significance, Air Quality (SDAPCD 2007).

Student Relocation (2019–2021)

Approximately 147 second- and third-grade students would be relocated to Ada Harris School during construction activities. Kindergarten and first grade would remain at Cardiff School during construction activities. Second grade would return to Cardiff School in August 2020, and third grade would return to Cardiff School in August 2021. No new trips would be generated as a result of relocation since existing trips to Cardiff School would be rerouted to Ada Harris School. However, student relocation during construction could increase VMT by altering student and teacher trips to and from campus. The two schools are approximately 1.1 miles apart, and any change in VMT during construction of the proposed project would be short term and would not generate substantial criteria air pollutant emissions. Impacts to the regional air quality associated with student relocation would be less than significant.

Long-Term Operation-Related Air Quality Emissions

Typical long-term air pollutant emissions associated with an elementary school are generated by area sources (e.g., landscape fuel use, aerosols, and architectural coatings), energy use (natural gas), and mobile sources (i.e., on-road vehicles associated with a project). The school currently generates criteria air pollutant emissions. The installation and operation of the new facilities would improve current programs at the existing campus and would increase student enrollment by approximately 73 students. Likewise, the project would result in up to 117 new vehicle trips (see Section 5.10, *Transportation and Traffic*). Emissions associated with operation of the proposed school project are shown in Table 5.2-9, *Regional Operational Emissions*. As shown in the table, emissions would not exceed the County of San Diego regional operation-phase significance thresholds or result in a cumulatively considerable net increase in criteria pollutants. Impacts to the regional air quality associated with operation of the project would be less than significant.

Table 5.2-8 Regional Operational Emissions

Source	Maximum Daily Emissions (lbs/day)a					
	VOC	NOx	CO	SO2	PM10b	PM2.5b
Existing Campus Emissions (2020)						
Area	1	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	2	1	10	<1	3	1
Proposed Project Emissions (2020)						
Area	1	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	2	2	12	<1	3	1
Net Emissions						
Area	<1	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	<1	<1	2	<1	1	<1
Total	**<1**	**<1**	**2**	**<1**	**1**	**<1**
County of San Diego Screening-Level Threshold	**75**	**250**	**550**	**250**	**100**	**55**
Exceeds Threshold	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.2. Highest winter or summer emissions are reported.
[1] Where specific information regarding project-related operation activities was not available, construction assumptions were based on CalEEMod defaults.

Impact 5.2-3: Construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-4]

Impact Analysis: The significance of localized project impacts depends on whether the project would cause substantial concentrations of criteria air pollutants for which the SDAB is designated nonattainment under the California or National AAQS.

Localized Impacts

Pursuant to the County of San Diego's Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality, projects whose stationary source emissions do not exceed or can be mitigated to less than the SDAPCD trigger level would not be considered to violate an air quality standard or contribute substantially to an existing or projected air quality violation (SDACD 2017). Since the County of San Diego does not have separate localized significance thresholds for construction, the SDAPCD trigger levels are used for localized construction impacts. Projects that exceed these thresholds would be required to conduct an air quality impact analysis to determine the concentrations of emissions at nearby sensitive receptors. SDAPCD considers emissions from projects that exceed the thresholds in Table 5.2-5 to require dispersion modeling to ensure that localized impacts would not occur. As identified in Table 5.2-7, onsite construction emissions would be substantially below the County's thresholds; therefore, localized construction emissions are also less than significant.

Construction Health Risk

Neither SDAPCD nor the County of San Diego require a health risk assessment to be conducted for short-term emissions from construction equipment. Emissions from construction equipment primarily consist of DPM. The Office of Environmental Health Hazards Assessment (OEHHA) adopted new guidance for the preparation of health risk assessments issued in March 2015. OEHHA developed a cancer risk factor and noncancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM. The proposed project would be developed in approximately 19 months, which would limit the exposure of onsite and offsite receptors. SDAPCD and the County currently do not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. In addition, construction activities would not exceed the regional significance thresholds, which are used by the SDAPCD to determine if localized air pollutant emissions modeling is necessary. For the reasons stated above, it is anticipated that construction emissions would not pose a threat to onsite and offsite receptors at or near the school; project-related construction health impacts would be less than significant, and no mitigation measures are required.

Impact 5.2-4: Operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-4]

Impact Analysis: The significance of localized project impacts depends on whether the project would cause substantial concentrations of criteria air pollutants for which the SDAB is designated nonattainment under the California or National AAQS.

Localized Impacts

Pursuant to the County of San Diego's Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality, projects whose stationary source emissions do not exceed or can be mitigated to less than the SDAPCD trigger level would not be considered to violate an air quality standard or contribute substantially to an existing or projected air quality violation (SDACD 2017). Projects that exceed these thresholds would be required to conduct an air quality impact analysis to determine the concentrations of stationary emissions at nearby sensitive receptors. As identified in Table 5.2-8 onsite emissions would be substantially below the County's thresholds; therefore, localized emissions are also less than significant.

Operation Health Risk

Operation of the project would not generate substantial quantities of emissions from stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions that would require a permit from SCAQMD include industrial land uses, such as chemical processing and warehousing operations where substantial truck idling could occur onsite. The project does not fall within these categories of uses. While operation of the new portable classrooms would result in the use of standard mechanical equipment such as heating, ventilation, and air conditioning (HVAC) systems, air pollutant emissions generated would be nominal. Therefore, localized air quality impacts related to operation-related emissions would be less than significant.

Carbon Monoxide Hotspots

Prior to 1998 the SDAB was designated nonattainment for CO under the California AAQS and National AAQS. Concentrations of CO in the SDAB and in the state have steadily declined with the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities. In 1998, the SDAPCD was designated as in attainment for CO under both the California and National AAQS and was under a 10-year federal maintenance plan for CO as a result of its redesignation. The current version of the maintenance plan is the "2004 Revision to the California State Implementation Plan (SIP) for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas," which was approved as a SIP revision in January 2006. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017). The proposed project would generate 117 net daily trips, with 38 trips (23 inbound and 15 outbound) during the AM peak hour and 10 trips (4 inbound and 6 outbound) during the PM peak hour (see Section 5.10, *Transportation and Traffic*), which would not cause a substantial increase in traffic volumes. Typical projects would not expose sensitive receptors to substantial pollutant concentrations, and analysis of CO hotspots is not warranted. Therefore, no significant impacts would occur.

5.2.5 Cumulative Impacts

The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is nonattainment under an applicable federal or state ambient air quality standard, including emissions that exceed the SLTs for ozone precursors.

Construction

The SDAB is designated under the California and National AAQS as nonattainment for O_3 and under the California AAQS as nonattainment for PM_{10}, and $PM_{2.5}$ (SDAPCD 2017). As discussed under Impact 5.2-1, implementation project-related construction emissions would be below the SDAPCD significance thresholds on a project and cumulative basis. Therefore, the proposed project's contribution to cumulative air quality impacts would not be cumulatively considerable.

Operation

It is assumed that a project which conforms to the Encinitas General Plan and does not have emissions exceeding the SLTs will not create a cumulatively considerable net increase to ozone since the emissions were accounted for in the RAQS. Operational impacts from land development activities are predominantly the result of vehicular traffic associated with projects. For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by SDAPCD to be a substantial source of air pollution and does not add significantly to a cumulative impact. Operation of the proposed project would not result in emissions in excess of the SDAPCD regional emissions thresholds for VOC, CO, NO_X, PM_{10}, and $PM_{2.5}$ (see Impact 5.2-2). Therefore, the air pollutant emissions associated with the proposed project would not be cumulatively considerable.

5.2.6 Existing Regulations and Standard Conditions

State

- Clean Car Standards – Pavley (AB 1493)
- California Advanced Clean Cars CARB (Title 13 CCR)
- Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

Regional

- SDAPCD Rule 50: Visible Emissions
- SDAPCD Rule 51: Nuisance
- SDAPCD Rule 52: Particulate Matter
- SDAPCD Rule 54: Dust and Fumes
- SDAPCD Rule 55: Fugitive Dust Control
- SDAPCD Rule 67.0.1, Architectural Coatings

5.2.7 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant, and no mitigation measures are necessary.

5.2.8 References

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5. Environmental Analysis
AIR QUALITY

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5.3 BIOLOGICAL RESOURCES

This section of the EIR evaluates the potential for implementation of the proposed Cardiff School Modernization and Reconstruction project to impact biological resources. This section discusses regulatory framework (plans and policies from several jurisdictional agencies), existing biological resources, and possible environmental impacts that may occur as the project is implemented.

The analysis in this section is based in part on the following technical report:

- *Campus Tree Evaluation for Cardiff Elementary School*, Arborgate Consulting, Inc., April 21, 2018 (included as Appendix 5.3-1)

A complete copy of this study is in the Technical Appendices to this Draft EIR.

Terminology

Active nest. A nest becomes active during the breeding season when birds begin constructing or repairing it for egg-laying. It is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest. Some nests are considered active year-round—e.g., for species that exhibit site fidelity, colonial nesters, and raptors.

Breeding season. The period of the year when courting, breeding, or nesting occurs, or when breeding adult birds or their nestlings or fledglings are at or near a nest. The breeding season varies among bird species and geographic locations.

Habitat. Where a given plant or animal species meets its requirements for food, cover, and water in both space and time.

Natural communities. Recurring assemblages of plants and animals found in particular physical environments. Three characteristics distinguish natural communities: 1) plant species composition, 2) vegetation structure (e.g., forest, shrubland, or marsh), and 3) a specific combination of physical conditions (e.g., water, light, nutrient levels, and climate). Each natural community type occurs in specific settings in the landscape, such as wind-exposed rocky summits at high elevations, or muddy coastal river shores flooded daily by tides. Natural community types vary with changes in physical settings, resulting in predictable patterns across the landscape.

Riparian habitats. Habitats along the banks of rivers and streams.

Roost (bat). The place a bat lives is called its roost. Bats need different roosting conditions at different times of the year. Some bats prefer hollow trees, some like caves, and some use both at different times; many bats shelter in buildings. Female bats use maternity roosts for several weeks in summer; bats use hibernation roosts in winter (BCI 2018).

Sensitive natural communities. Considered rare in the region by regulatory agencies; known to provide habitat for sensitive animal or plant species; or known to be important wildlife corridors.

Sensitive species. Species listed as endangered or threatened under the federal or California Endangered Species Acts; species otherwise given certain designations by the California Department of Fish and Wildlife; and plant species listed as rare by the California Native Plant Society.

Take. Defined under the federal Endangered Species Act as "harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct."

Wetlands. Defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include playas, ponds, and wet meadows; lakes and reservoirs; rivers, streams, and canals; estuaries; and beaches and rocky shores (SCWRP 2018).

5.3.1 Environmental Setting

5.3.1.1 REGULATORY BACKGROUND

Federal

Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973, as amended, protects and conserves any species of plant or animal that is endangered or threatened with extinction, as well as the habitats where these species are found. "Take" of endangered species is prohibited under Section 9 of the FESA. "Take" means to "harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Section 7 of the FESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) on proposed federal actions that may affect any endangered, threatened, or proposed (for listing) species or critical habitat that may support the species. Section 4(a) of the FESA requires that critical habitat be designated by the USFWS "to the maximum extent prudent and determinable, at the time a species is determined to be endangered or threatened." This provides guidance for planners/managers and biologists by indicating locations of suitable habitat and where preservation of a particular species has high priority. Section 10 of the FESA provides the regulatory mechanism for incidental take of a listed species by private interests and nonfederal government agencies during lawful activities. Habitat conservation plans for the impacted species must be developed in support of incidental take permits to minimize impacts to the species and formulate viable mitigation measures.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) affirms and implements the United States' commitment to four international conventions—with Canada, Japan, Mexico, and Russia—to protect shared migratory bird resources. The MBTA governs the take, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these items, except under a valid permit or as permitted in the implementing regulations. USFWS administers permits to take migratory birds in accordance with the MBTA.

State

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA and is administered by the California Department of Fish and Wildlife (CDFW). Its intent is to prohibit take and protect state-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates). Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Under certain conditions, CESA has provisions for take through a 2081 permit or memorandum of understanding. In addition, some sensitive mammals and birds are protected by the state as "fully protected species." California "species of special concern" are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for CDFW's California Natural Diversity Database (CNDDB), which maintains a record of known and recorded occurrences of sensitive species. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biological resources assessments.

California Fish and Game Code

Section 1600 of the California Fish and Game Code requires a project proponent to notify CDFW of any proposed alteration of streambeds, rivers, and lakes. The intent is to protect habitats that are important to fish and wildlife. CDFW may review and place conditions on the project, as part of a Streambed Alteration Agreement, that address potentially significant adverse impacts within CDFW's jurisdictional limits. Moreover, Sections 3503, 3503.5, and 3800 of the California Fish and Game Code establish that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, or to take, possess, or destroy the nest or eggs of any such bird except as provided by other sections of the Fish and Game Code.

Local

City of Encinitas Local Coastal Plan

The project site is in the coastal zone, and the Encinitas Local Coastal Plan, which is incorporated into the City's general plan, includes goals and policies pertaining to preservation of biological resources, planting of native vegetation, and construction in areas adjacent to environmentally sensitive areas and within the coastal zone. One of the main goals of the local coastal plan is to maintain and enhance coastal access while preserving and promoting the city's natural resources.

City of Encinitas Municipal Code

Removal of city trees requires written approval of the city arborist under municipal code Chapter 15.02. That chapter also requires public notification prior to the planned removal of any city tree or heritage tree with a diameter greater than six inches measured at 54 inches above finish grade. Such notification shall at a minimum consist of placing two signs no less than 12 inches wide by 18 inches high and visible from at least two directions in the immediate vicinity of each city tree or heritage tree to be removed no less than 14

calendar days prior to the scheduled removal. The notification shall include the reason for the proposed removal and shall include a link to further information on a city website, including how to appeal the proposed action.

5.3.1.2 EXISTING CONDITIONS

Vegetation

Vegetation on the campus is ornamental landscape vegetation, including trees, shrubs, and turf. The nearest vegetation community to the campus mapped on the "2012 Vegetation, San Diego County, California" map issued by the San Diego Association of Governments is riparian scrub about 100 feet east of the campus (CBI 2018). Riparian scrub is dominated by small trees or shrubs and occurs mostly in major river systems where flood scour occurs. Characteristic species include willows such arroyo willow (*Salix lasiolepis*), and desert broom (*Baccharis sarothroides*) (Oberbauer et al. 2008).

Trees on the Campus

The tree evaluation completed for the project site in April 2018 identified 66 trees, approximately 57 of which are on the campus; the remaining 9 trees are street trees along San Elijo Avenue next to the southwest campus boundary (see Figure 5.3-1, *Tree Inventory*). Tree species identified in the evaluation are listed in Table 5.3-1.

Table 5.3-1 Tree Species Identified Onsite

Common Name *Scientific Name*	California Native	Status			
		Federal	State	CNPS[1]	Native Plant Protection Act
Canary Island date palm *Phoenix canariensis*		None	None	None	No
Tolurosa Juniper *Juniperus c. Torulosa*		None	None	None	No
red flowering gum *Corymbia ficifolia*		None	None	None	No
New Zealand Christmas trees *Metrosideros excelsus*		None	None	None	No
Gold medallion tree *Cassia leptophylla*		None	None	None	No
Torrey pine *Pinus torreyana*	X Endemic to California[2]	None	None	1B.2	No
Japanese black pine *Pinus thunbergiana*		None	None	None	No
Aleppo pine Pinus halepensis		None	None	None	No
shamel ash *Fraxinus uhdei*		None	None	None	No
Brazilian peppertree *Schinus terebinthifolius*		None	None	None	No

Table 5.3-1 Tree Species Identified Onsite

Common Name *Scientific Name*	California Native	Status			
		Federal	State	CNPS[1]	Native Plant Protection Act
Mexican fan palm *Washingtonia robusta*		None	None	None	No
Moreton Bay fig *Ficus macrophylla*		None	None	None	No
Catalina ironwood / Santa Cruz Island ironwood *Lyonothamnus f. asplenifolius*	X Endemic to California[2]	None	None	1B.2	No
Norfolk Island pine *Araucaria heterophylla*		None	None	None	No

Sources: Applegate 2018; CDFW 2018; Calflora 2018; NRCS 2018.
1 CNPS Rank 1B.2: species rare, threatened, or endangered in California and elsewhere, and moderately threatened in California.
2 Endemic means that the species occurs naturally only in California.

5.3.1.3 SENSITIVE RESOURCES

Sensitive Plants

Two sensitive plant species were identified in the tree evaluation: Torrey pine and Catalina ironwood, which are both assigned California Native Plant Society (CNPS) Rare Plant Rank 1B.2, indicating that they are rare, threatened, or endangered in California and elsewhere, and moderately threatened in California.

Sensitive Wildlife

The CNDDB maintained by the CDFW lists occurrences of 15 sensitive bird species in the project region.[1] The following bird species' habitat preferences include riparian scrub or riparian woodland/forest. Thus, these species could occur in riparian scrub and riparian forest habitats short distances east and northeast of the campus, and therefore might use the campus for incidental foraging:

- Tricolored blackbird (*Aegilus tricolor*): California species of special concern
- White-tailed kite (*Elanus leucurus*): California fully protected species
- Yellow-breasted chat (Icteria virens): California species of special concern (CDFW 2018)[2]

The ranges of all three species include the project region (CDFW 2008a; CDFW 2008b; CDFW 2008c). These species are not considered to inhabit the campus. A fourth sensitive bird species, burrowing owl (*Athene cunicilaria*), could inhabit scrub and disturbed habitat between San Elijo Avenue and Coast Highway west of the site. However, burrowing owl is unlikely to inhabit the campus because it nests in old

1 The region, consisting of the Encinitas, Rancho Santa Fe, and Del Mar topographic quadrangles, is about 180 square miles in west-central San Diego County.
2 One species, least Bell's vireo (*Vireo belli pusillus*), is omitted from this list due to its rarity; it is listed as federal and state endangered, and thus is quite unlikely to occur on the campus (CDFW 2018).

underground burrows left by other animals, especially ground squirrels, which are unlikely to inhabit the campus due to frequent disturbances.

The remaining 11 sensitive bird species in the CNDDB search results are unlikely to occur either in riparian scrub or riparian forest habitat east of the site, or in scrub or disturbed habitat west of the site, due to their habitat preferences. Thus, those species are unlikely to use the project site even for incidental foraging.

Two sensitive bat species listed on the CNDDB with occurrences in the region roost in buildings and could roost in buildings onsite:

- **Mexican long-tongued bat** (*Choeronycteris mexicana*), a California species of special concern. Mexican long-tongued bat uses buildings, mines, and caves as day roosts; in California the species has been recorded mostly in urban portions of the San Diego region. This species winters in Mexico and northern Central America (CDFW 2008d).

- **Yuma myotis** (*Myotis yumanensis*), a Bureau of Land Management sensitive species, roosts in buildings, mines, caves, or crevices (CDFW 2008e).

Two additional sensitive bat species in the CNDDB search results for the project region roost in trees and could occur in trees onsite:

- **Western mastiff bat** (*Eumops perotis californicus*), a California species of special concern (CDFW 2008f).

- **Western red bat** (*Lasiurus blossevillii*), a California species of special concern (CDFW 2008g).[3]

5.3.1.4 NESTING BIRDS

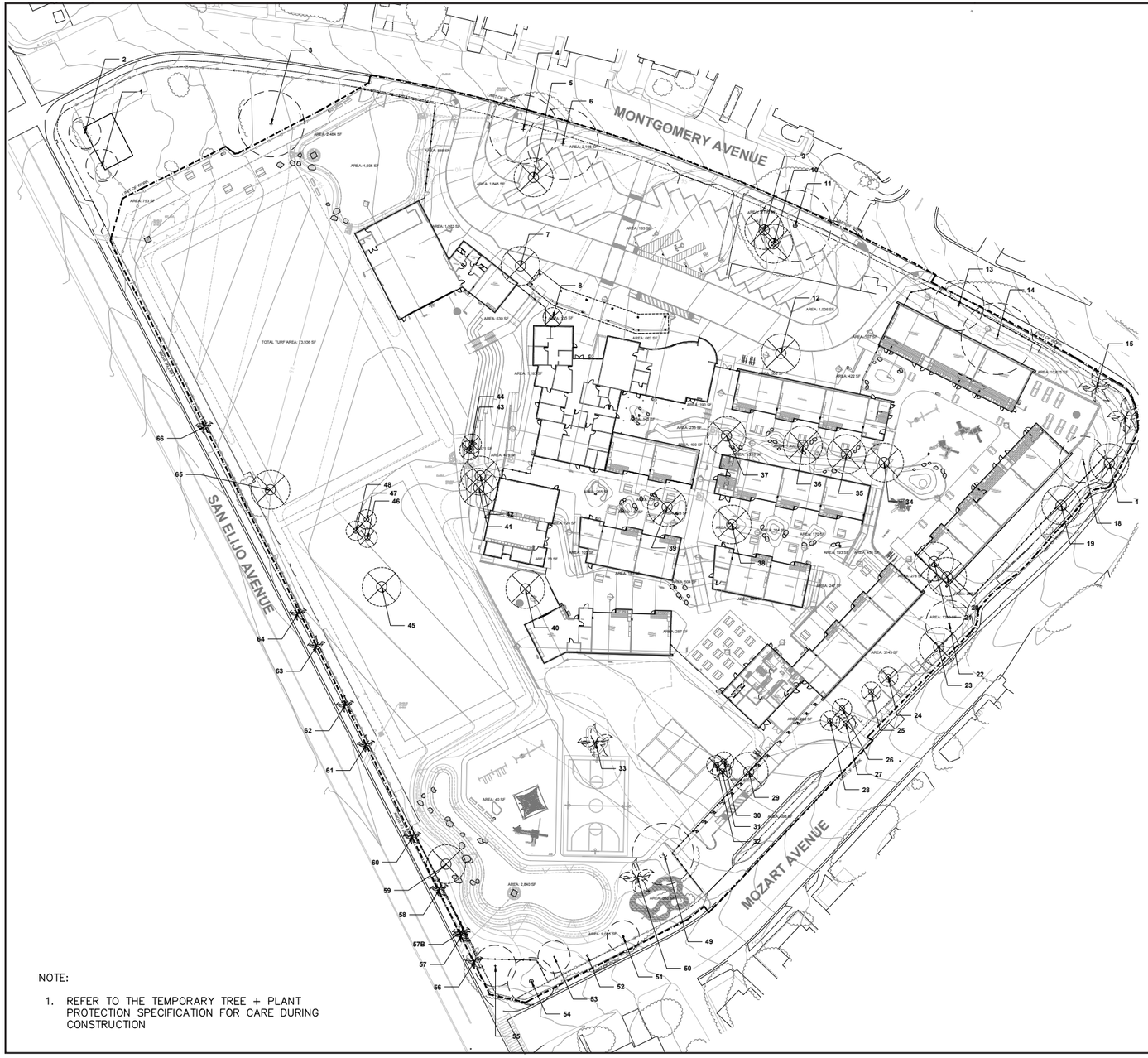
Birds protected under the MBTA and California Fish and Game Code Sections 3503 et seq. could nest in trees and other vegetation on campus.

5.3.1.5 WETLANDS AND RIPARIAN HABITAT

Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include playas, ponds, and wet meadows; lakes and reservoirs; rivers, streams, and canals; estuaries; and beaches and rocky shores (SCWRP 2018). Riparian habitats are those occurring along the banks of rivers and streams.

[3] Identification of bat species that could roost onsite is based on preferences for habitat and roosting sites listed on the CNDDB and in CDFW species accounts; CNDDB-listed occurrences in the project region; and species' ranges shown on CDFW range maps.

Figure 5.3-1 - Tree Inventory
5.3 Biological Resources



EXISTING TREE DESCRIPTION CHART

TAG #	DIA. B.T.H (INCHES)	HEIGHT X WIDTH	TREE TYPE	NOTES
1	5"	10' X 10'	JUNIPERUS C. TORULOSA	TREE TO REMAIN (PROTECT IN PLACE)
2	11"	16' X 23'	JUNIPERUS C. TORULOSA	TREE TO REMAIN (PROTECT IN PLACE)
3	46"	40' X 42'	COYRMBIA FICIFOLIA	TREE TO REMAIN (PROTECT IN PLACE)
4	48.5"	45' X 55'	CORYMBIA FICIFOLIA	TREE TO REMAIN (PROTECT IN PLACE)
5	7"	33' X 30'	METROSIDEROS EXCELSUS	TREE TO BE REMOVED
6	6.3"	18' X 18'	CASSIA LEPTOPHYLLA	TREE TO REMAIN (PROTECT IN PLACE)
7				TREE TO BE REMOVED
8			PALM	TREE TO BE REMOVED
9	28"	60' X 45'	PINUS TORREYANA	TREE TO BE REMOVED
10	46"	60' X 55'	PINUS TORREYANA	TREE TO BE REMOVED
11	40"	65' X 50'	PINUS TORREYANA	TREE TO REMAIN (PROTECT IN PLACE)
12				TREE TO BE REMOVED
13	41"	32' X 40'	CORYMBIA FICIFOLIA	TREE TO REMAIN (PROTECT IN PLACE)
14	53"	60' X 50'	PINUS TORREYANA	TREE TO REMAIN (PROTECT IN PLACE)
15	40"	40' X 24'	PHOENIX CANARIENSIS	TREE TO REMAIN (PROTECT IN PLACE)
16	32"	32' X 25'	PHOENIX CANARIENSIS	TREE TO REMAIN (PROTECT IN PLACE)
17	8"	8' X 16'	PINUS THUNBERGIANA	TREE TO BE REMOVED
18	24"	24' X 40'	PINUS HALEPENSIS	TREE TO REMAIN (PROTECT IN PLACE)
19	36"	36' X 40'	FRAXINUS UHDEI	TREE TO BE REMOVED
20	24+14"	35' X 40'	SCHINUS TEREBINTHIFOLIUS	TREE TO BE REMOVED
21	40"	37' X 52'	SCHINUS TEREBINTHIFOLIUS	TREE TO BE REMOVED
22	30"	30' X 38'	PINUS HALEPENSIS	TREE TO REMAIN (PROTECT IN PLACE)
23	24"	30' X 30'	CORYMBIA FICIFOLIA	TREE TO BE REMOVED
24		60' X 10'	WASHINGTONIA ROBUSTA	TREE TO BE REMOVED
25		60' X 10'	WASHINGTONIA ROBUSTA	TREE TO BE REMOVED
26			PALM	TREE TO BE REMOVED
27			PALM	TREE TO BE REMOVED
28			PALM	TREE TO BE REMOVED
29				TREE TO BE REMOVED
30			PALM	TREE TO BE REMOVED
31			PALM	TREE TO BE REMOVED
32			PALM	TREE TO BE REMOVED
33		60' X 25'	PHOENIX CANARIENSIS	TREE TO REMAIN (PROTECT IN PLACE)
34				TREE TO BE REMOVED
35				TREE TO BE REMOVED
36				TREE TO BE REMOVED
37				TREE TO BE REMOVED
38	41"	60' X 53'	PINUS TORREYANA	TREE TO BE REMOVED
39	36"	60' X 55'	PINUS TORREYANA	TREE TO BE REMOVED
40				TREE TO BE REMOVED
41				TREE TO BE REMOVED
42				TREE TO BE REMOVED
43			PALM	TREE TO BE REMOVED
44			PALM	TREE TO BE REMOVED
45				TREE TO BE REMOVED
46				TREE TO BE REMOVED
47				TREE TO BE REMOVED
48				TREE TO BE REMOVED
49	30+30+20	45' X 45'	FICUS MACROPHYLLA	TREE TO REMAIN (PROTECT IN PLACE)
50			PHOENIX CANARIENSIS	TREE TO REMAIN (PROTECT IN PLACE)
51	13"	24' X 25'	METROSIDEROS EXCELSUS	TREE TO REMAIN (PROTECT IN PLACE)
52	13"	28' X 28'	METROSIDEROS EXCELSUS	TREE TO REMAIN (PROTECT IN PLACE)
53	14"	30' X 30'	METROSIDEROS EXCELSUS	TREE TO REMAIN (PROTECT IN PLACE)
54	37"	58' X 40'	ARAUCARIA HETEROPHYLLA	TREE TO REMAIN (PROTECT IN PLACE)
55	28"	60' X 40'	ARAUCARIA HETEROPHYLLA	TREE TO REMAIN (PROTECT IN PLACE)
56			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)
57			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)
57B			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)
58			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)
59	39.4"	42' X 60'	PINUS TORREYANA	TREE TO BE REMOVED
60			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)
61			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)
62			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)
63			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)
64			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)
65	22"	38' X 36'	CORYMBIA FICIFOLIA	TREE TO BE REMOVED
66			WASINGTONIA SPP.	WITHIN PUBLIC R.O.W., TO REMAIN (PROTECT IN PLACE)

EXISTING TREE LEGEND

TREES	QUANTITY
EXISTING TREE TO REMAIN	20
EXISTING TREE TO BE REMOVED	47

NOTE:

1. REFER TO THE TEMPORARY TREE + PLANT PROTECTION SPECIFICATION FOR CARE DURING CONSTRUCTION

0 100
Scale (Feet)

Source: Studio E Architects, 2018

5. Environmental Analysis
BIOLOGICAL RESOURCES

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The campus is fully developed, and there are no wetlands or riparian habitats onsite.

A seasonally flooded marsh with shrub vegetation, about 90 feet east of the campus across Mozart Avenue, is mapped on the National Wetlands Mapper maintained by the USFWS. Riparian forest habitat is mapped about 90 feet northeast of the campus across Montgomery Avenue (USFWS 2018).

5.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

B-1 Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

B-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

B-3 Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

B-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

B-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

B-6 Conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant and will therefore not be discussed in this EIR section:

- Threshold B-2
- Threshold B-3
- Threshold B-4
- Threshold B-5
- Threshold B-6

5.3.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.3-1: Development of the proposed project could impact four special-status bat species—Mexican long-tongued bat, Yuma myotis, western mastiff bat and western red bat—and could impact protected nesting birds. One of the species of ornamental trees to be removed is a special-status species, Torrey pine. Project development would involve replacement of Torrey pines. [Threshold B-1]

Impact Analysis:

Sensitive Species

No sensitive plant species are onsite due to frequent disturbances by school use and landscape maintenance, and no impacts would occur. Construction will occur within the campus boundaries, and will not affect adjacent habitat across Mozart Avenue, or been San Elijo Avenue and South Coast Highway 101.

Three sensitive bird species could inhabit riparian scrub and/or riparian forest habitats east of the campus, and might use the campus for incidental foraging: tricolored blackbird, white-tailed kite, and yellow-breasted chat. A fourth sensitive bird species, least Bell's vireo, could inhabit riparian habitat east of the campus, but is considered highly unlikely to occur on campus due to its rarity; it is listed as federal and state endangered. Burrowing owl could occur in scrub and disturbed habitat west of the campus; however, it nests in underground burrows and thus is unlikely to occur on campus due to frequent disturbances.

Two sensitive bat species listed on the CNDDB with occurrences in the region roost in buildings and could roost in buildings onsite: Mexican long-tongued bat and Yuma myotis. Two other sensitive bat species listed in CNDDB results for the region roost in trees and could roost in trees onsite: western mastiff bat and western red bat.

Tree removals could have a significant impact on the two sensitive bat species that might roost in trees onsite: western mastiff bat and western red bat. Removal of trees that could be used for incidental foraging by sensitive bird species would not be a significant impact.

The proposed project would remove one of the two sensitive species of trees on the project site assigned Rare Plant Rank of 1B.2 by the CNPS, indicating that the species is rare, threatened, or endangered in California and elsewhere, and moderately threatened in California. The Catalina ironwood tree would not be impacted by the proposed project, however five Torrey pine trees would be removed because of program needs and design constraints and/or the poor health/condition of the tree per the arborist's report. Torrey pines do not have a federal or state special status (CDFW 2018; CNPS 2018). The Torrey pine trees on campus are part of the ornamental landscaping and are not remnants from native habitat predating the school, as shown on historical aerial photographs (NETR 2018). Removal of the trees is not considered a significant impact.

Sensitive Habitat

The project site is a developed elementary school campus with ornamental landscape vegetation. It is frequently disturbed by landscape maintenance activities and use of turf areas for play. There are no sensitive habitats or communities onsite, and no impacts to such habitats would occur.

Nesting Birds

Project development would involve removal of 47 trees: 36 trees on the campus and 9 street trees on San Elijo Avenue next to the south site boundary (see Figure 5.3-1, *Tree Inventory*), in addition to some shrubs. Trees and shrubs could be used for nesting by birds protected under the MBTA and California Fish and Game Code Sections 3503 et seq. Legal protections for nesting birds apply to birds generally, not just sensitive bird species. Fish and Game Code Section 3503 protects all bird species, and the MBTA covers thousands of species of birds (USFWS 2013). This impact would be significant.

***Level of Significance before Mitigation*:** Based on the analysis above, Impact 5.3-1 would be potentially significant related to sensitive bat species that could roost in buildings and trees onsite, and nesting birds. Mitigation Measures BIO-1 and BIO-2 (see Section 5.3.7) would be required to mitigate the potentially significant impacts.

5.3.4 Cumulative Impacts

The area considered for cumulative impacts to biological resources is the part of the South Coast Geographic Subdivision of California in San Diego and southern Orange counties, which extends from the Pacific Coast inland up to several miles; geographic subdivisions of California are designated by the Jepson Herbarium at the University of California, Berkeley.[4]

Many other projects in the region would impact sensitive species directly and/or indirectly through impacts on those species' habitats. Other projects would be required to comply with existing laws and regulations protecting biological resources.

Proposed project development would not have significant impacts on sensitive species or sensitive habitat. Project vegetation impacts would be limited to ornamental landscape vegetation on campus and would not impact native habitat. Therefore, project impacts to biological resources would not be cumulatively considerable.

[4] The South Coast Geographic Subdivision extends northwest to Point Conception and east to the Community of Cabazon in Riverside County (see Jepson Herbarium 2018). In Los Angeles County and northern Orange County, the subdivision is far wider than it is in San Diego County and southern Orange County; thus, only the southern part of the subdivision was chosen here respecting cumulative impact analysis.

5.3.5 Applicable Regulations

Federal

- Endangered Species Act: United States Code, Title 16, Sections 1531 et seq.
- Migratory Bird Treaty Act of 1918 (16 USC Sections 703–711)

State

- California Endangered Species Act: California Fish and Game Code, Section 2080
- California Fish and Game Code Sections 3503, 3503.5, and 3800

5.3.6 Level of Significance Before Mitigation

Without mitigation, these impacts would be **potentially significant**:

Impact 5.3-1 Development of the proposed project could impact four special-status bat species and migratory nesting birds.

5.3.7 Mitigation Measures

Impact 5.3-1

BIO-1 A preconstruction nesting bird survey shall be conducted by a qualified biologist (i.e., one with experience conducting nesting bird surveys) to ensure potential impacts to nesting bird species do not occur during the breeding season. The survey shall comply with the conditions in the MBTA and California Fish and Game Code with methods accepted by the US Fish and Wildlife Service and the California Department of Fish and Wildlife to protect active bird/raptor nests. To the extent feasible, vegetation/tree clearing shall take place outside the general avian breeding season (February 1 through August 31). If vegetation clearing and/or tree removal cannot occur outside the general avian breeding season, then a preconstruction survey for avian nesting shall be conducted by a qualified biologist on the project site and areas within 500 feet of the site, within seven calendar days prior to the start of construction.

If the biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. If the biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the biologist shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended.

To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified biologist: work may proceed if it is (1) at least 500 feet from raptor nests; (2) at least 300 feet from federal- or state-listed bird species' nests; and (3) at least 100 feet from nonlisted bird species' nests. Encroachment into the buffer area around a known nest shall only be allowed if the biologist determines that the proposed activity would not disturb the occupants of the nest. A qualified biologist shall conspicuously mark the buffer so that vegetation clearing and/or tree removal/trimming does not encroach into the buffer until the nest is no longer active (i.e., the nestlings fledge, the nest fails, or the nest is abandoned, as determined by a qualified biologist). All recommendations provided by the biologist shall be complied with.

BIO-2 No less than 7 days and no more than 14 days prior to beginning ground disturbance and/or demolition, a qualified wildlife biologist will conduct surveys for special-status bats on two days, during the appropriate time of day to maximize detectability, to determine if bat species are roosting near the work area. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, mistnetting, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat). The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required.

If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts.

If roosts are identified in structures onsite and must be removed, the bats will be excluded from the roosting site before the facility is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed prior to implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., while females in maternity colonies are nursing young).

If roosts must be removed, the project applicant shall provide bat houses constructed on- or off-site in locations and settings where bats would be likely to use them. If bat houses are required, the District shall consult with the wildlife biologist regarding the design, materials, locations, and settings of the bat houses.

5.3.8 Level of Significance After Mitigation

With the implementation of Mitigation Measures BIO-1 and BIO-2, the potentially significant impacts to special-status bat species and migratory nesting birds would be less than significant.

5.3.9 References

Bat Conservation International (BCI). 2018, June 27. Bat Roosts. http://www.bats.org.uk/pages/bat_roosts.html.

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5. Environmental Analysis
BIOLOGICAL RESOURCES

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5.4 CULTURAL RESOURCES

Cultural resources comprise paleontological, archaeological, and historical resources. Paleontological resources are the fossilized remains of plants and animals. Archaeology is the branch of paleontology that studies human artifacts, such as places, objects, and settlements that reflect group or individual religious, cultural, or everyday activities. Historical resources include sites, structures, objects, or places that are at least 50 years old and are significant for their engineering, architecture, cultural use or association, etc. In California, historic resources cover human activities over the past 12,000 years. Cultural resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Cardiff School Modernization and Reconstruction Project to impact cultural resources in Cardiff. The analysis in this section is based in part on the following information:

- *California Historical Resources Information System Records Search,* South Central Coastal Information Center, March 29, 2018 (included as Appendix 5.4-1)
- *Historic Resources Assessment Report of Cardiff School*, Pamela Daly, M.S.H.P, June 2018 (included as Appendix 5.4-2)
- *Paleontological Records Search: Cardiff School Modernization and Reconstruction Project,* San Diego Natural History Museum, May 8, 2018 (included as Appendix 5.4-3)

Complete copies of these studies are included in the appendices of this Draft EIR.

TERMINOLOGY

Archaeological resources. Cultural resources of prehistoric or historic origin that reflect human activity. Archaeological resources include both structural ruins and buried resources.

Archaeological site. An accumulation or presence of food remains, waste from manufacturing of tools, tools, concentrations or alignments of stones, modification of rock surfaces, and/or human/skeletal remains. Archaeological sites are often located along creek areas, ridgelines, and vistas.

Archaeology. The study and recovery of material evidence of human life and culture of past ages that is buried and typically fragmented and scattered.

Architectural resources. Buildings, structures, objects, and sites of the built environment.

Historic context. Patterns or trends in history by which a specific occurrence, property, or site is understood and its meaning (and ultimately its significance) is made clear. A context may be organized by theme, geographic area, or chronology, but regardless of the frame of reference, a historic context is associated with a defined area and an identified period of significance.

Historic district. A concentration of historic buildings, structures, objects, or sites within precise boundaries that share a common historical, cultural, or architectural background and meet one of the criteria for significance in the California Code of Regulations (CCR), Title 14, Chapter 11.5, Section 4852(b).

Historical resources. Buildings, structures, objects, sites, and districts that have been formally evaluated and found to meet one or more of the significance criteria in CEQA Section 15064.5 (a)(3). While most historical resources will be 50 years old or older, resources that have achieved significance in less than 50 years may also be considered historic, provided that sufficient time has passed to understand their historical importance (14 CCR Chapter 11.5, Section 4852(d)(2)).

Paleontological resources. Natural resources characterized as faunal or floral fossilized remains, but may also include specimens of nonfossil material dating to any period preceding human occupation.

Unique archaeological resources. Defined in Public Resources Code (PRC) Section 21083.2(g):

> … "unique archaeological resources" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> (1) Contains information need to answer important scientific research questions and there is a demonstrable public interest in that information.
>
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
>
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

5.4.1 Environmental Setting

5.4.1.1 REGULATORY BACKGROUND

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 authorized the National Register of Historic Places and coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources.

Section 106 (Protection of Historic Properties) of the National Historic Preservation Act of 1966 requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review refers to the federal review process designed to ensure that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

National Register of Historic Places

The National Register of Historic Places (NRHP) is authorized by National Historic Preservation Act of 1966 (Code of Federal Regulations, Title 36, Chapter I, Part 60). It is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The NRHP recognizes resources of local, state, and national significance that have been documented and evaluated according to uniform standards and criteria.

The NRHP includes districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The NRHP is administered by the National Park Service. Properties are nominated to the NRHP by the State Historic Preservation Officer of the state in which the property is located, by the Federal Preservation Officer for properties under federal ownership or control, or by the Tribal Historic Preservation Officer if a property is on tribal lands.

To be eligible for listing in the National Register, a resource must meet at least one of the following criteria:

A. Are associated with events that have made a significant contribution to the broad patterns of history.

B. Are associated with the lives of persons significant in our past.

C. Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; or represent a significant and distinguishable entity whose components may lack individual distinction.

D. Have yielded, or may be likely to yield, information important in prehistory or history.

A final critical component of eligibility is "integrity." Integrity refers to the ability of a property to convey its significance and the degree to which the property retains the identity, including physical and visual attributes, for which it is significant under the four basic criteria. The NRHP criteria recognize seven aspects or qualities of integrity: location, design, setting, materials, workmanship, feeling, and association.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act became law on October 31, 1979, and has been amended four times. It regulates the protection of archaeological resources and sites that are on federal and Indian lands.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act was established within the Omnibus Public Land Management Act of 2009, which regulates the management, collection, and curation of paleontological resources from National Forest Systems Lands.

Preservation of American Antiquities

The Federal Antiquities Act of 1906 was enacted with the primary goal of protecting cultural resources in the United States. As such, it explicitly prohibits appropriation, excavation, injury, and destruction of "any historic or prehistoric ruin or monument, or any object of antiquity" located on lands owned or controlled by the federal government without permission of the secretary of the federal department with jurisdiction. It also establishes criminal penalties, including fines and/or imprisonment, for these acts. Neither the Antiquities Act itself nor its implementing regulations specifically mentions paleontological resources. However, several federal agencies—including the National Park Service, the Bureau of Land Management and the US Forest Service—have interpreted objects of antiquity to include fossils. Consequently, the Antiquities Act also represents an early cornerstone for efforts to protect the nation's paleontological resources.

State

California Register of Historical Resources

The State Historical Resources Commission has designed this program for use by state and local agencies, private groups and citizens to identify, evaluate, register and protect California's historical resources. The CRHR is the authoritative guide to the state's significant historical and archeological resources.

The CRHR program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA.

To be eligible for listing in the CRHR, a resource must meet at least one of the following criteria:

A. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.

B. Associated with the lives of persons important to local, California or national history.

C. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.

D. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation. [PRC Section 5024.1(c)]

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be

recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR, if, under Criterion D, it maintains the potential to yield significant scientific or historical information or specific data.

California Public Resources Code

Archaeological, paleontological, and historical sites are protected pursuant to a wide variety of state policies and regulations enumerated under the California PRC. In addition, cultural and paleontological resources are recognized as nonrenewable resources and therefore receive protection under the California Public Resources Code and CEQA.

- **PRC Sections 5020 to 5029.5** continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for designating State Historical Landmarks and Historical Points of Interest.

- **PRC Sections 5079 to 5079.65** define the functions and duties of the Office of Historic Preservation (OHP), which administers federal- and state-mandated historic preservation programs in California as well as the California Heritage Fund.

- **PRC Sections 5097.9 to 5097.991** provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission (NAHC); require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

Local Ordinances

Historical resources include properties listed or formally determined to be eligible for listing in the CRHR or local historic register. A local register consists of resources that are officially designated or recognized as historically significant by a local government, pursuant to a resolution, ordinance, or other discretionary approval.

City of Encinitas General Plan and Local Coastal Program

The City of Encinitas Resource Management Element provides a resource management plan for cultural resources and identifies areas in the City of Encinitas that have greater sensitivity for cultural resources. The General Plan identifies policies that require survey and recordation of paleontological, archaeological, and historical resources. The Cultural Resource Sensitivity map identifies areas in the City that have low, moderate, or high likelihood for presence of sensitive cultural resources. According to the Cultural Resources Sensitivity map, the project site would have low sensitivity for presence of cultural resources (Encinitas 2011).

Encinitas Register of Historic Places

The City of Encinitas has a formal application process to designate a local landmark, building, or district as a historical resource. The Encinitas Register of Historic Places includes three properties: 423 Rancho Santa Fe

Road Olivenhain Town Meeting Hall, 221 Sunset Drive, and 471 South Coast Highway 101 La Paloma Theater.

City of Encinitas Municipal Code

The City of Encinitas Municipal Code includes policies oriented to preservation of historical, archaeological, and paleontological resources. The municipal code also includes policies for the Cultural/Natural Resources Overlay zone (Section 30.34, Special Purpose Overlay Zone), which provides protections for cultural and biological resources for designated areas in the City.

5.4.2 Existing Conditions

5.4.2.1 NATURAL SETTING

The project site is generally flat and is entirely developed with school buildings; paved area for parking, loading, and hard courts; and grass playfield. The site has landscaping and mature trees as well as several street trees along Montgomery and Mozart Avenues.

5.4.2.2 CULTURAL SETTING

Historical Setting

Cardiff-by-the-Sea

In 1769, due to threats from outside foreign countries making excursions into the Spanish territory of Alta California, King Carlos III of Spain ordered the Governor of Baja California, Gaspar de Portolá, to protect the territory under the realm of Spain. Five expeditions were dispatched from New Spain (Mexico). Three came by ship in the *San Carlos*, the *San Antonio*, and the *San Jose*, and two expeditions came by land. The *San Carlos* and the *San Antonio* set sail in January and February of 1769 and anchored in San Diego Bay later that spring.

Father Junipero Serra accompanied the second land expedition sent from Mexico, which arrived in San Diego on July 1, 1769. Shortly after arriving, Father Serra established Mission San Diego, the first of 21 missions that would span from San Diego north to Mission San Francisco Solano.

Hector MacKinnon is the first western-European credited by Cardiff historians with settling in the area of Cardiff-by-the Sea in 1875 on a 600-acre homestead north of San Elijo Lagoon. The official survey (plat) map of the Encinitas/Cardiff area was created by the United States Surveyor General's Office in April 1881, in advance of the Atchison Topeka and Santa Fe Railroad (ATSF) building their rail line through the area of Township 13 South, Range 04 West, Sections 22, 26, and 27. The area of Cardiff located in Section 22, where the Cullen School was erected in 1914, and later the Cardiff School in 1950, was recorded by the General Land Office under two land patents.

Cullen School

J. Frank Cullen, a real estate agent from San Diego who moved west from Massachusetts between 1900 and 1910, appears to have either consolidated much of the patent lands in Sections 22 and 26 under his ownership, or acted as the agent to develop the land in the rural settlement in 1912, which would come to be called Cardiff-by-the-Sea. When J. Frank Cullen donated the land of lots A, B, L, M, N of Block 72 of the Cardiff Vista Tract for the construction of a new school building in 1914, the deed for the transfer stated that a school building was already on the property. An additional schoolhouse building was raised on the site shortly after, and both buildings comprised the Cullen School.

The "new" Cullen School building had been designed by John S. Siebert, a well-respected architect from San Diego, who was instrumental in the growth of San Diego from the late 1890s into the early twentieth-century. In 1924, the District Trustees heard that an iron bell from a steam locomotive retired from the ATSF system was available in Santa Ana for $20 and brought the 250-pound bell back to Cullen School.

Cardiff School

As happened in so many communities in California after World War II, the existing Cullen School property was found not adequate to support the growing number of students needing to enroll, and it didn't meet other concerns for facility safety and maintenance. When the decision was made to replace the Cullen School, the Cardiff School District issued an advertisement for architectural services to design a new campus. Samuel Wood Hamill, an architect who in 1948was teaming on a project for the proposed Veterans War Memorial with the designer of the Cullen School, John Siebert, was hired by the Cardiff School District to design the new Cardiff School campus in 1949.

The new Cardiff School was designed to be built in stages—the first 3-classroom building, entrance arcade, and administrative unit were constructed for $91,604 in time for the fall session of 1950. The larger kindergarten classes would continue to be held in the old Cullen School buildings in rooms available when the upper classes moved to the new school building.

The kindergarten classes would be moved to the Cardiff School campus in 1955 with the construction of an additional four-classroom unit and separate kindergarten building. Future additions would add a three-classroom unit and covered passages in 1956 and an additional classroom, kindergarten room, "remedial" room, and multipurpose room with kitchen facilities in 1962. Based on aerial photographs, the first schoolhouse building and the 1914 Cullen School were demolished between 1953 and 1964. The campus remained relatively unchanged (except for the introduction of temporary classrooms) between 1962 and 2002 when new administration buildings were constructed on the campus.

Cardiff School Campus Buildings

A pedestrian-level survey of the Cardiff School campus was conducted on January 31, 2018, and of the "Little Brick Building" on March 23, 2018. Evaluations of the buildings were based on review of the original drawings by Samuel Wood Hamill for Cardiff School, documents provided from Board of Trustees records for the construction of Cardiff School buildings, and other archival resources.

Cardiff School Campus Buildings (1950–1962)

All the buildings constructed on the Cardiff School campus from 1950 to 1962 were designed by Samuel Wood Hamill in a very modest, International style of Modern architecture. The original blueprints for the Cardiff School show that the District intentionally planned to construct additional buildings and increase the student population it could serve over the course of six years, from 1950 to 1956, with the last campus project of the post-WWII era constructed in 1962. In 2002, new administrative offices and new support space were constructed.

Table 5.4-1 Construction History of Cardiff School

Date	Project I.D.	Description	Architect	Contractor
1950	Original project #1575	3 classroom bldg., Administration and nurses office with attached classroom	S. W. Hamill	Smith Construction Co.
1955	Addition #1: A-12142	4-classroom bldg., one kindergarten building	S.W. Hamill	Larsen Construction Co.
1956	Addition #2: A-14236	2-classroom bldg., one classroom added to Admin. Bldg.	S.W. Hamill	Larsen Construction Co.
1962	Addition #3: A-21878	1 classroom added to Admin. Bldg., 2nd kindergarten classroom added to existing, multi-purpose bldg. with kitchen facilities.	S.W. Hamill	Thornburg Construction Co.
2002	A-51059	New Administration bldgs., 1 classroom added to old Admin. Bldg.		

Source: Historic Resources Assessment Report, August 2018.

The major buildings constructed before 1963, from east (front of the property along Montgomery Avenue) to the west, are Buildings A, B, C, D, E, and F and the Little Brick Building.

Building A

When first constructed, the administrative building consisted of one classroom and the administration and nurse's office. The building had a low-pitched hip roof, and the exterior walls have a stucco finish. The "original" portion of the building was fenestrated with a wide band of multiple-sash windows units with three large, single lights on the east elevation, and one-over-one, and two-over-two individual double sash windows on west elevation. Single classrooms were added to the north end of the original building in 1956 and 1962, and one room to the south end of the building in 2002. The original hip roof was replaced with a low-pitch gable roof in 2002.

Building B

Part of the "original" plan, this 3-classroom rectangular-massed building constructed in 1950 is 150 feet long by 34 feet wide and is covered with a low-pitch hip roof. This building also presents a large band of three-light window units on the east elevation and one-over-one units set in the upper portion of the stucco-clad exterior walls of the west elevation.

Building C

The kindergarten building measures 108 feet long by 34 feet wide and is covered by a low-pitch shed roof. The rectangular-massed building consists of two classrooms that were constructed in 1955 and 1962. The kindergarten building reverses the fenestration plan of the other classroom buildings. The kindergarten rooms each have large expanses of metal-frame window units consisting of six-light-tall windows on the west elevation within oversized cant bay windows. Because of the bay windows, the entrances to the classrooms appear to be recessed under the covered walkway. The exterior walls are clad with a stucco finish.

Building D

The four-classroom building was constructed as part of the first addition in 1955. This building appears to be intact from its original construction. The east elevation is fenestrated with metal-frame window units, with seven narrow lights in each unit. The west elevation is shaded by an extension of the roof slope.

Building E

This two-classroom building was constructed as part of the second addition in 1956. The building has a wide band of metal-frame, six-light window units on its east elevation and a set of three-light window units lining the upper portion of the west elevation.

Building F

The multipurpose room, with attached kitchen facilities, was added to the campus in 1962. The one-story building holds the school auditorium and is used for a variety of functions. In accordance with subtle aspects of International style architecture, this building is set apart from the classroom buildings by setting the fenestration in a vertically aligned formation of five-light window units along the north elevation.

Little Brick Building

Until August of 2001, the Little Brick Building was situated on a legal parcel not under the ownership of the Cardiff School District. In 2001, the District purchased the property and building from Robert C. and Jacqueline Sinclair of San Diego.

The Little Brick Building is thought to have been constructed circa 1938 for the purpose of holding telephone repeater equipment for the American Telephone and Telegraph Company. Because the nearest building of distinction to the Cardiff-by-the-Sea repeater hut was the Cullen School building, a Colonial Revival style of architecture may have been chosen by Bell Telephone to complement the Cullen School building's classical design. The exterior of the building is decorative Roman brick veneer in a range of red and clay colors set over the structural brick walls, and the veneer exhibits a high degree of masonry workmanship. Overall, the building was designed to look like a small house in order to blend into the area, but was constructed to protect the internal equipment and also to protect the neighborhood if the electrical equipment should explode or catch fire.

Archaeological Resources

A records search from the South Central Coastal Information Center shows that 23 cultural resource studies have been conducted within a one-half-mile search radius of the project site. Several of these studies addressed the rail line, Pacific Coast Highway, and portions of San Elijo Avenue; none have specifically covered the project site.

Paleontological Resources

The San Diego Natural History Museum record search found three recorded fossil-collecting sites within a one-mile radius of the project site. All three localities were discovered to be Eocene-age (34 to 56 million years old) and Delmar formation, and they produced internal molds of marine mollusks, fossilized teeth and post-crania of skates and bony fish, lizard osteoderms and a partial crocodile skeleton, and partial skulls of the bear-sized tillodont and the ancestral rhino (McComas 2018).

5.4.3 Thresholds of Significance

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated the with lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC § 5024.1; 14 CCR § 4852)

The fact that a resource is not listed in the California Register of Historical Resources, not determined to be eligible for listing, or not included in a local register of historical resources does not preclude a lead agency from determining that it may be a historical resource.

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

C-1 Cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5.

C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

C-3 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

C-4 Disturb any human remains, including those interred outside of dedicated cemeteries.

The Initial Study, included as Appendix 1-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold C-4

This impact will not be addressed in the following analysis.

5.4.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.4-1: Development of the project could impact an identified historic resource. [Threshold C-1]

Impact Analysis:

Cardiff School Buildings

According to the Historic Resources Assessment Report prepared for the project (see Appendix 5.4-2), the Cardiff School campus buildings do not appear eligible for listing in the National Register of Historic Places under Criterion A, B, C, or D, or the California Register of Historic Resources under Criterion 1, 2, 3, or 4.

Little Brick Building

According to the Historic Resources Assessment Report, the "Little Brick Building" appears eligible for listing in the in the National Register and/or California Register individually under Criterion A/1 and C/3 as a rare example of a telephone repeater hut constructed circa 1938 to boost telephone signals between San Diego and Los Angeles, and as a rare example of a repeater hut designed in the Colonial Revival style of architecture.

- **Criterion A/1. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.**

  The Little Brick Building is an example of a building associated with telephone communications from the 1930s to 1960s. The building was constructed and used by the Pacific Telephone Company to transmit telephone calls over trunk lines between San Diego and Los Angeles. These small buildings were called "repeater huts" and were once frequently found situated between large cities and rural communities. They have now largely disappeared due to the growth of suburban populations and being redundant to modern communication systems. Therefore, the Little Brick Building appears eligible for listing in the National Register Under Criteria A and California Register under Criteria 1.

- **Criterion C/3. Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.**

  The Little Brick Building appears eligible for listing in the National Register or California Register under Criterion C/3 as a rare example of an early twentieth-century telephone system repeater hut designed in the Colonial Revival–style architecture. Not only is the building significant for its functional architecture, it is also an excellent example of Colonial Revival architecture as interpreted in the late 1930s. The workmanship of the brick mason who applied his skills to the building is remarkable for its artistic and imaginative use of Roman brick veneer to create a modern interpretation of a classic building design. The mason achieved his design by setting bricks in horizontal and vertical alignments, by slightly projecting or recessing the bricks, and by using full, half, header, and stretcher bricks to achieve the cohesive design. The building's overall design is also rather remarkable in that if the shutters were once again put in place over the original windows on the structure (currently replaced by inset brick), most passersby would not know that this was historically used as a telephone utility building and not a private residence.

According to the CEQA Guidelines, a project would result in a significant impact to historical resources if it would materially impair a historical resource (CEQA Guidelines Section 15064.5[b][1]). Impairment occurs if the historical resource is demolished or materially altered in an adverse manner in its physical characteristics or features that convey the historical significance and justify its inclusion in or eligibility for inclusion in the California Register of Historical Resources (CEQA Guidelines Section 15064.5[b][2]). The CEQA Guidelines also specify a means of evaluating the relative significance of project impacts on historical resources. CEQA Guidelines Section 15064.5(b)(3) states:

> Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

Compliance with the Secretary's Standards indicates that a project may have a less than significant impact on a historical resource. The converse of this does not hold; that is, failure to comply with the Secretary's Standards does not, by definition, result in a significant impact under CEQA. CEQA recognizes that alterations that are not consistent with the Secretary's Standards may still not result in significant impacts to the historical resource. Therefore, the significance of project impacts on a historical resource can be evaluated by determining:

- Whether a project is in conformance with the Secretary's Standards (less than significant impact).

- Whether a project is in substantial conformance with the Secretary's Standards and does not result in material impairment (less than significant impact, with mitigation if required).

- Whether a project is not in conformance with the Secretary's Standards and results in material impairment (significant impact).

The District has proposed renovations to the Little Brick Building to meet seismic requirements for future use on the Cardiff School property as a historic resource consistent with the Secretary's Standards. Changes to the surrounding landscape may also be made to provide a viewing area, patio, and seating. It is possible that the building could be used as a focal point for garden events, community meetings, or activities in support of the school.

Because the Little Brick Building has been determined eligible for listing as a historical resource in the California Register, if the District should decide to rehabilitate and/or reuse the Little Brick Building, Mitigation Measure CUL-1 requires that the District demonstrate that the provisions of *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings* (Kay D. Weeks and Anne E. Grimmer, revised 2017) have been followed. The measure requires a public report on the plan demonstrating compliance with the Secretary's Standards prior to application for a building permit to conduct the repairs.

Additionally, any repairs, alterations, and/or additions necessary for the preservation, restoration, rehabilitation, moving, or continued use of a historical building or structure would fall under the regulations of the California 2016 Historical Building Code (CHBC), 24 CCR Part 8 (January 1, 2017). The intent of the CHBC is to facilitate the preservation and continuing use of qualified historical buildings while providing reasonable safety for the building occupants and access for persons with disabilities. The regulations of the CHBC have the same authority as state law, and therefore additional mitigation is not required.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.4-1 under both project options would be potentially significant.

Impact 5.4-2: Development of the project could impact archaeological resources. [Threshold C-2]

Impact Analysis: The project site is entirely developed and is not a designated archaeological site. Based on a review of historical information, the subject site has been used as a school site since the 1950s. Prior to the construction of the school, the campus had a former residential structure near Mozart Avenue. Excavation and ground disturbance near this structure, as well as near the existing school buildings, may result in the accidental discovery of unique artifacts that are of public interest, have a particular quality (e.g., oldest or the best available example of its type), and/or are associated with a recognized important prehistoric or historic event or person.

Conclusion

Although archaeological resources were not identified during site surveys, it is possible that subsurface archaeological resources exist and may be encountered during construction activities that disturb soil. If any are encountered, the District would comply with CEQA Guidelines Section 15064.5, which requires the lead agency to determine if the discovered resource is unique or historically significant, and if so to treat it in accordance with the provisions of PRC Section 21083.2.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.4-2 would be potentially significant.

Impact 5.4-3: The proposed project could destroy paleontological resources. [Threshold C-3]

Impact Analysis: Project development would involve disturbance of approximately 7.4 acres of land and would involve grading and trenching into subsurface soil. Subsurface soil consists of Quaternary Previously Placed Fill (encountered from 2 to 4 feet below ground surface [bgs]), Quaternary Older Paralic Deposits Units 6 and 7 across the western portion of the site (encountered at 14.5 feet bgs), and Units 2 to 4 along the eastern portion (encountered at 31.5 feet bgs). According to the geotechnical report prepared for the project (see Appendix 5.5-1), within the footprint of proposed structures it is recommended that existing fill soils should be overexcavated to competent paralic deposits, a minimum uniform depth of four feet below existing or proposed grades and five feet beyond the building footprint. Therefore, excavation for the footings for the improvements would extend beyond the subsurface fill and could encounter native soils.

A paleontological records search was conducted by the San Diego Natural History Museum for the proposed project (see Appendix 5.4-3). According to the paleontological records search, the project site is underlain by Bay Point Formation (approximately 10,000 to 750,000 years old) at the surface and Delmar Formation (approximately 49 to 50 million years old) at unknown depths beneath the Bay Point Formation (SDNHM 2018). Although there are no recorded fossil localities from the Bay Point Formation within a one-mile radius of the project site, a large number of diverse marine localities are within the Bay Point Formation throughout San Diego County. Additionally, three fossil localities have been identified within Delmar Formation within a one-mile radius. According to the County of San Diego Guidelines, the Bay Point Formation and Delmar Formation have a high sensitivity for paleontological resources (SDNHM 2018).

Conclusion

Although no paleontological resources have been identified on or within close proximity of the project site, project construction may encounter subsurface Bay Point and Delmar Formation with potential to yield significant paleontological resources, and ground-disturbing activities could damage potential resources.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.4-3 would be potentially significant.

5.4.5 Cumulative Impacts

The proposed project would have a cumulatively considerable effect on historical resources if the project and related projects were historically significant under the same criteria and conditions, and their alterations were inconsistent with the Secretary's Standards.

Other projects in the region would involve ground disturbances and thus could disturb surface or buried archaeological and/or paleontological resources. The potential for cumulative impacts to cultural resources from other projects is unknown but likely similar due to their location along the coast. Destruction of significant cultural resources from each of these projects would constitute a significant cumulative impact.

However, similar to the proposed project, all projects would require mitigation of impacts, including construction monitoring, testing, archiving, and recovery of any found resources prior to development of the site. The proposed project has incorporated mitigation measures that would reduce the potential to contribute to cumulative impacts. Therefore, the project would not result in significant impacts to cultural resources. In consideration of the preceding factors, the project's contribution to cumulative cultural resource impacts would be rendered less than significant, and therefore, project impacts would not be cumulatively considerable.

5.4.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, no impacts would be less than significant.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.4-1** The proposed improvements to the "Little Brick Building" could potentially impact an eligible historical resource.
- **Impact 5.4-2** Excavation for the project could potentially encounter archaeological resources.
- **Impact 5.4-3** Excavation and grading for the project could potentially encounter paleontological resources.

5.4.7 Mitigation Measures

Impact 5.4-1

CUL-1 Prior to start of construction, the Cardiff School District shall retain a qualified historic architect or architectural historian (with experience in preparing rehabilitation plans) to assist in developing plans for the future use and function of the Little Brick Building. The District shall provide documentation to the public prior to application for a building permit that the plans for the building meet the requirements of *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings.*

Impact 5.4-2

CUL-2 Prior to the start of construction, Cardiff School District shall retain a qualified archaeologist to monitor ground-disturbing activities. The archaeologist shall attend a meeting with the grading contractor, engineering geologist, grading engineer, and school authorities to establish a protocol for monitoring during all earth-disturbing activities. The meeting shall briefly summarize the prehistoric and historic use of the land, describe the types of cultural resources that may be encountered in the project area, and outline steps to follow in the event a discovery is made. The training shall be developed and presented by a

registered professional archaeologist (RPA) and may run concurrently with other environmental training (biological, paleontology, safety training, etc.). The training may be videotaped or presented in an informational brochure for future use by field personnel not present at the start of the project phase. The RPA shall have the authority to stop grading or construction work within 25 feet of any discovery of potential historical or archaeological resources in order to test, analyze, and make a finding of significance under Section 15064.5 of the California Environmental Quality Act Guidelines; develop a plan for recovery, analysis, report, and curation of the recoveries, as appropriate; and report to an accredited and permanent scientific institution, such as the South Central Coastal Information Center and San Diego Natural History Museum.

Impact 5.4-3

CUL-3 Prior to the start of construction, the Cardiff School District shall retain a qualified paleontologist to determine if grading and excavation activities will encounter older Quaternary paralic deposits. If it is determined that older Quaternary paralic deposits will not be encountered, no additional work is required.

If it is determined that construction could encounter older Quaternary deposits, the qualified paleontologist shall provide training to the construction staff, including but not limited to the grading contractor, engineering geologist, grading engineer, and school authorities to outline steps to follow in the event that a discovery is made. The paleontologist shall establish a protocol for monitoring during all earth-disturbing activities. The training shall be developed and presented by the paleontologist and may be videotaped or presented in an informal brochure for future use by field personnel not present at the start of the project phase.

During construction, the paleontologist shall have the authority to halt construction activities to allow a reasonable amount of time to identify potential resources. If paleontological resources are discovered, the construction crew shall immediately cease work in the vicinity of the find. The paleontologist shall prepare a recovery plan in accordance with the Society of Vertebrate Paleontology guidelines (1996), which may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination, and a report of findings. Necessary and feasible recommendations in the recovery plan can also be provided by the lead agency and shall be implemented before construction activities resume at the site where the resources were discovered. Any discovered resources shall be curated with the facilities at the San Diego Natural History Museum.

5.4.8 Level of Significance After Mitigation

Mitigation measures CUL-1, CUL-2, and CUL-3 would reduce potential impacts to cultural resources to a level that is less than significant. Therefore, no significant unavoidable adverse impacts to cultural resources have been identified.

5.4.9 References

Encinitas, City of. 2011, March 9. Resource Management Element, City of Encinitas General Plan. http://archive.ci.encinitas.ca.us/weblink8/0/doc/724656/Page1.aspx.

San Diego Natural History Museum (SDNHM). 2018, May 8. Paleontological Records Search: Cardiff School Modernization and Reconstruction Project.

South Coastal Information Center. 2018, March 20. California Historical Resources Information System Records Search.

5. Environmental Analysis
CULTURAL RESOURCES

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5.5 GEOLOGY AND SOILS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Cardiff School Modernization and Reconstruction Project to impact geological and soil resources in the City of Encinitas. The analysis in this section is based in part on the following technical report:

- *Geotechnical Investigation Proposed Improvements to Cardiff School*, Construction Testing & Engineering, Inc., May 25, 2018 (included as Appendix 5.5-1)

A complete copy of this study is included in the technical appendices to this Draft EIR.

5.5.1 Environmental Setting

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act requires the state geologist to delineate earthquake fault zones along faults that are "sufficiently active" and "well defined." The act requires that cities and counties withhold development permits for a site in an earthquake fault zone until geologic investigations demonstrate that the site is not threatened by surface displacements from future faulting. An active fault is one showing expression of surface rupture within the last 11,000 years. Pursuant to this act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

California Building Code

The California Building Code (CBC) is established by the California Building Standards Commission, and the code is in Title 24, Part 2 of the California Code of Regulations. The most recent building standard adopted by the legislature and used throughout the state is the 2016 version of the CBC (effective January 1, 2017). Local jurisdictions often adopt the CBC with local, more-restrictive amendments that are based on local geographic, topographic, or climatic conditions. These codes provide minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground shaking with specified probability of occurring at a site.

5.5.2 Existing Conditions

Project Site

Topography

The project site and surrounding area are generally flat with a slight slope to the west; elevations at the project site range from 98 feet above mean sea level in the eastern part of campus to 78 feet in the west.

Geologic Units

The following geologic units were observed during the geotechnical investigation:

- **Quaternary Previously Placed Fill:** Quaternary Previously Placed Fill was encountered from 2 to 4 feet below ground surface (bgs) in the explorations and was observed to a maximum depth of approximately 7 feet bgs in Boring B-9. The fill soils observed generally consisted of loose to medium dense, slightly moist to moist, variably brown, orange brown, and dark brown, silty to clayey, fine grained sand. Localized depths of fill soils may be greater than encountered during the explorations.

- **Quaternary Older Paralic Deposits, Units 2 to 4:** Quaternary Older Paralic Deposits, Units 2-4 were encountered beneath the surficial fill in the borings advanced on the approximate eastern half of the site.[1] These units were encountered as deep as 14.5 feet bgs, as observed in Boring B-18 and are underlain by Older Paralic Deposits, Units 6 to 7, discussed below. Older Paralic Deposits Units 2 to 4 observed in the explorations generally consist of medium dense to dense, slightly moist to moist, brown to red brown, silty fine sands; locally scattered gravels and cobbles were encountered in the paralic deposits during drilling.

- **Quaternary Older Paralic Deposits, Units 6 to 7:** Quaternary Older Paralic Deposits, Units 6 to 7 were encountered beneath the surficial fill and younger paralic deposits at the site. These units were encountered to the maximum explored depth of 31.5 feet bgs, in Boring B-24. Units 6 to 7 observed in the explorations generally consist of medium dense to dense, slightly moist to moist, variably brown to orange and gray brown, silty and clayey, fine grained sands as well as very stiff, fine sandy clays. A geologic map of the project site and vicinity is included as Figure 4 in the geotechnical investigation report (Appendix 5.5-1 to this DEIR).

Groundwater

Groundwater was not encountered at a maximum explored depth of 31.5 feet bgs.

Seismic Hazards

Faulting and Seismicity

The project site is not in an Alquist-Priolo Earthquake Fault Zone and there are no known faults (active, potentially active, or inactive) onsite. The closest faults to the project site are the Rose Canyon Fault Zone, offshore approximately 2.5 miles northwest of the site; the Coronado Bank Fault Zone, offshore about 17 miles to the west; and the Julian segment of the Elsinore Fault Zone, about 29 miles to the northeast. Additionally, the San Diego Trough is offshore about 28 miles to the west (CIT 2013).

Segments of each of the four faults are considered active; that is, they show evidence of surface displacement within the last 11,700 years. The segment of the Rose Canyon Fault Zone nearest to the project site (about

[1] Paralic sediments were deposited in areas with both marine and freshwater influence, such as estuaries, bays, and lagoons.

2.5 miles) is not mapped as active; the nearest active traces of the Rose Canyon Fault Zone are an offshore segment approximately 3 miles to the west of the site.

Liquefaction and Seismic Settlement

Liquefaction is a seismic phenomenon in which loose, saturated, granular soil behaves similarly to a fluid when subjected to strong ground shaking. Three main factors contribute to susceptibility to liquefaction: 1) shallow groundwater; 2) low density non-cohesive (granular) soil; and 3) strong ground shaking.

Groundwater was not encountered at a maximum explored depth of 31.5 feet bgs. Due to the lack of shallow groundwater and the presence of medium dense to dense sediments (geologic units 2 to 4 and 6 to 7) beneath the site, liquefaction and seismic settlement are not anticipated to be significant at the project site.

Geologic Hazards

Subsidence

Major causes of ground subsidence are withdrawal of subsurface fluids such as groundwater or oil. The project site is not over a groundwater basin and is not mapped in an area of known subsidence by the California Department of Water Resources (DWR 2017). The Santa Fe Irrigation District, which provides water to the project site, does not use groundwater (RMC 2016). There is one oil well on the eastern edge of the City of Encinitas, approximately 2.5 miles east of the site, mapped on the Well Finder maintained by the Division of Oil, Gas, and Geothermal Resources (DOGGR 2017).

Collapsible and Compressible Soils

Collapsible soils shrink upon being wetted and/or subjected to a load. The existing previously placed fill and weathered paralic deposits at the site surface are considered to be compressible under the proposed loading conditions; underlying medium dense to dense paralic deposits are not considered compressible.

Expansive Soils

Expansive soils swell when they become wet and shrink when they dry out; such swelling and shrinking can damage foundations and buildings. Tests of samples of near-surface soils yielded very low to low expansion potentials.

5.5.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

G-1 Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on

other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42.)

ii) Strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction.

iv) Landslides.

G-2 Result in substantial soil erosion or the loss of topsoil.

G-3 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

G-4 Be located on expansive soil, as defined in Table 18-1B of the Uniform building Code (1994), creating substantial risks to life or property.

G-5 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The Initial Study, included as Appendix 1-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold G-1i
- Threshold G-1ii
- Threshold G-1iv
- Threshold G-2
- Threshold G-5

These impacts will not be addressed in the following analysis.

5.5.4 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.5-1: Project development could expose people and structures to hazards from collapsible soils and expansive soils. [Thresholds G-3 (part), and G-4]

Impact Analysis:

Collapse

The previously placed fill and highly weathered sediments encountered at the site are generally considered to be compressible under the proposed loading conditions. Surficial soils were also found to be locally disturbed and weathered. The geotechnical investigation report therefore recommends that previously placed fill and highly weathered sediments be overexcavated to a depth of at least four feet below existing grades, or at least two feet below proposed foundation bottoms, whichever is greater.

Expansive Soils

Expansive soils swell when they become wet and shrink when they dry out, resulting in the potential for cracked building foundations. Based on geologic observation and laboratory testing, the near-surface materials at the project site are anticipated to exhibit very low to low expansion potential. The geotechnical investigation report recommends that additional evaluations of soil expansion potential be conducted during grading and upon completion of rough grading. The geotechnical investigation also states that select grading may be necessary to ensure fill placed at the project site is nonexpansive (expansion index of 50 or less). The geotechnical investigation report recommends foundations of continuous and/or isolated spread footings.[2]

Level of Significance before Mitigation: Based on the analysis above, Impact 5.5-1 would be significant.

Impact 5.5-2 Project development would not expose people or structures to substantial hazards from liquefaction or ground subsidence. [Thresholds G-1.iii and G-3 (part)]

Impact Analysis:

Liquefaction

Liquefaction occurs when saturated fine-grained sands or silts lose their strengths during an earthquake and behave as a liquid. Three main factors contribute to susceptibility to liquefaction: 1) shallow groundwater; 2) low density non-cohesive (granular) soil; and 3) strong ground shaking. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The potential for liquefaction onsite is negligible due to the lack of shallow groundwater and presence of medium dense to dense sediments beneath the site.

[2] A continuous footing is one long foundation slab supporting several columns. Isolated spread footings are smaller slabs each supporting one column. See Haque, Mohammed (Professor, Department of Construction Science). 2014, August 19. Course Notes: Construction Science 421. http://people.tamu.edu/~mhaque/cosc421/FOUNDATION.pdf.

Ground Subsidence

The major cause of ground subsidence is the excessive withdrawal of groundwater. The project site is not over a groundwater basin and is not mapped in an area of known subsidence by the California Department of Water Resources (DWR 2017). The Santa Fe Irrigation District, which provides water to the project site, does not use groundwater (RMC 2016). Moreover, the geotechnical investigation report does not identify ground subsidence as a design consideration. Therefore, potential impacts related to ground subsidence is less than significant.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.5-2 would be less than significant.

5.5.5 Cumulative Impacts

Impacts relating to soils and geologic influences are site specific and usually cannot be considered in cumulative terms, such as in the case of the proposed Cardiff School Modernization and Reconstruction project. Mitigation of geologic, seismic, and soil impacts of development projects are specific to the affected sites. The proposed project and other new development projects in the City of Encinitas are required to comply with applicable federal, state, and local requirements, including CBC standards. Each project's geologic and soil impacts would be reduced to a less than significant level and would not be cumulatively considerable; therefore, no significant cumulative impacts would occur.

5.5.6 Existing Regulations and Standard Conditions

- 2016 California Building Code

5.5.7 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and compliance with state standards, Impact 5.5-2 would be less than significant.

Without mitigation, the following impacts would be **potentially significant**:

- **Impact 5.5-1:** Project development could expose people and structures to hazards from collapsible soils and expansive soils.

Mitigation Measures

Impact 5.5-1:

GEO-1 The proposed project shall be designed and constructed in accordance with the geotechnical engineering recommendations presented in Construction Testing & Engineering's *Geotechnical Investigation Proposed Improvements to Cardiff School*, subsequent geotechnical studies prepared for the proposed project, and recommendations provided by the geotechnical engineer. These recommendations address site preparation and grading, excavation, fill placement and

compaction, onsite materials, and foundation and slab design to ensure potential soil hazards are remedied and the project adheres to the California Building Standards Code.

5.5.8 Level of Significance After Mitigation

Impacts would be less than significant.

5.5.9 References

California Geological Survey (CGS). California Geological Survey (CGS). 2007, August 27. Fault-Rupture Hazards in California. Special Publication 42. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sp/Sp42.pdf.

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RMC. 2016, June. 2015 Urban Water Management Plan. Prepared for the Santa Fe Irrigation District. https://wuedata.water.ca.gov/public/uwmp_attachments/5485685050/_Compiled%20Final%20SFID%202015%20UWMP%20Complete_June2016.pdf.

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5.6 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (Draft EIR) evaluates implementation of the Cardiff School Modernization Project (proposed project) to cumulatively contribute to greenhouse gas (GHG) emissions. Because no single project is large enough to result in a measurable increase in global concentrations of GHG emissions, climate change impacts of a project are considered on a cumulative basis. The analysis in this section is based on buildout of the proposed project, as modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2.25, and trip generation provided by IBI Group, Inc. (included as Appendix 5.10-1 to this DEIR). The GHG emissions modeling for construction and operational phases are in Appendix 5.2-1 of this DEIR.

Terminology

The following are definitions for terms used throughout this section.

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a greenhouse gas absorbs relative to a molecule of carbon dioxide (CO_2) over a given period of time (20, 100, and 500 years). CO_2 has a GWP of 1.
- **Carbon dioxide-equivalent (CO_2e).** The standard unit to measure the amount of greenhouse gases in terms of the amount of CO_2 that would cause the same amount of warming. CO_2e is based on the GWP ratios between the various GHGs relative to CO_2.
- **$MTCO_2e$.** Metric ton of CO_2e.
- **$MMTCO_2e$.** Million metric tons of CO_2e.

5.6.1 Environmental Setting

Greenhouse Gases and Climate Change

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6),

hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[1,2] The major GHGs are briefly described.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in landfills and water treatment facilities.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high GWP gases.

    - ***Chlorofluorocarbons (CFCs)*** are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere, stratosphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down the ozone layer. These gases are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.

    - ***Perfluorocarbons (PFCs)*** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF_4] and perfluoroethane [C_2F_6]) were introduced as alternatives, along with hydrofluorocarbons (HFCs), to ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high GWP.

    - ***Sulfur Hexafluoride (SF_6)*** is a colorless gas soluble in alcohol and ether, and slightly soluble in water. SF_6 is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.

[1] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, because it is considered part of the feedback loop rather than a primary cause of change.

[2] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017a). However, state and national GHG inventories do not include black carbon yet due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

- ***Hydrochlorofluorocarbons (HCFCs)*** contain hydrogen, fluorine, chlorine, and carbon atoms. Although they are ozone-depleting substances, they are less potent than CFCs. They have been introduced as temporary replacements for CFCs.

- ***Hydrofluorocarbons (HFCs)*** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs. (IPCC 1995; USEPA 2018)

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.6-1, *GHG Emissions and Their Relative Global Warming Potential Compared to CO_2*. The GWP is used to convert GHGs to CO_2-equivalence (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fourth Assessment Report (AR4) GWP values for CH_4, a project that generates 10°MT of CH_4 would be equivalent to 250 MT of CO_2.[3]

Table 5.6-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	SAR GWP Relative to CO_2[1]	AR4 GWP Relative to CO_2[1]	AR5 GWP Relative to CO_2[1]
Carbon Dioxide (CO_2)	1	1	1
Methane[2] (CH_4)	21	25	28
Nitrous Oxide (N_2O)	310	298	265

Source: IPCC 1995; IPCC 2007, IPCC 2013.
Note: The 2014 Scoping Plan Update was based on the GWP values in the Fourth Assessment Report (AR4).
1 Based on 100-year time horizon of the GWP of the air pollutant compared to CO_2.
2 The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

California's GHG Sources and Relative Contribution

In 2017, the statewide GHG emissions inventory was updated for 2000 to 2015 emissions using the GWPs in IPCC's AR4.[4] Based on these GWPs, California produced 440 MMTCO_2e GHG emissions in 2015. California's transportation sector was the single largest generator of GHG emissions, producing 37.4 percent of the state's total emissions. Industrial sector emissions made up 20.8 percent, and electric power generation made up 19.0 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (8.6 percent), agriculture (7.9 percent), high GWP GHGs (4.3 percent), and recycling and waste (2.0 percent) (CARB 2017d).

[3] CO_2-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

[4] Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

California's GHG emissions have followed a declining trend since 2007. In 2015, emissions from routine emitting activities statewide were 1.5 million metric tons of CO_2 equivalent ($MMTCO_2e$) lower than 2014 levels, representing an overall decrease of 10 percent since peak levels in 2004. During the 2000 to 2015 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 $MTCO_2e$ per person to 11.3 $MTCO_2e$ per person in 2015, a 19 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) is declining, with a 33 percent decline since the 2001 peak, despite the 37 percent growth in the state's gross domestic product during this period (CARB 2017e).

Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The amount of CO_2 in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation (IPCC 2007). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are also hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.

- Intense tropical cyclone activity increases.

- Increased incidence of extreme high sea level (excluding tsunamis).

Potential Climate Change Impacts for California

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). The years from 2014 through 2016 have shown unprecedented temperatures with 2014 being the warmest (OEHHA 2018). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels (CCCC 2012).

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms (CAT 2006). Overall, California has become drier over time with five of the eight years of severe to extreme drought occurring between 2007 and 2016, with unprecedented dry years occurring in 2015 and 2015 (OEHHA 2018). Statewide precipitation has become increasingly variable from year to year with the driest consecutive four years occurring from 2012 to 2015 (OEHHA 2018). According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 5.6-1), and the inertia of the Earth's climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 5.6-2, *Summary of GHG Emissions Risks to California,* and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

Specific climate change impacts that could affect the project include:

- **Water Resources Impacts.** By late this century, all projections show drying, and half of the projections suggest 30-year average precipitation will decline by more than 10 percent below the historical average. This drying trend is caused by an apparent decline in the frequency of rain and snowfall. Even in projections with relatively little or no decline in precipitation, central and southern parts of the state are expected to be drier from the warming effects alone because the spring snowpack will melt sooner, and the moisture in soils will evaporate during long dry summer months (CCCC 2012).

- **Wildfire Risks.** Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. Human activities will continue to be the biggest factor in ignition risk. The number of large fires statewide is estimated to increase from 58

percent to 128 percent above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57 percent to 169 percent, depending on location (CCCC 2012).

Table 5.6-2 Summary of GHG Emissions Risks to California

Impact Category	Potential Risk
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Fewer extremely cold nights Poor air quality made worse Higher temperatures increase ground-level ozone levels
Water Resources Impacts	Decreasing Sierra Nevada snow pack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: CEC 2006, 2009; CCCC 2012; CNRA 2014.

- **Health Impacts.** Many of the gravest threats to public health in California stem from the increase of extreme conditions, principally more frequent, more intense, and longer heat waves. Particular concern centers on the increasing tendency for multiple hot days in succession and simultaneous heat waves in several regions throughout the state. Public health could also be affected by climate change impacts on air quality, food production, the amount and quality of water supplies, energy pricing and availability, and the spread of infectious diseases. Higher temperatures also increase ground-level ozone levels. Furthermore, wildfires can increase particulate air pollution in the major air basins of California (CCCC 2012).

- **Increase Energy Demand.** Increases in average temperature and higher frequency of extreme heat events combined with new residential development across the state will drive up the demand for cooling

in the increasingly hot and longer summer season and decrease demand for heating in the cooler season. Warmer, drier summers also increase system losses at natural gas plants (reduced efficiency in the electricity generation process at higher temperatures) and hydropower plants (lower reservoir levels). Transmission of electricity will also be affected by climate change. Transmission lines lose 7 percent to 8 percent of transmitting capacity in high temperatures while needing to transport greater loads. This means that more electricity needs to be produced to make up for the loss in capacity and the growing demand (CCCC 2012).

5.6.2 Regulatory Framework

This section describes the federal, state, and local regulations applicable to GHG emissions.

5.6.2.1 FEDERAL

The U.S. Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not themselves impose any emission reduction requirements, but allowed the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, per San Diego Air Pollution Control District (SDAPCD) guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

US Mandatory Reporting Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 $MTCO_2e$ or more per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers were required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued

new standards in 2012 for model years 2017 to 2025 that will require a fleet average of 54.5 miles per gallon in 2025. However, the EPA is reexamining the 2017–2025 emissions standards.

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new stationary sources of emissions, such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. However, the EPA is reviewing the Clean Power Plan under President Trump's Energy Independence Executive Order.

5.6.2.2 STATE

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Orders S-03-05 and B-30-15, Assembly Bill 32 (AB 32), Senate Bill 32 (SB 32), and SB 375.

Executive Order S-03-05

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in AB 32, the Global Warming Solutions Act. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The final Scoping Plan was adopted by the California Air Resources Board (CARB) on December 11, 2008. The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state (CARB 2008). In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

First Update to the Scoping Plan

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted May 22, 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As part of the update, CARB

recalculated the 1990 GHG emission levels with the updated AR4 GWPs; it found that the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, are slightly higher at 431 $MMTCO_2e$ (CARB 2014).

As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a high level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent below 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

2017 Climate Change Scoping Plan

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels;

integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities, and conservation of agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and toxic air contaminants emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which includes increasing ZE buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZE trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydroflurocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps;
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to these statewide strategies, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and recommended local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends statewide targets of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust, quantitative, and locally appropriate goals that align with the statewide per capita targets and the state's sustainable development objectives, and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the state's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population) consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the business-as-usual yardstick—that is, what would the GHG emissions look like if the State did nothing at all beyond the existing policies that are required and already in place to achieve the 2020 limit, as shown in Table 5.6-3, *2017 Climate Change Scoping Plan Emissions Reductions Gap*. It includes the existing renewables requirements, advanced clean cars, the "10 percent" LCFS, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 $MMTCO_2e$ above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

Table 5.6-3 2017 Climate Change Scoping Plan Emissions Reductions Gap

Modeling Scenario	2030 GHG Emissions $MMTCO_2e$
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	**260**
Gap to 2030 Target	**60**

Source: CARB 2017a.

Table 5.6-4, *2017 Climate Change Scoping Plan Emissions Change by Sector*, provides estimated GHG emissions by sector, showing the range of GHG emissions for each sector estimated for 2030 compared to 1990 levels, as identified in the 2017 Scoping Plan Update.

Table 5.6-4 2017 Climate Change Scoping Plan Emissions Change by Sector

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24 to 25	-8% to -4%
Residential and Commercial	44	38 to 40	-14% to -9%
Electric Power	108	30 to 53	-72% to -51%
High GWP	3	8 to 11	267% to 367%
Industrial	98	83 to 90	-15% to -8%
Recycling and Waste	7	8 to 9	14% to 29%
Transportation (including TCU)	152	103 to 111	-32% to -27%
Net Sink[1]	-7	TBD	TBD
Sub Total	431	294 to 339	-32% to -21%
Cap-and-Trade Program	NA	24 to 79	NA
Total	**431**	**260**	**-40%**

Source: CARB 2017b.
Notes: TCU = Transportation, Communications, and Utilities; TBD: To Be Determined.
[1] Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH_4. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants by 2030, including a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels. The bill established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Final Proposed Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s despite the tripling of diesel fuel use (CARB 2017b). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduced GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and was anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implemented the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that set even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines into a single package of standards the control of smog, soot, and GHGs and requirements for greater numbers of ZE vehicles. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHGs and 75 percent less smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 set a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS required a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects, because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon), was signed into law in September 2015 and establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also established a target for the transportation sector of reducing GHG emissions 80 percent below 1990 levels.

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2016 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, go into effect starting January 1, 2020.

The 2016 Standards improved upon the previous 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Under the 2016 Standards, residential and nonresidential buildings are generally 28 and 5 percent more energy efficient than the 2013 Standards, respectively (CEC 2015a). Buildings that were constructed in accordance with the 2013 Building Energy

Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the previous 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features. Although the 2016 standards did not achieve zero net energy, they get very close to the state's goal and take important steps toward changing residential building practices in California (CEC 2015b).

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. Four key areas the 2019 standards will focus on are 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; and 4) nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy than homes built to the 2016 standards (CEC 2018b).

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air contaminants.[5] The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011. The 2016 Standards became effective on January 1, 2017. The CEC adopted the 2019 CALGreen on May 9, 2018, and it becomes effective January 1, 2020.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Regulations

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

[5] The green building standards became mandatory in the 2010 edition of the code.

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses.

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

Section 5.408 of the 2016 CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

In October 2014 Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also required that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

Water Efficiency Regulations

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

5.6.2.3 REGIONAL

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and

vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The San Diego Association of Governments (SANDAG) is the MPO for the County of San Diego.

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. In March 2018, CARB adopted updated targets and technical methodology. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of State technology and fuels strategies and any potential future State strategies, such as statewide road user pricing. The proposed targets call for greater per capita GHG emission reductions from SB 375 than are currently in place, which, for 2035, translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs.

CARB's updated targets for SANDAG are a 15 percent per capita GHG reduction in 2020 from 2005 levels (compared to the 2010 target of 7 percent) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent). The updated targets and methodology will take effect on October 1, 2018 (CARB 2018).

SANDAG's San Diego Forward: The Regional Plan

SB 375 requires the MPOs to prepare a Sustainable Communities Strategy (SCS) in their Regional Transportation Plan (RTP). SANDAG adopted the San Diego Forward: The Regional Plan, which combines the region's Regional Comprehensive Plan (RCP) and SCS (SANDAG 2015). SANDAG's SCS shows how the region will meet the Scoping Plan targets for the region by using land in ways that make developments more compact, conserving open space, and investing in a transportation network that gives residents alternatives to driving alone. The proposed land uses pattern within SANDAG's SCS would accommodate 79 percent of all housing and 86 percent of all jobs within the Urban Area Transit Strategy Study Area where the greatest investments in public transit would be made. It is estimated that 82 percent of new housing in the region will be attached multifamily dwellings (SANDAG 2015). In addition to land use strategies, SANDAG's SCS relies on improvements to the transportation network (e.g., transit system, bicycle network), expansion of transportation demand measures, transportation system management measures, and pricing strategies. The SCS would result in a 15 percent reduction in emissions by 2020 and a 21 percent reduction by 2035—far more than what CARB mandates for the SANDAG region (SANDAG 2015).

The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers. The five strategies toward sustainability in the SCS include:

- Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.

- Protect the environment by preserving sensitive habitat, open space, and farmland.
- Invest in a transportation network that gives people transportation options and reduces greenhouse gas emissions.
- Address the housing needs of all economic segments of the population.
- Implement the Regional Plan through Incentives and Collaboration.

The Regional Plan's actions applicable for local agencies include:

- Promote the use of both zero-emission vehicles and alternative fuels and ensure that we have the infrastructure to support these innovations.
- Support the efforts of local jurisdictions to implement their Energy Roadmap Programs to save energy in their own operations and in their larger communities.
- Work with partner agencies to implement the transportation projects contained in the Regional Plan. These include:
- Implement state-of-the-art technologies and Transportation Demand and Systems Management Programs to provide more mobility choices and allow the transportation system to function more efficiently.
- Continue to pursue opportunities to expand shared mobility services near Smart Growth Opportunity Areas in the region. Examples of shared mobility services including carsharing, bikesharing, real-time ridesharing, Transportation Network Companies (e.g., Uber, Lyft, Sidecar), neighborhood electric vehicles, scootershare, and on-demand shuttle and jitney services.
- Support the development of policies, programs, and funding for moving goods in the state and nation, as well as for infrastructure in the region that supports moving goods.

5.6.2.4 LOCAL

City of Encinitas Climate Action Plan

The City of Encinitas 2018 Climate Action Plan (CAP) supersedes its 2011 CAP to account for new legislation, improved technology, and a more recent baseline inventory year of 2012. The 2018 CAP reevaluates the City's baseline greenhouse gas emissions inventory, establishes emissions reduction targets consistent with State guidelines, and includes strategies, goals, quantitative actions and qualitative supporting measures. It provides a roadmap for reducing greenhouse gas emissions through implementation of various strategies, goals, actions, and supporting measures and sets targets to reduce emissions, aiming to reduce GHG emissions to 13 percent below 2012 levels by 2020, and 41 percent below 2012 levels by 2030.

5.6.3 Existing Conditions

The Cardiff School campus currently generates direct and indirect GHG emissions from vehicle trips by students and staff traveling to school, as well as energy use (indirectly from purchased electricity use), area sources (e.g., equipment used on-site, consumer products, coatings), water/wastewater generation, and waste disposal. GHG emissions generated at the existing school site are shown in Table 5.6-5, *Cardiff Campus Existing GHG Emissions*.

Table 5.6-5 Cardiff Campus Existing GHG Emissions

	GHG Emissions $MTCO_2e$/Year	
Source	**Existing**	**Percent of Total**
Area	<1	<1%
Energy	104	22%
Transportation	332	71%
Waste	8	2%
Water	20	4%
Total All Sectors	**465**	**100%**

Source: CalEEMod Version 2016.3.2.25. Based on 2018 emission rates and IPCC's AR4 GWPs. Totals may not equal 100 percent due to rounding.

5.6.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

5.6.4.1 COUNTY OF SAN DIEGO

The San Diego Air Pollution Control District operates out of the County of San Diego. The SDAPCD has not adopted GHG emissions thresholds. Guidance for addressing GHG emissions in the County has generally been provided by the County's Planning & Development Services Division. However, the County's Planning & Development Services Division only has land use authority for projects in unincorporated County of San Diego.

Following a legal challenge to the County's adoption of the 2012 Climate Action Plan, the County provided interim guidance for land use projects evaluating GHG emissions: "2016 Climate Change Analysis Guidance, Recommended Content and Format for Climate Change Analysis Reports in Support of CEQA Documents" (2016 Guidance). Since release of the 2016 Guidance, the County adopted the revised County of San Diego

Guidelines for Determining Significance, Climate Change, in August 2017 (2017 Guidance) along with a revised CAP on February 14, 2018, with Appendix A, Final Climate Action Plan Consistency Review Checklist.[6]

The proposed project is in the City of Encinitas and not in unincorporated County of San Diego. Emissions associated with land uses in the City of Encinitas are not accounted for in the County's CAP; therefore, projects in Encinitas cannot use the County's CAP to tier off or to mitigate significant GHG emissions impacts of a project. Therefore, while updated guidance from the County is available for projects in unincorporated areas of the County, the 2016 Guidance provides the latest available methodology for identifying a bright-line threshold to screen GHG emissions impacts for projects in incorporated cities that lack a GHG reduction plan.

900 $MTCO_2e$ Screening Criteria

The County of San Diego's 2016 Guidance identified a bright line threshold of 900 $MTCO_2e$ per year, a conservative screening criteria, in order to capture 90 percent of the development projects that would require further analysis and mitigation with regard to climate change. Projects that generate 900 $MTCO_2e$ per year or less would have a less-than-cumulatively considerable impact. This bright-line threshold is based on the California Air Pollution Control Officer's Association's (CAPCOA) 2008 white paper, "CEQA & Climate Change," as described below.

The bright-line significance threshold is a numeric, mass-emissions threshold. In general, the bright-line threshold identifies the point at which additional analysis of project-related GHG emissions impacts is necessary. Projects below the established bright-line significance criteria have a *de minimus* contribution to the local, regional, and/or statewide GHG emissions inventory and have less than significant impacts. Projects above this threshold may result in a substantial increase in GHG emissions.

The bright-line threshold is based on the methodology discussed in the 2008 CAPCOA white paper (CAPCOA 2008). It is based on the market capture approach and reflects the amount of emissions that 90 percent of development projects surveyed in four cities within California would generate. CAPCOA identified that a bright-line threshold set at 900 $MTCO_2e$ per year would capture 90 percent of projects.

The 900 $MTCO_2e$ per year is used because it is the most conservative bright-line threshold. Exceeding the bright-line significance criteria does not necessarily indicate that the project generates a significant unavoidable impact. The bright-line thresholds are used as a screening criterion to identify whether a full analysis of GHG emissions is warranted. Furthermore, if a project exceeds the screening threshold, the second level of analysis would compare the project to the efficiency metric, discussed below.

[6] On March 16, 2018, a petition for a writ of mandate was filed by the Sierra Club and six other organizations on the revised CAP, challenging that the CAP does not contain enforceable measures to reduce GHG emissions and requesting that the court set aside a threshold of significance established by the County that the petitioners alleged would allow development not contemplated by a 2011 General Plan Update, so long as developers obtained offsets, which could be obtained out of state or even outside of the country. In the new lawsuit, the petitioners asserted that this "offshoring of GHG emissions offsets" had been done without proper review under CEQA.

5.6.4.2 CARB SCOPING PLAN

2020 Efficiency Metric

The efficiency metric is derived from CARB's Scoping Plan and is based on the projected year 2020 statewide emissions inventory for the land use sector and statewide population and employment for land use sectors, as shown in Table 5.2-6, *2020 GHG Reduction Efficiency Target*. Based on the inventory and statewide service population for the land use sector in 2020, the land use sector project-level efficiency threshold is estimated at 5.0 $MTCO_2e$ service population per year. This efficiency metric represents the target per service population emission rate for land use development projects that would be consistent in meeting the AB 32 year 2020 reduction target

Table 5.6-6 2020 GHG Reduction Efficiency Target

GHG Sector[1]	Scoping Plan AB 32 2020 Scenario $MMTCO_2e$[1]
1990 End Use Sector	
Electricity	94.8
Transportation	137.9
Landfills	7.4
Wastewater	3.2
Commercial	13.8
Residential	29.7
2020 Project-Level Efficiency Target	
Population[2]	40,636,392
Employment[3]	17,190,490
Service Population	57,829,882
Efficiency Target	**5.0 $MTCO_2e$/SP**

Sources:
[1] CARB 2007.
[2] CDOF 2018.
[3] Caltrans 2017. Without industrial and agricultural sectors.

2030 Efficiency Metric

For projects that would be implemented beyond year 2020, the efficiency targets have been adjusted based on the GHG reduction targets of SB 32, which set a goal of 40 percent below 1990 levels by 2030. Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. The recently adopted *2017 Climate Change Scoping Plan Update* includes the regulations and programs to achieve the 2030 target. It establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b). However, some of the state emissions sectors are not applicable for project-level analysis. (e.g., industrial, oil and gas extraction, petroleum refining, agriculture, and non-energy GHGs). These sectors are subtracted from the emissions inventory in order to derive a project-level GHG efficiency target, which is more conservative than the plan-level target of the Scoping Plan, which includes all the emissions sectors. As shown in Table 5.2-7, *2030 GHG*

Reduction Targets, using the latest land use emissions inventory developed for the 2017 Scoping Plan, the estimated 2030 GHG project-level efficiency target would be 3.0 $MTCO_2e$/year/SP.

Table 5.6-7 2030 GHG Reduction Efficiency Target

GHG Sector[1]	Scoping Plan SB 32 2030 Scenario $MMTCO_2e$[1]
Scoping Plan End Use Sector– Land Use Only Sectors	
Residential – residential energy consumption	41.4
Commercial – commercial energy consumption	30.1
Transportation – transportation energy consumption	105.1
Transportation Communications and Utilities – energy that supports public infrastructure like street lighting and waste treatment facilities	5
Solid Waste Non-Energy GHGs	9.1
Scoping Plan Land Use Sector Target	260
Project-Level Efficiency Target	
Population[2]	43,939,250
Employment[3]	18,694,169
Service Population	62,633,419
Efficiency Target	**3.0 $MTCO_2e$/SP**

Sources:
[1] CARB 2017b
[2] CDOF 2018.
[3] Caltrans 2017. Without industrial and agricultural sectors.

Summary

For the purpose of this CEQA assessment, projects that are not exempt from CEQA are required to quantify project-level GHG emissions and compared them to the following applicable significance thresholds:

- County/CAPCOA Bright Line Threshold: 900 $MTCO_2e$ per year
- 2020 Efficiency Threshold: 5.0 $MTCO_2e$ per year per service population for year 2020
- 2030 Efficiency Threshold: 3.0 $MTCO_2e$ per year per service population for year 2030

For school projects, service population is defined as the daytime population of the campus, which includes students and staff. A GHG inventory for a development project should include GHG emissions for the following GHG sectors: electricity, transportation, waste generation, wastewater treatment, and commercial and residential (e.g., natural gas use, area sources). In addition, construction-related emissions are amortized over the lifetime of a project, which is conservatively estimated at 20 years unless a longer project lifetime can be substantiated. Projects that do not exceed the applicable threshold of significance are considered to have a less than cumulatively considerable impact to climate change. Projects that do exceed the applicable GHG significance threshold would be considered potentially significant and would require inclusion of all feasible mitigation measures to reduce GHG emissions.

5.6.5 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.6-1: The proposed project would not generate an increase in GHG emissions, either directly or indirectly, that would cause a significant impact on the environment. [Threshold GHG-1]

Impact Analysis: Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough GHG emissions on its own to influence global climate change significantly; hence the issue of global climate change is, by definition, a cumulative environmental impact.

The proposed project would result in an increase of 73 students from existing average enrollment and would generate GHG emissions from construction activities, energy use (indirectly from purchased electricity use and directly through fuel consumed for building heating), and area sources (e.g., consumer products, coatings). During construction, approximately 147 students would be temporarily relocated to Ada Harris Elementary School during the 2019-2020 school year, and approximately 50 students would be relocated during the 2020-2021 school year. At project buildout, students would return to Cardiff School, and interim operation would not generate additional trips or a net increase in GHG emissions. Table 5.6-8, *Project-Related GHG Emissions*, shows the emissions associated with the proposed project. GHG emissions associated with the plans would primarily be from vehicle trips associated with trips to and from the campus. In addition, GHG emissions from construction activities are amortized into the operational phase GHG emissions inventory to account for one-time emissions from construction. The table also provides a comparison of the proposed project to the existing conditions. As shown in the table, the net change in GHG emissions of 60 $MTCO_2e$ per year as a result of project implementation would not exceed the bright line threshold of 900 $MTCO_2e$. Therefore, the project-related cumulative contribution to GHG emissions is less than significant.

Table 5.6-8 Project-Related GHG Emissions

Source	Existing Emissions – 2018 ($MTCO_2e$/Year)	Proposed Project – 2020 ($MTCO_2e$/Year)	Net Difference ($MTCO_2e$/Year)
Area	<1	<1	<1
Energy	104	87	-17
Mobile	332	372	40
Waste	8	10	2
Water	20	20	-1
Amortized Construction Emissions[1]	N/A	36	36
Total All Sectors	**465**	**525**	**60**
Bright-Line Screening Threshold			900 $MTCO_2e$/Yr
Exceeds Bright-Line Threshold			No

Source: CalEEMod, Version 2016.3.2.25. Totals may not equal the sum of the values shown due to rounding.
Notes: $MTCO_2e$ = metric ton of carbon dioxide equivalent
[1] Total construction emissions are amortized over 20 years to account for one-time construction emissions.

Impact 5.6-2: The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. [Threshold GHG-2]

***Impact Analysis*:** Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan, the City of Encinitas's Climate Action Plan, and San Diego Forward: The Regional Plan, which combines the region's Regional Comprehensive Plan (RCP) and the RTP/SCS (SANDAG 2015).

CARB Scoping Plan

The CARB Scoping Plan is applicable to state agencies, but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require cities/counties to adopt policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the state agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that would affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the low-carbon fuel standard and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars programs).

The proposed project is required to adhere to the applicable programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies. The proposed project would comply with these state GHG emissions reduction measures since they are statewide strategies. For example, new buildings under the proposed project would meet the applicable CALGreen and Building Energy Efficiency

Standards. Furthermore, the Advanced Clean Cars program would be applicable to new vehicles introduced in the state and contribute to reducing mobile-source GHG emissions, which would be a benefit for the proposed project. Therefore, the proposed project would not obstruct implementation of the CARB Scoping Plan.

SANDAG's Regional Transportation Plan/Sustainable Communities Strategy

In addition to AB 32, the California legislature passed SB 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy in their regional transportation plans to achieve the per capita GHG reduction targets. SANDAG adopted San Diego Forward: The Regional Plan, which is the region's SCS, on October 8, 2015. The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers. The proposed project would construct school facilities to serve existing students in the area and is consistent with the underlying General Plan land use designation (see Section 5-8, *Land Use and Planning*). Consequently, the proposed project would not interfere with SANDAG's ability to implement the regional strategies outlined in San Diego Forward. Therefore, the proposed project would not have the potential to interfere with the State of California's or SANDAG's ability to achieve GHG reduction goals and strategies.

City of Encinitas Climate Action Plan

The City of Encinitas 2018 CAP is a CEQA Section 15183.5–qualified plan and affords development projects the opportunity to use CEQA streamlining tools for analysis of GHG emission if the projects are consistent with the 2018 CAP. The GHG reduction strategies are focused on City programs, policies, and projects that will reduce GHG emissions across multiple sectors as a complement to legislative actions taken by the federal and state government. GHG reduction strategies in the CAP are organized under six GHG emissions categories: electricity and natural gas, water, on-road transportation, off-road transportation, solid waste, and carbon sequestration. Although the proposed project is within the City of Encinitas, emissions associated with the proposed buildings and transportation sources are under the jurisdictional authority of Cardiff School District. Additionally, the City has not yet adopted ordinances to implement their CAP goals. Therefore, emissions associated with the school facilities are not accounted for in the City's CAP, and the District cannot use the City's CAP to tier off and mitigate significant GHG emission impacts of the project. However, because the project is in the city, a consistency analysis with the applicable measures was conducted to ensure that development of the proposed project is consistent with the applicable goals of the CAP. Table 5.6-9, *Project-Related GHG Emissions*, provides a consistency analysis of the proposed project and the 2018 CAP. As shown in this table, the proposed project would generally be consistent with the applicable measures in the CAP, supporting five of the six applicable CAP goals through sustainability measures onsite. Therefore, the proposed project would not obstruct the goals and strategies described in the City of Encinitas's CAP.

Table 5.6-9 Project-Related GHG Emissions

Applicable Goals	Consistency Analysis
Energy	
Goal 1.1: Reduce Building Energy Consumption	**Consistent**. The proposed project would replace and/or modernize existing structures with newer, more-energy-efficient structures onsite. The project would be consistent with the California Building Code and 2016 Building Energy Efficiency Standards. This would improve energy efficiency 33.5 percent over the 2008 standard and would be consistent with the City of Encinitas Climate Action Plan.
Water	
Goal 3.1: Reduce City-wide Potable Water Consumption	**Consistent.** The proposed project would comply with the State's Landscape Water Efficient Ordinance. Landscaping installed onsite would be water efficient. Additionally, the proposed school buildings would be more efficient than existing buildings, since new construction would adhere to CALGreen's requisite water efficiency measures.
On-Road Transportation	
Goal 4.1: Reduce Vehicle Miles Traveled	**Consistent**. The District would continue to comply with the Safe Routes to School Program, using existing walk, bike, and scoot programs, and providing multimodal routes to the school. In addition, the proposed project would provide bicycle parking as well as two electric-vehicle parking spaces in compliance with CALGreen clean air vehicle requirements.
Off-Road Fuel Use	
Goal 5.1: Reduce Off-Road Fuel Use	**Inconsistent.** The District currently does not use electric-powered landscaping equipment onsite, and the use of electric equipment on this property is not feasible due to limited access to outdoor outlets. In addition, the District is not obligated to adhere to the City's off-road fuel use ordinances because emissions associated with the proposed project are under the jurisdictional authority of Cardiff School District. The CAP goal is directed primarily toward residential, commercial, and industrial developments and therefore is not applicable to the proposed project.
Solid Waste	
Goal 6.1: Divert Solid Waste	**Consistent.** Cardiff School District diverts solid waste and organic waste in accordance with state law. Assembly Bill 341 requires business that generate four or more cubic yards of commercial solid waste per week to arrange for recycling services. AB 1826 requires businesses to recycle organic waste. During construction, the proposed project would comply with the construction and demolition diversion requirements of CALGreen, which requires construction contractors to divert a minimum of 65 percent of waste from landfills.
Carbon Sequestration	
Goal 7.1: Increase Urban Tree Cover	**Consistent**. The proposed project would participate in the City's educational partnership with schools to develop programs to educate students about planting trees as part of the Urban Tree Planting Program.

Source: City of City of Encinitas, 2018. City of Encinitas Climate Action Plan.

5.6.6 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact 5.6-1 are not project-specific impacts, but the proposed project's

contribution to the cumulative impact of global warming. Implementation of the proposed project would be consistent with CARB's Scoping Plan, SANDAG's RTP/SCS, and the City of Encinitas's Climate Action Plan. Thus, the proposed project's GHG emissions and contribution to global climate change impacts are not considered cumulatively considerable, and therefore are less than significant.

5.6.7 Existing Regulations and Standard Conditions

State

- California Global Warming Solutions Act (AB 32)
- California Global Warming Solutions Act of 2006: Emissions Limit (SB 32)
- Sustainable Communities and Climate Protection Act (SB 375)
- Greenhouse Gas Emission Reduction Targets (Executive Order S-03-05)
- Clean Car Standards – Pavley (AB 1493)
- Renewables Portfolio Standards (SB 1078)
- California Integrated Waste Management Act of 1989 (AB 939)
- California Mandatory Commercial Recycling Law (AB 341)
- California Advanced Clean Cars CARB (Title 13 CCR)
- Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Heavy-Duty Vehicle Greenhouse Gas Emissions Reduction Measure (Title 17 CCR)
- Low Carbon Fuel Standard (Title 17 CCR)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

5.6.8 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, impacts 5.6-1 and 5.6-2 would be less than significant.

5.6.9 Mitigation Measures

No mitigation measures are required.

5.6.10 Level of Significance After Mitigation

Impacts would be less than significant.

5.6.11 References

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5. Environmental Analysis
GREENHOUSE GAS EMISSIONS

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5.7 HYDROLOGY AND WATER QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts of the proposed Cardiff School Modernization and Reconstruction project on hydrology and water quality conditions in the community of Cardiff-by-the-Sea in the City of Encinitas. Hydrology deals with the distribution and circulation of water, both on land and underground. Water quality deals with the quality of surface- and groundwater. Surface water includes lakes, rivers, streams, and creeks; groundwater is under the earth's surface.

Impacts related to flood hazards and impacts on groundwater supplies and groundwater recharge were determined to be less than significant in the Initial Study, included as Appendix 1-1 to this DEIR, and they are not addressed below.

- *Preliminary Drainage Report for the Cardiff Schoo*l, Chang Consultants, August 31, 2018 (included as Appendix 5.7-1)

- *City of Encinitas Stormwater Intake Form and Priority Development Project Preliminary Stormwater Quality Management Plan (PSWQMP)*, Chang Consultants, August 31, 2018 (included as Appendix 5.7-2)

Complete copies of these studies are included in the appendices to this Draft EIR.

5.7.1 Environmental Setting

5.7.1.1 REGULATORY FRAMEWORK

Federal

Clean Water Act

The federal Water Pollution Control Act (or Clean Water Act [CWA]) is the principal statute governing water quality. It establishes the basic structure for regulating discharges of pollutants into the waters of the United States and gives the US Environmental Protection Agency (EPA) authority to implement pollution control programs, such as setting wastewater standards for industry. The statute's goal is to completely end all discharges and to restore, maintain, and preserve the integrity of the nation's waters. The CWA regulates direct and indirect discharge of pollutants; sets water quality standards for all contaminants in surface waters; and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges; requires states to establish site-specific water quality standards for navigable bodies of water; and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA funds the construction of sewage treatment plants and recognizes the need for planning to address nonpoint sources of pollution. Section 402 of the CWA requires a permit for all point source (a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel) discharges of any pollutant (except dredge or fill material) into waters of the United States.

National Pollutant Discharge Elimination System

Under the National Pollutant Discharge Elimination System (NPDES) program (under Section 402 of the CWA), all facilities that discharge pollutants from any point source into waters of the United States must have a NPDES permit. The term "pollutant" broadly applies to any type of industrial, municipal, and agricultural waste discharged into water. Point sources can be publicly owned treatment works (POTWs), industrial facilities, and urban runoff. (The NPDES program addresses certain agricultural activities, but the majority are considered nonpoint sources and are exempt from NPDES regulation.) Direct sources discharge directly to receiving waters, and indirect sources discharge to POTWs, which in turn discharge to receiving waters. Under the national program, NPDES permits are issued only for direct, point-source discharges. The National Pretreatment Program addresses industrial and commercial indirect dischargers. Municipal sources are POTWs that receive primarily domestic sewage from residential and commercial customers. Specific NPDES program areas applicable to municipal sources are the National Pretreatment Program, the Municipal Sewage Sludge Program, Combined Sewer Overflows, and the Municipal Storm Water Program. Nonmunicipal sources include industrial and commercial facilities. Specific NPDES program areas applicable to these industrial/commercial sources are: Process Wastewater Discharges, Non-process Wastewater Discharges, and the Industrial Storm Water Program. NPDES issues two basic permit types: individual and general. Also, the EPA has recently focused on integrating the NPDES program further into watershed planning and permitting (USEPA 2012).

The NPDES has a variety of measures designed to minimize and reduce pollutant discharges. All counties with storm drain systems that serve a population of 100,000 or more, as well construction sites one acre or more in size, must file for and obtain an NPDES permit. The EPA's Storm Water Phase I Final Rule is another measure for minimizing and reducing pollutant discharges to a publicly owned conveyance or system of conveyances (including roadways, catch basins, curbs, gutters, ditches, man-made channels and storm drains, designed or used for collecting and conveying stormwater). The Phase I Final Rule requires an operator (such as a city) of a regulated municipal separate storm sewer system (MS4) to develop, implement, and enforce a program (e.g., best management practices [BMPs], ordinances, or other regulatory mechanisms) to reduce pollutants in postconstruction runoff to the city's storm drain system from new development and redevelopment projects that result in the land disturbance of greater than or equal to one acre.

State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. Under this Act, the State Water Resources Control Board (SWRCB) has ultimate control over state water rights and water quality policy. In California, the EPA has delegated authority to issue NPDES permits to the SWRCB. The state is divided into nine regions related to water quality and quantity characteristics. The SWRCB, through its nine Regional Water Quality Control Boards (RWQCBs), carries out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a water quality control plan or basin plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality

conditions and problems. Encinitas is in the San Diego Basin, Region 9, in the Upper Santa Ana Watershed. The water quality control plan for the San Diego Basin was updated in 2016. This Basin Plan gives direction on the beneficial uses of the state waters in Region 9; describes the water quality that must be maintained to support such uses; and provides programs, projects, and other actions necessary to achieve the standards in the Basin Plan.

Storm Water Pollution Prevention Plans

Pursuant to the CWA, in 2001, the SWRCB issued a statewide general NPDES Permit for stormwater discharges from construction sites (NPDES No. CAS000002). Under this statewide permit, construction sites with a disturbed area of one or more acres are required to obtain individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Coverage by the general permit is accomplished by completing and filing a notice of intent with the SWRCB and developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). Each applicant under the Construction General Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must estimate sediment risk from construction activities to receiving waters; list BMPs to be implemented on the construction site to protect stormwater runoff; and contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs, and a monitoring plan if the site discharges directly to a water body listed on the state's 303(d) list of impaired waters.

Regional

Water Quality Improvement Plan

The MS4 Permit for the part of San Diego County in the San Diego RWQCB region, Order No. R9-2013-0001, provides a pathway for the co-permittees on the MS4 Permit to select and address the highest priority water quality issues. This process is incorporated in watershed-specific water quality improvement plans (WQIPs). RWQCB Region 9 is divided into nine watershed management areas (WMA). The WQIPs are developed through a collaborative effort between the co-permittees in each WMA and other key stakeholders, including the RWQCB. The WQIPs include descriptions of the highest-priority pollutants or conditions in a specific watershed, goals and strategies to address those pollutants or conditions, and schedules for those goals and strategies. The City of Encinitas is in the Carlsbad WMA, which comprises six hydrologic districts and covers approximately 211 square miles (Project Clean Water 2018). The WQIP for the Carlsbad WMA was issued by the RWQCB in 2016.

Local

City of Encinitas General Plan

The City of Encinitas General Plan includes policies that specifically address conservation and protection of surface and groundwater resources in the city, enhancement of ocean waters through elimination of pollutants; erosion and sedimentation control for lagoons and surface waters; preservation of natural areas,

including riparian and oceanic habitats; and retention of coastal bluffs to minimize geologic hazards that can arise from hydrologic conditions.

City of Encinitas Municipal Code

The municipal code has policies that are designed to ensure compliance with the MS4 permit and reduce pollutants in urban runoff to the maximum extent practicable. Chapter 20.08 of the municipal code, Stormwater Management, includes regulations for construction impacts to water quality, prohibited activities, BMPs, and low-impact-development strategies.

City of Encinitas Jurisdictional Runoff Management Program

The Jurisdictional Runoff Management Program sets forth strategies, standards, and protocols to address the priorities and goals established in the WQIP. The highest-priority water quality conditions in the WMA are discharges of bacteria (D-Max Engineering 2017).

City of Encinitas Engineering Design Manual - Best Management Practices Design Manual

The City of Encinitas Best Management Practices Design Manual (BMP Manual)(Encinitas 2016, Chapter 7) addresses updated, on-site, post-construction stormwater requirements and provides updated procedures for planning, preliminary design, selection, and design of permanent stormwater BMPs based on the performance standards in the MS4 Permit. The BMP Manual classifies BMPs into three categories: source control, site design, and stormwater pollutant control.

Source Control BMPs

Source control BMPs avoid and reduce pollutants in stormwater runoff. Everyday activities, such as recycling, trash disposal, and irrigation, generate pollutants that can drain to the stormwater conveyance system. Source control BMPs are defined as activities that reduce the potential for stormwater runoff to contact pollutants. Activities include administrative action; facility design; use of alternative materials; and operation, maintenance, and inspection of an area. Examples include protecting trash storage areas and materials stored outdoors and signage for storm drain systems.

Site Design BMPs

Site design BMPs (also called low-impact-development BMPs) are intended to reduce the rate and volume of stormwater runoff and associated pollutant loads. Site design BMPs minimize surface soil compaction, reduce impervious surfaces, and/or provide flow pathways not connected to the storm drain system, such as routing flow over pervious surfaces. Site design BMPs may incorporate interception, storage, evaporation, evapotranspiration, infiltration, and/or filtration processes to retain and/or treat pollutants in stormwater before it is discharged from a site.

Stormwater Pollutant Control BMPs

Stormwater pollutant control BMPs are engineered facilities designed to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire), biofilter, and/or provide flow-through treatment of stormwater runoff

generated on the project site. Examples include cisterns, infiltration basins, bioretention, permeable pavement, biofiltration basins, vegetated swales, and filters (Encinitas 2016).

Green Building Standards Code

The proposed project will be developed consistent with the Green Building Standards Code (CALGreen) for planning, design, operation, construction, use, and occupancy of newly constructed buildings and structures within the city.

5.7.1.2 EXISTING CONDITIONS

The project site is entirely developed with buildings, asphalt, concrete walkways, grass field, and landscaping. Onsite drainage is generally directed to the west toward the ocean. There are few drainage facilities on the project site; stormwater runoff travels directly from the buildings, asphalt, and walkways to the curb and gutter of Mozart Avenue, Montgomery Avenue, and San Elijo Avenue. Uncontrolled stormwater may run off to the west across San Elijo Avenue to the rail line and the Cardiff Trunk Sewer line, below the grade of the project site.

Regional Drainage

The project site is in the Carlsbad WMA, which spans approximately 211 square miles in west-central San Diego County (Project Clean Water 2018). Within the Carlsbad WMA are six hydrologic areas—Loma Alta, Buena Vista Creek, Agua Hedionda, Canyon de las Encinitas, San Marcos, and Escondido Creek (see Figure 5.7-1, *Carlsbad Watershed Management Area*). The project site is in the Escondido Creek hydrologic area.

Surface waters in the Carlsbad WMA include the Pacific Ocean; Buena Vista, Agua Hedionda, Batiquitos, and San Elijo Lagoons; Loma Alta, Agua Hedionda, San Marcos, and Escondido Creeks; and Lake Wohlford.

Local Drainage

Runoff from the northern part of the school flows north to the northwest corner of the school at the intersection of San Elijo Avenue and Montgomery Avenue. Runoff from the southern part of the school flows south to San Elijo Avenue and Mozart Avenue. Runoff is conveyed south in streets (curb and gutter), channels, and storm drains to San Elijo Lagoon, about 0.8 mile from the school.

Runoff Rates

The existing site is divided into two drainage areas: P1, 3.03 acres, mostly the southern half of the site; and P2, 4.13 acres, mostly the northern half of the site (see Figure 5.7-2, *Project Site Drainage Areas*).

Table 5.7-1 Existing Drainage Flow Rates

Drainage Area	Acres	Drainage Flow Rate, cubic feet per second (cfs)			
		2-Year Storm	5-Year Storm	10-Year Storm	25-Year Storm
P1 (south part of site)	3.03	0.40	0.70	0.84	1.33
P2 (north part of site)	4.13	0.54	0.96	1.15	1.82

Source: Chang Consultants 2018a.

Water Quality

303(d) List Status

The Federal Clean Water Act Section 303(d) requires that states assess the quality of their waters every two years and publish a list of waters not meeting state standards. Once a water body is placed on the 303(d) list, it remains on the list until water quality standards and total maximum daily pollutant load levels are achieved. Water bodies in the path of stormwater from the project site to the Pacific Ocean are on the 303(d) list; their respective pollutants include:

- San Elijo Lagoon
  - Eutrophic: estimated Total Maximum Daily Load (TMDL) projected to reach in 2019[1]
  - Indicator bacteria: estimated TMDL reached in 2015
  - Sedimentation/siltation: estimated TMDL projected to reach in 2019

- Pacific Ocean Shoreline at Cardiff State Beach at San Elijo Lagoon:
  - Total coliform bacteria: estimated TMDL reached in 2008

5.7.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

HYD-1 Violate any water quality standards or waste discharge requirements.

HYD-2 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted.

HYD-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.

HYD-4 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

HYD-5 Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

HYD-6 Otherwise substantially degrade water quality.

[1] Eutrophic water contains excessive plant nutrients, such as nitrogen and phosphorus, causing excessive production of algae (SWRCB 2018).

HYD-7 Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

HYD-8 Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

HYD-9 Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

HYD-10 Be subject to inundation by seiche, tsunami, or mudflow.

The Initial Study, included as Appendix 1-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold HYD-2
- Threshold HYD-7
- Threshold HYD-8
- Threshold HYD-9
- Threshold HYD-10

These impacts will not be addressed in the following analysis.

5.7.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.7-1: Development pursuant to the proposed project would increase the amount of impervious surfaces on the site. The project includes proposed biofiltration basins that would reduce postproject runoff flow rates to below existing rates. [Thresholds HYD-3, HYD-4, and HYD-5]

Impact Analysis:

Drainage Areas

At project completion, the site would be divided into three drainage areas: Drainage Management Area 1 (DMA 1), in the southern part of the site; DMA 2 in the northern, central, and eastern parts of the site; and a self-mitigating area consisting of two playfields and some landscaped area along the western site boundary (see Figure 5.7-3, *Drainage Management Areas and Proposed Biofiltration Basins*).

DMA 1 would comprise 2.06 acres, including 1.66 acres of impervious area. DMA 2 would encompass 3.0 acres, including 2.19 acres of impervious areas. The self-mitigating area would encompass 2.1 acres, including 0.2 acre of impervious areas.

The drainage area P1 described in existing conditions consists of DMA 1 plus the south half of the self-mitigating area, and P2 consists of DMA 2 plus the north half of the self-mitigating area (compare figures 5.7-2 and 5.7-3).

The total existing impervious area onsite is about 3.2 acres; thus, project development would involve a net increase of about 0.85 acre of impervious area.

Proposed Biofiltration Basins and Storm Drains

Project plans include two biofiltration basins—Basin 1 is near the southwest corner of the site, and Basin 2 is near the northwest corner of the site. Basin 1 would have a floor area of 3,364 square feet, and Basin 2 a floor area of 4,356 square feet. The biofiltration basins would infiltrate part of the stormwater flowing into them into soil and discharge remaining stormwater via underdrains.

Infiltration was assessed as a possible BMP during PSWQMP preparation. The infiltration rate of site soils is insufficient for full infiltration of stormwater in infiltration BMPs (such as infiltration basins) in postproject conditions. Biofiltration basins were thus chosen as the structural BMPs for this project.

The project includes two networks of proposed storm drains on-site, one in the south half of the site conveying stormwater to Basin 1, and one in the north half of the site to Basin 2.

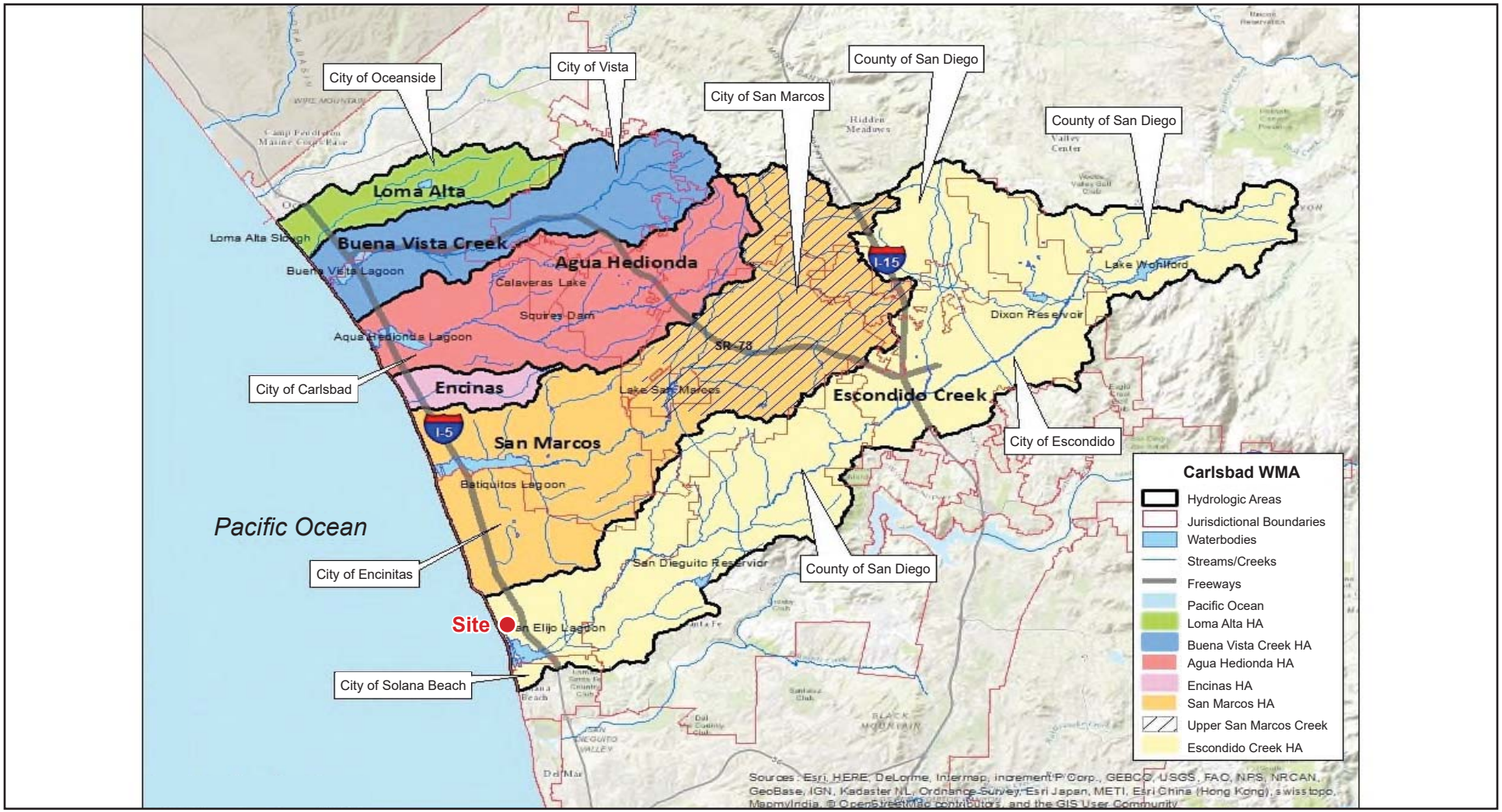
Self-Mitigating Area: Runoff from the two proposed playfields along San Elijo Avenue would flow onto the roadway and continue north and south in the roadway; there is a high point on San Elijo Avenue near the middle of the site.

Drainage Flow Rates, Existing and Postproject Conditions

Project development would increase stormwater flow on-site. Flows from a 100-year storm in P1 would increase from 9 to 15 cubic feet per second (cfs), a net increase of 6 cfs; flows in P2 would increase from 11 to 18 cfs, a net increase of 7 cfs.

Figure 5.7-1 - Carlsbad Watershed Management Area

5.7 Hydrology and Water Quality



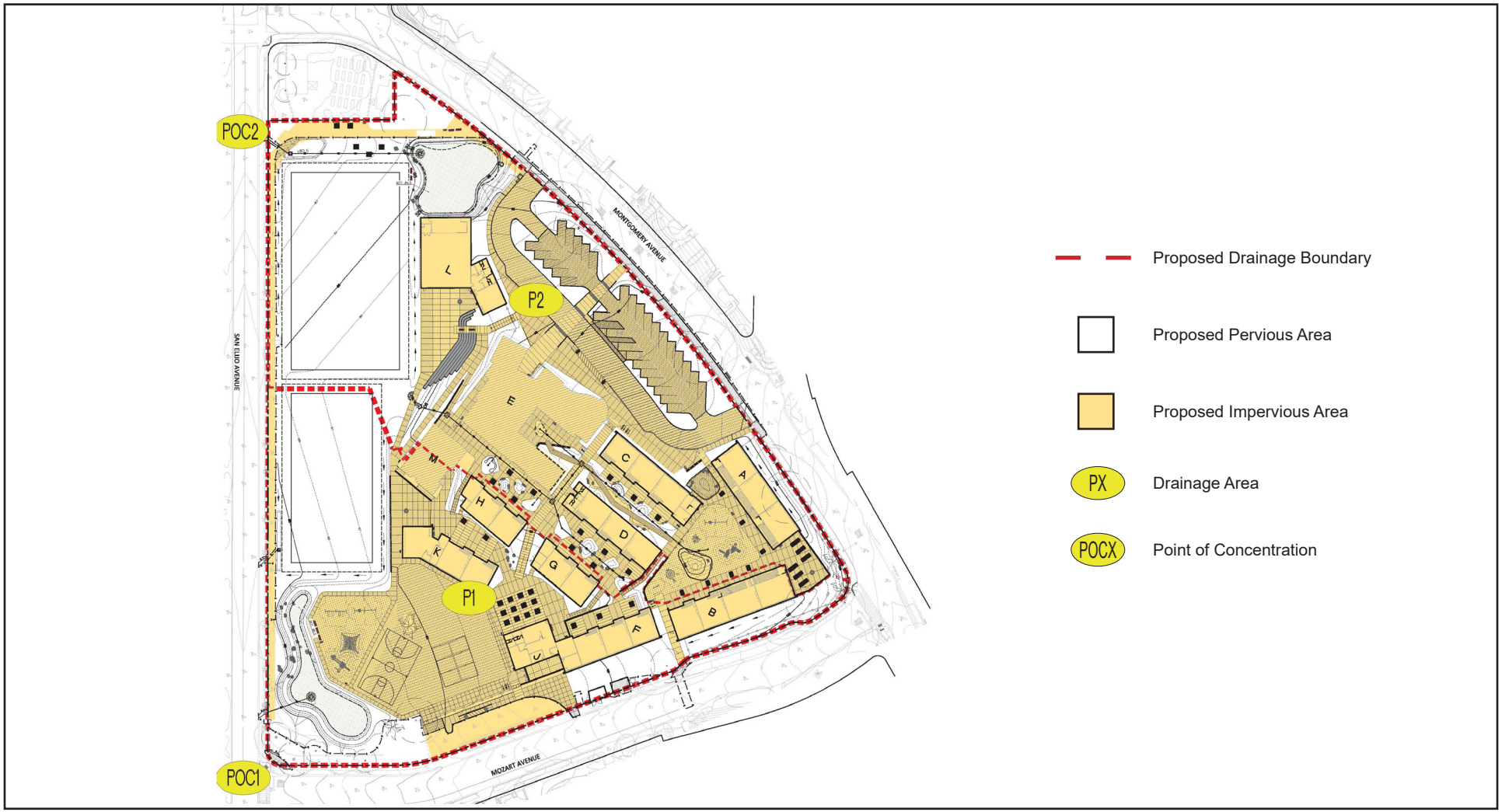
Source: MOE, 2016

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Figure 5.7-2 - Project Site Drainage Areas

5.7 Hydrology and Water Quality



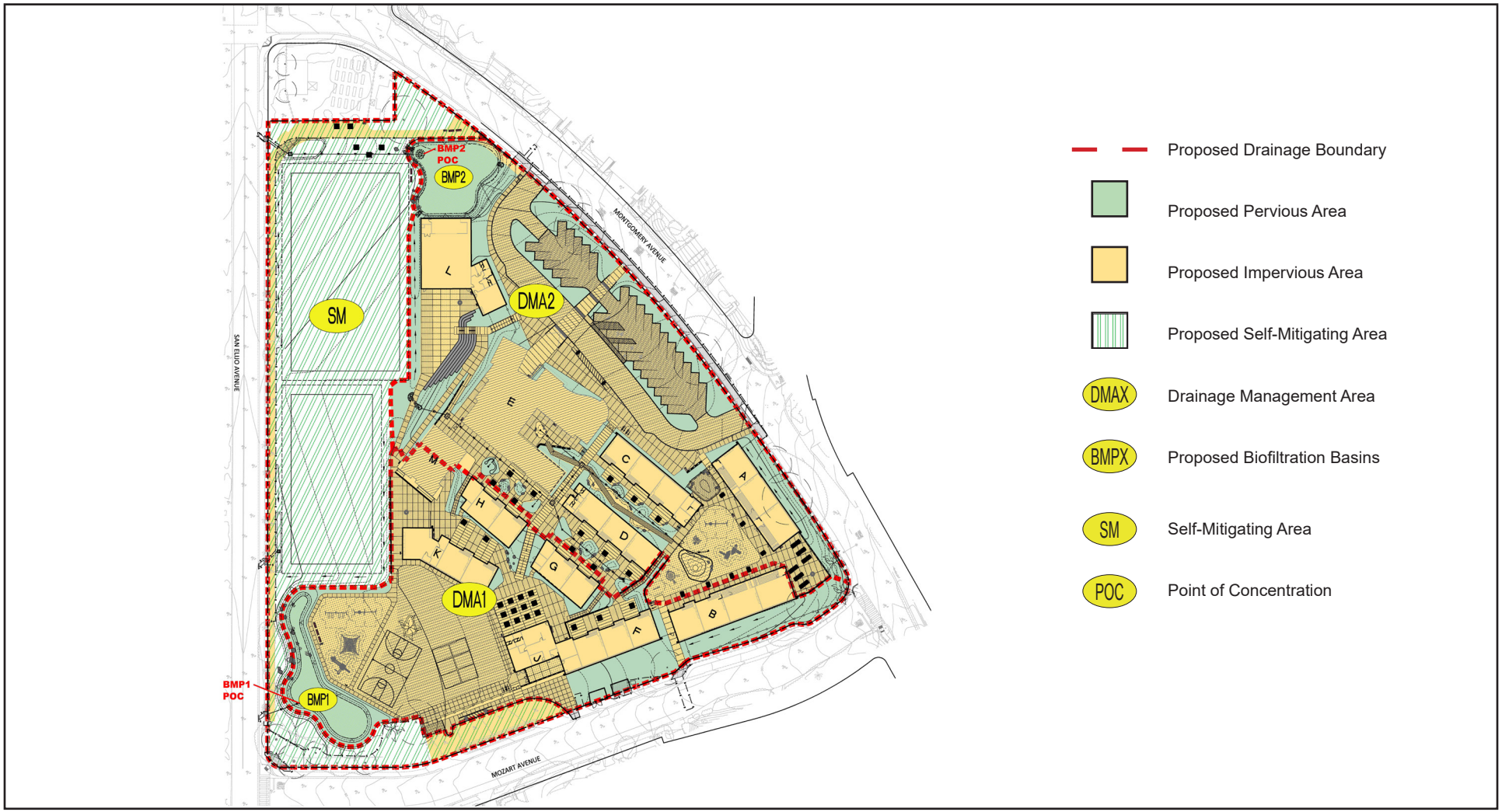
Source: Chang Consultants 2018

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Figure 5.7-3 -Drainage Management Areas and Proposed Biofiltration Basins

5.7 Hydrology and Water Quality



Source: Chang Consultants, 2018

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The biofiltration basins would detain and treat stormwater such that runoff flow rates discharged from the basins would be lower than existing rates. Postproject runoff rates discharged from the basins are compared to existing rates in Table 5.7-2, below. Project development would not increase runoff rates discharged into off-site storm drainage systems, and impacts would be less than significant.

Table 5.7-2 Drainage Flow Rates, Postproject (with Biofiltration) vs. Existing Conditions

		Drainage Flow Rate (cfs)											
		Existing Conditions				Postproject Conditions				Difference			
Drainage Area	Acres	[2][1]	[5]	[10]	[25]	[2]	[5]	[10]	[25]	[2]	[5]	[10]	[25]
P1 (south part of site)	3.03	0.40	0.70	0.84	1.33	0.17	0.43	0.82	1.09	0.23	0.27	0.02	0.24
P2 (north part of site)	4.13	0.54	0.96	1.15	1.82	0.23	0.64	1.12	1.40	0.31	0.32	0.03	0.42

Source: Chang Consultants 2018a.
[1] [X] = storm frequency in years

Construction

The potential erosion and siltation impacts would occur during the construction phase of the project. During construction, the existing structures that would be demolished from the site would have the footprint of their footing cleared for grading, which would expose and loosen soil, making it susceptible to wind and water erosion. If not controlled, the transport of these materials to local waterways would temporarily increase suspended sediment concentrations and release pollutants attached to sediment particles into local waterways.

However, prior to construction activities, a SWPPP would be prepared and submitted to the SWRCB for approval, consistent with the Municipal NPDES permit. The SWPPP would include the BMPs to be implemented during construction to ensure that erosion and siltation impacts are reduced to a less than significant level. Examples of construction BMPs that may be required by the approved SWPPP include debris basins, silt fences, and stabilized construction entrance/exit driveways. The Draft SWPPP is included as Appendix 5.7-2 to this Draft EIR. The final SWPPP will be prepared and approved by the RWQCB after preparation of detailed construction drawings. Adherence to the BMPs in the SWPPP, such as jute bails, covering of the soil, filtration basins, sediment basins, and stopping construction during storm events, would ensure that erosion and siltation potential during construction would be less than significant.

Level of Significance before Mitigation: Less than Significant.

Impact 5.7-2: During the construction phase of the proposed project, there is the potential for short-term unquantifiable increases in pollutant concentrations from the site. After project development, the quality of storm runoff (sediment, nutrients, metals, pesticides, pathogens, and hydrocarbons) may be altered. [Thresholds HYD-1 and HYD-6]

Impact Analysis: Urban runoff from storms or nuisance flows (runoff during dry periods) can carry pollutants to receiving waters (e.g., oil, fertilizers, pesticides, trash, soil, and animal waste). This runoff may

flow directly into local streams or lakes or into storm drainages and continue through pipes until it is released untreated into a local waterway and eventually the ocean. Untreated stormwater runoff degrades water quality in surface waters and groundwater and can affect drinking water, human health, and plant and animal habitats. Additionally, the increased runoff from urban surfaces can increase the intensity of flooding and erosion. Construction activities could degrade water quality by releasing sediment, oil and greases, and other chemicals into nearby water bodies. In addition, site preparation and grading may expose soils to erosion and release sediment into off-site drainage systems.

Construction

Clearing, grading, excavation, and construction activities associated with the project have potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. The refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, the project would be required to comply with the NPDES Construction General Permit as well as prepare a SWPPP that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. BMPs differ for each project and often for each phase of a project. Typical BMPs can include ground covering under engine powered equipment, off-site fueling of vehicles, silt fencing, covering of sediment stockpiles, and protection of storm drain inlets with gravel bag barriers. The Draft SWPPP is included as Appendix 5.7-2 to this Draft EIR. The final SWPPP will be prepared and approved by the RWQCB after preparation of detailed construction drawings. Adherence to the BMPs in the SWPPP, such as jute bails, covering of the soil, filtration basins, sediment basins, and stopping construction during storm events, would ensure that erosion and siltation potential during construction would be less than significant.

Additionally, it is standard practice for the District's contractors to comply with the City of Encinitas Municipal Code (Chapter 20.08 Stormwater Management), which requires the project proponent to meet the requirements of Chapter 20.08 and the City of Encinitas BMP Design Manual (Encinitas 2016, Chapter 7) prior to issuance of grading permit.

Operation

After construction of the proposed project, urban runoff could include a variety of contaminants that could impact water quality. Runoff from buildings and parking lots typically contains oils, grease, fuel, antifreeze, by-products of combustion (such as lead, cadmium, nickel, and other metals), fertilizers, herbicides, pesticides, and other pollutants. Precipitation at the beginning of the rainy season could result in an initial stormwater runoff (first flush) with high pollutant concentrations.

Pollutants of Concern

The project would not change the use of the site as a school; project operation would result in similar pollutant sources as existing conditions.

Project operation is expected to generate the following categories of pollutants that could contaminate stormwater:

- Sediment
- Nutrients
- Heavy metals
- Organic compounds
- Trash and debris
- Oxygen-demanding substances (protein, carbohydrates, and fats, and substances such as ammonia and hydrogen sulfide that react with dissolved oxygen in water)
- Oil and grease
- Bacteria and viruses
- Pesticides

Pollutants of concern for the proposed project are expected pollutants for which receiving waters are also listed on the Section 303(d) List, that is, sediment and bacteria and viruses.

Best Management Practices

The project's PSWQMP specifies the following BMPs for minimizing stormwater pollution:

Site Design BMPs: reduce or eliminate post-project runoff:

- SD-3 Minimize Impervious Area
- SD-4 Minimize Soil Compaction
- SD-5 Impervious Area Dispersion: that is, directly connected impervious areas (e.g., roof downspouts connected to street) are not allowed
- SD-7 Landscaping with Native or Drought Tolerant Species

Source Control BMPs: reduce the potential for pollutants to enter runoff:

- SC-1 Prevention of Illicit Discharges into municipal storm drains
- SC-2 Storm Drain Stenciling or Signage

- SC-5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal
- SC-6 Additional BMPs Based on Potential Sources of Runoff Pollutants:
  - Onsite storm drain inlets
  - Need for future indoor & structural pest control
  - Landscape/outdoor pesticide use
  - Food service
  - Refuse/trash areas must be covered
  - Fire sprinkler test water
  - Miscellaneous drain or wash water
  - Plazas, sidewalks, and parking lots

Structural BMPs: reduce the quantity of pollutants in storm water discharges: engineered facilities that are designed to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire), biofilter, and/or provide flow-thru treatment of stormwater runoff generated on the project site (San Diego County 2016). Structural BMPs addressed in the PSWQMP are referred to as Stormwater Pollutant Control BMPs in the City of Encinitas' BMP Manual; the term from the PSWQMP is used here.

- **Biofiltration:** Biofiltration basins without impermeable liners have been selected as the integrated pollutant and flow control BMPs. Biofiltration (bioretention with underdrain) facilities are vegetated surface water systems that filter water through vegetation and soil or engineered media prior to discharge via underdrain or overflow to downstream storm drains.

  Two biofiltration basins are proposed, one on the northern portion of the site (Basin 2) to treat stormwater drainage from the northern drainage area; and one in the southwestern portion of the site (Basin 1) to treat stormwater runoff from the southern drainage area. Engineering specifications of the two basins are provided in the PSWQMP (Appendix 5.7-1 to this DEIR). Each of the two basins would outlet through an underdrain discharging to San Elijo Avenue. Runoff discharged from Basin 1 would flow south in San Elijo Avenue, and runoff from Basin 2 would flow north in the same roadway. The biofiltration basins would infiltrate part of the stormwater flowing into them into soil and discharge the remaining stormwater via underdrains.

Conclusion

Implementation of the SWPPP and BMPs in compliance with the stormwater and water quality control requirements under the City's Stormwater Management Ordinance, County's LID manual, 2016 CALGreen, and MS4 permit would ensure water quality impacts are not significant.

Level of Significance before Mitigation: Less than Significant.

5.7.4 Cumulative Impacts

Construction and operation of the proposed project, in conjunction with related projects in the Carlsbad WMA, would result in increased flows that would eventually discharge into the Pacific Ocean. Related projects are those in the Escondido Creek hydrologic area that would direct stormwater flows through streams, channels, and other waterways into the Pacific Ocean. These projects would comply with their respective SWPPP and regulations for water quality standards established by the Carlsbad WMA. The project would result in a net reduction in the site's volume of stormwater runoff, and the project would not result in a significant impact on a cumulative basis.

Although the area around the project site is built out, new projects in the area, both individually and cumulatively, could potentially increase the volume of stormwater runoff and contribute to pollutant loading in the storm drain system with eventual discharge to the Pacific Ocean. However, as with the proposed project, future projects in Encinitas would be required to comply with the drainage and grading regulations and ordinances in Chapter 20.08 of the Encinitas Municipal Code that control runoff and regulate water quality at each development site. New development and redevelopment projects would be required to demonstrate that stormwater volumes could be managed by conveyance facilities and would not induce flooding. New projects would also be required to comply with the City's standard conditions of approval, regulations, ordinances regarding water quality, and NPDES permitting requirements. In consideration of the preceding factors, including the project's beneficial impact to water quality, cumulative water quality impacts would be rendered less than considerable, and therefore, less than significant. Thus, project impacts would not be cumulatively considerable.

5.7.5 Level of Significance Before Mitigation

With implementation of regulatory requirements, impacts 5.7-1 and 5.7-2 would be less than significant.

5.7.6 Mitigation Measures

No mitigation measures are required.

5.7.7 Level of Significance After Mitigation

Impacts would be less than significant.

5.7.8 References

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5.8 LAND USE AND PLANNING

This section of the Draft Environmental Impact Report (DEIR) evaluates the project's consistency with applicable land use plans and policies, and coastal resources in the City of Encinitas. Land use impacts can be either direct or indirect. Direct impacts result from conflicts with an applicable land use plan or policy or regulation adopted to reduce an environmental effect, division of neighborhoods or communities, or conflict with other applicable land use plans, including habitat and wildlife conservation plans. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services or increased traffic on roadways. Indirect impacts are addressed in other sections of this DEIR, where applicable. This section focuses on direct land use impacts and the proposed project's consistency with the local coastal plan and Coastal Act policies.

5.8.1 Environmental Setting

5.8.1.1 REGULATORY BACKGROUND

Federal

Land and Water Conservation Fund Act

The Land and Water Conservation Fund (LWCF) Act was established by Congress in 1964 to fulfill a commitment to safeguard natural areas, water resources and cultural heritage, and to provide recreation opportunities to all Americans. The fund invests earnings from offshore oil and gas leasing to help strengthen communities, preserve American history, and protect America's national endowment of lands and waters. The LWCF program can be divided into the "State Side" which provides grants to State and local governments, and the "Federal Side" which is used to acquire lands, waters, and interests therein necessary to achieve the natural, cultural, wildlife, and recreation management objectives of federal land management agencies.

Administered by the National Park Service in cooperation with states, Section 6(f)(3) of the LWCF Act, discourages casual discards and conversions of state and local park and recreation facilities to other uses.

> SEC. 6(f)(3) No property acquired or developed with assistance under this section shall, without the approval of the Secretary, be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.

The law is firm but flexible. It recognizes the likelihood that changes in land use or development may make some assisted areas obsolete over time, particularly in rapidly changing urban areas. At the same time, the law discourages casual "discards" of park and recreation facilities by ensuring that changes or "conversions from recreation use" will bear a cost - a cost that assures taxpayers that investments in the "national recreation estate" will not be squandered. The LWCF Act contains a clear and common sense provision to protect grant-assisted areas from conversions.

State

California Government Code

Section 53094 of the California Government Code allows a school district to render local zoning ordinance provisions inapplicable. To take this action, the school district must take a two-thirds vote, and the project must be for school facilities. The Cardiff School District has not adopted a resolution in accordance with Section 53094 of the California Government Code.

California Coastal Act of 1976

The California Coastal Act, codified in Public Resources Code (PRC), Division 20, Sections 30000 et seq., is the primary law that governs the decisions of the Coastal Commission and outlines standards for development within the coastal zone.

Local

City of Encinitas General Plan and Local Coastal Plan

The issues and policies pertaining to the City of Encinitas Local Coastal Program (LCP) have been embedded into the City's General Plan as a combined document. The General Plan/LCP aims to improve consistency between the goals and policies related to land use, circulation, resource management, public safety, and recreation, while protecting and enhancing coastal access and views.

The goals of the General Plan/LCP include goals such as managing growth and protecting community values, ensuring safe and efficient transportation that is compatible with surrounding community character, providing visual access to coastal and inland views, preserving vegetation and wildlife habitats, ensuring public safety through the consideration of future land use planning, and preserving open space areas.

City of Encinitas Municipal Code

The City of Encinitas Zoning Ordinance, Title 30, is designed to operate in conjunction with the City's land use plan to serve and enhance public safety and health, and social and economic opportunities. Title 30 of the Municipal Code establishes zones for allowable uses. Section 30.80.010 of the City of Encinitas Municipal Code states that all development within the Coastal Zone of the City will require the processing of Coastal Development Permit applications and enforcing permit requirements. Section 30.28.010 (A) specifies development standards for projects within the P/SP zone, including setback requirements of 20 feet from the front yard property line, 10 feet for side yards, 20 feet from side yards on streets, 10 feet from rear yard, 50 percent maximum lot coverage, and 30 feet maximum height limit.

5.8.1.2 EXISTING CONDITIONS

Land Use and Zoning

The City of Encinitas General Plan Land Use designation for the project site is Public/Semi-Public (Encinitas 2013a). The site is zoned P/SP (Public/Semi-Public). The P/SP land use is for activities operated by

governmental agencies, including school districts (Encinitas 2017a). The site is also in a Special Study Zone and Coastal Bluff Overlay Zone (Encinitas 2017b). According to the City of Encinitas General Plan, the Special Study zone is inclusive of all special study overlays and does not have established development standards; the City designates development standards for each overlay within a Special Study zone. Surrounding land use designations include: Residential R8 (5.01–8.00 density units [du]/acre [ac]) and Residential R11 (8.01–11.00 du/ac) to the north; transportation corridor (TC) to the west; Residential R8 to the south; and Residential R8 and R11 to the east.

Land and Water Conservation Fund Grant

In 1993, NPS approved a grant through the LWCF program to finance outdoor recreational improvements at Cardiff School. The conditions of the grant are identified in an agreement with the National Park Service that identifies both the Cardiff School District and the City of Encinitas as co-signatories. The affected boundary, required to remain as outdoor recreation area in perpetuity, is shown in Figure 3-6, *Existing 6(f)(3) Boundary Map*. As shown in the figure, the following uses are within the 6(f)(3) boundary: an underutilized baseball/multipurpose field, soccer field, dog park, playground apparatus, pollinator garden, passenger loading area, and an entire school classroom building and a pick-up/parking area that were constructed in the early 2000s. The outdoor recreational areas have been well maintained by the District and are available for public use when not used by Cardiff School, per the LWCF Act and Civic Center Act (California Education code Sections 38130 et seq.).

Surrounding Land Uses

The project site is surrounded by low-density, single- and multifamily residential land use to the north, east, and south, and a transportation corridor and Pacific Ocean to the west. See Figure 3-5, *Land Use Designation and Zoning*.

5.8.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

LU-1 Physically divide an established community.

LU-2 Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

LU-3 Conflict with any applicable habitat conservation plan or natural community conservation plan.

The Initial Study, included as Appendix 1-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold LU-1
- Threshold LU-3

Therefore, these impacts will not be addressed in the following analysis.

5.8.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed a potentially significant impact. The applicable threshold is identified in brackets after the impact statement.

Impact 5.8-1: Project implementation would not conflict with applicable plans and policies adopted for the purpose of avoiding or mitigating an environmental effect. [Threshold LU-2]

Impact Analysis:

City of Encinitas Municipal Code

According to the City of Encinitas Municipal Code Section 30.28.10, the P/SP designation allows for a floor-area-ratio (FAR) between 0.0 and 0.5. Since the proposed improvements would maintain the property as a public educational facility, and would be within the allowable FAR,[1] the project would be consistent with the City of Encinitas Municipal Code. The proposed improvements would also comply with the development standards of Section 30.28.010 (A), which includes setbacks of 20 feet from the front yard property line, 10 feet for side yards, 20 feet from side yards on streets, 10 feet from rear yard, 50 percent maximum lot coverage, and 30 feet maximum height limit.

City of Encinitas General Plan and Local Coastal Plan

The project consists of the modernization and reconstruction of an existing school on District property zoned P/SP. The proposed improvements would not change the existing land use and would continue to be consistent with the allowed uses and development standards under the P/SP zone. However, the project site is in a coastal zone planning area, as identified by the LCP adopted in the City of Encinitas General Plan (Encinitas 1995). In accordance with the City of Encinitas LCP, the District is preparing a Coastal Development Permit that will be reviewed for approval by the City of Encinitas. As part of the Coastal Development Permit process, the project has been reviewed for its consistency with the LCP.

The project's consistency review is based on the requirements of Chapter 3, Coastal Resources Planning and Management Policies, of the California Coastal Act (PRC § 30200 et seq.). Table 5.8-1, *Project Consistency with Coastal Resources Planning and Management Policies,* lists the policies in Chapter 3 of the Coastal Act that are applicable to the proposed project and explains how the proposed project conforms to them. Table 5.8-2,

[1] 45,754 square feet of school facilities/7.4-acre project site (322,730 square feet) = 0.14 FAR.

Project Consistency with City of Encinitas LCP Policies, lists the policies within each applicable General Plan element, which has incorporated the City's adopted LCP.

Table 5.8-1 Project Consistency with Coastal Resources Planning and Management Policies

Coastal Resources Planning and Management Policies	Consistency Evaluation
Article 1, General (Section 30200)	Consistent. The development standards outlined in Chapter 3 of the Coastal Act have been reviewed for all proposed improvements at Cardiff School, including those outside the coastal zone. The analysis herein complies with Section 30200.
Article 2, Public Access (Sections 30210–30214) concerns maintaining public access to recreational facilities within the Coastal Zone.	Consistent. At its closest point, the District-owned property is approximately 500-feet east of the Pacific Ocean. The property is topographically separated from the Pacific Ocean by coastal bluffs, North County Transit District Rail easement, U.S. Highway 101, and urban development. The project improvements would not hinder public access to the beach or other recreational facilities. Proposed improvements to recreational facilities include relocation of the existing play structure between the existing soccer and baseball field to the southern portion of the site. The existing baseball field would be converted into a soccer field; the site would have two soccer fields. The project does not include additional lighting for the play fields. The field area could be accessed by two areas on Montgomery Avenue, a gated fence near the proposed western driveway and via the main campus entrance, and from the existing southerly driveway on Mozart Avenue. Similar to existing conditions, the proposed multipurpose building and grass play fields would be available for public use via the Civic Center Act during the school's non-operational hours.
Article 3, Recreation (Sections 30220–30224) concerns the protection of lands that are suitable for coastal recreational activities.	Consistent. The project would improve existing recreational facilities on the site and protect for recreational use. See discussion of project impacts to recreation at the project site in Impact 5.8-2, below.
Article 4, Marine Environment (Sections 30230–30237) concerns the protection of marine resources, including those of special biological or economic significance.	Consistent. The project site is approximately 500-feet east of the Pacific Ocean and does not contain marine environment. The District and its construction contractor will comply with all applicable federal, state, and local requirements to limit effects to the marine environment from project construction. Runoff from the proposed project would comply with state discharge requirements, as described in Section 5.7, *Hydrology and Water Quality*, of this EIR.
Article 5, Land Resources (Sections 30240–30244) concerns the compatibility of development and land resources, including environmentally sensitive habitat, prime agriculture, timberlands, and subsurface cultural resources.	Consistent. The project site is surrounded by urban development and does not contain any agricultural or timberland uses. The project site is located within the plan area of the MHCP; However, the project site area is designated as Developed/Disturbed Land by the MHCP, and therefore, not designated as any kind of habitat preserve. Construction activities would result in soil disturbance that could impact subsurface cultural resources, which are further addressed in Section 5.4, *Cultural Resources*, of this EIR. The project would implement mitigation measures CUL-1 and TRI-1 to reduce potential impacts associated with cultural resources to a less than significant level.
Article 6, Development (Sections 30250–30255) concerns the project's effects to aesthetics, beach access, geologic, flood, fire hazard, air quality, and energy consumption.	Consistent. Evaluation of the project's potential environmental effects is discussed in the project's Initial Study and summarized herein. The proposed improvements would be constructed within the existing developed school site and would not exacerbate conditions associated with geologic, flood, or fire hazards; aesthetics; air quality; or energy consumption. The project would comply with all applicable federal and state

Table 5.8-1 Project Consistency with Coastal Resources Planning and Management Policies

Coastal Resources Planning and Management Policies	Consistency Evaluation
	requirements, including building code standards, to minimize risks to life and property, and comply with applicable regulations enforced by the San Diego Air Pollution Control District. Since the property is approximately 500 feet from the Pacific Ocean and is separated by coastal bluffs and urban development, project improvements would not significantly impair public views of the beach and ocean (see Section 5.1, *Aesthetics*, for further discussion of impacts to aesthetics). The project site is not located within a Scenic/Visual Corridor Overlay zone. The proposed improvements would be consistent with the existing site development as a school and would be visually compatible with the surrounding uses. One of the goals of the project is to beautify the campus, and project implementation would not have an indirect, negative effect on the viewsheds of the corridor. The project would not modify vehicular and bicycle circulation on surrounding streets that provide coastal access. The project would not inhibit pedestrian access around the perimeter of the site on Montgomery or Mozart Avenues to San Elijo Avenue, and would not impact coastal access.
Article 7, Industrial Development (Sections 30260– 30265.5) concerns coastal-dependent industrial facilities.	Not Applicable. The project is not an industrial development. Policies in Article 7 are not applicable to the project.

Source: Public Resources Code Section 30000 et seq

Table 5.8-2 Project Consistency with City of Encinitas LCP Policies

City of Encinitas, Local Coastal Program	Consistency Evaluation
Land Use. Policies 2.3, 2.7, 2.8, 2.11, 6.5, 8.2, 8.6 (Coastal Act, Sections 30231, 30240, 30250, 30251, 30253) Preserve the basic character of communities, as well as significant environmental areas and natural features; manage growth; ensure development does not degrade ground, surface, and ocean water quality, ensure an environmental analysis is prepared prior to development of large properties; and design of future development should be compatible with existing opportunities and constraints of existing development.	Consistent. The project site is fully developed. The proposed project would modernize and reconstruct facilities on the Cardiff School campus. The proposed project would be visually compatible, both in terms of height and design features, with the surrounding areas and adjacent existing development (see Section 5.1, Aesthetics, for further discussion of aesthetic impacts). The proposed project would increase the capacity of Cardiff School by one classroom or 22 seats. Although the District would increase the capacity of the school, the proposed improvements would accommodate existing operations and would not directly increase enrollment. Furthermore, students that would fill the new classroom would be from within the District and the project would not result in direct growth in the area. The proposed project may degrade water quality during project construction. However, the improvements would be constructed using best management practices, which would reduce potential impacts associated with water quality (see Section 5.7, Hydrology and Water, of this EIR). An initial study was prepared for the project; this analysis (Section 5.8, Land Use) is a component of the Environmental Impact Report which analyzes 12 environmental impact topics. The project site is fully developed and would not conflict with opportunities and constraints of the site. Therefore, the proposed project would be consistent with the policies stated in the Land Use element.
Public Safety. Policies 1.3, 1.6 (Coastal Act, Sections 30210, 30240, 30250, 30251, 30253) The City will prevent development or redevelopment in the Coastal Bluff and Hillside/Inland Overlay Zones that would result in hazards to occupants. The City shall also provide for the reduction of unnatural causes of bluff erosion.	The project site is located within the Coastal Bluff Overlay Zone. According to the City of Encinitas Municipal Code, Section 30.34.020(b), no principal structure, accessory structure, facility or improvement shall be constructed, placed or installed within 40 feet of the top edge of the coastal bluff. The project site is approximately 455 feet east of the coastal bluff and project implementation would not exacerbate erosion or pose hazards to occupants, consistent with this ordinance. Therefore, the proposed project would be consistent with the policies of the Public Safety element.
Circulation. Policies 1.12, 1.15, 3.8,3.11 (Coastal Act 30252) The City requires off-street parking be provided in accordance with parking ratios specified in the City's Zoning code. The City also requires that sidewalks and paths shall be developed around schools, parks, and other areas of pedestrian activity; and the City will strive to implement safe circulation systems for bicycle traffic.	Section 30.54.030, Schedule of Required Off-Street Parking, states that schools, elementary and intermediate require 1.5 spaces for each classroom or lecture hall plus 1 for each 3 fixed seats in school auditorium, or if there are no fixed seats, then 1 for each 100 square feet of auditorium floor area. The project would result in an increase in 1 classroom, 881 square feet of auditorium space, and 17 parking spaces. The project would result in an increased need of 11 spaces (see Section 5.10, *Transportation and Traffic*); therefore, the project exceeds required parking by 6 stalls. The proposed improvements would include expanding the existing drop-off/pick-up zone and the northern parking lot in order to improve circulation within the neighborhood. Existing sidewalk on the south side of Montgomery Avenue would be reconstructed to accommodate the driveway improvements for the parking lot on Montgomery Avenue. The project would not impact bike lanes or change circulation of the surrounding roadway network. Thus, the proposed project would be consistent with the policies of the Circulation element.
Resource Management. Policies 2.1, 2.3, 4.1, 4.3, 4.5, 4.6, 4.10, 4.11, 7.1, 7.2, 7.4, 9.4, 9.8, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 14.1, 14.2, 14.4, 14.5, 14.6 (Coastal Act, Sections 30230, 30231, 30232, 30233, 30235, 30240, 30241, 30250, 30251, 30253) The City shall mandate the reduction/elimination of harmful pollutants from entering waterways; the Encinitas Community Park is a Vista Point that will be acquired and developed, as feasible; the Cardiff	The project would not change the existing use of the site as a school and would incorporate BMPs during construction of the improvements to reduce pollutants from entering waterways during construction. Although the project site is within the viewshed of City-established vista points, the project is not within a Scenic/Visual Corridor overlay and does not propose changes to vista points or areas within the Scenic/Visual Corridor Overlay zone. Views of the project site and Pacific Ocean from vista points would be similar to existing conditions after project implementation (see Section 5.1, *Aesthetics*, for discussion of impacts to Vista Points and views).

Table 5.8-2 Project Consistency with City of Encinitas LCP Policies

City of Encinitas, Local Coastal Program	Consistency Evaluation
Beach State Park (south parking lot) is a Vista Point that will be maintained and upgraded, as necessary; the City will designate "Scenic/Visual Corridor Overlay" areas within which the character of development would be regulated to protect Vista Points; the City will maintain enhance the Scenic Highway/Visual Corridor viewshed; development in Scenic View Corridors along scenic highways and adjacent to significant/historic viewsheds and vista points are subject to additional design criteria; the City will develop a program to preserve views that also preserves appropriate vegetation and removes obstacles that impact views; paleontological, historical and archaeological resources in the planning area are documented, preserved or salvaged if threatened by new development; conduct a survey to identify historic structures and archaeological/cultural sites throughout the community and ensure their preservation; the City will encourage the development of cultural facilities to be made available to the public; encourage and adopt drought tolerant, natural landscaping, and efficient irrigation systems standards throughout the City; grading shall be subject to City review; the City shall plan for development which minimize air and water pollution, fire hazard, soil erosion, silting, flooding, slide damage, and severe hillside cutting and scarring; the City shall plan for compatible land uses within and adjacent to recreation areas, natural preserves, and agricultural areas; encourage the use of buffer zones to separate major thoroughfares from adjacent areas and protect them from pollutants of noise, exhaust, and light; minimize visual pollution by establishing design review standards; the City shall promote and require the conservation and preservation of natural resources, and encourage the planning of trees and vegetation to enhance the environment; establish and preserve wildlife corridors; grading and the removal of vegetation shall be limited to the minimum necessary; the City shall develop a comprehensive program to control sedimentation and erosion; revegetation and landscaping shall be required for all areas scraped of vegetative cover and graded; no grading or vegetation removal shall be allowed to occur during the wet season, October 1 to April 15, without all systems and devices per an approved erosion control plan in place; a comprehensive erosion control plan shall be required with final building permit and improvement plans, prior to commencement of grading and construction.	The project site is in an urbanized area of the City and is disturbed and developed with school facilities. Project implementation would require grading and excavation for new structural footings, which could impact unknown archaeological and paleontological resources onsite. Historical and cultural resources, if found, would be documented according to state laws. A historical resources assessment, archaeological, and paleontological records search were conducted to assess the sites' historical and cultural significance and are included as reference in Section 5.3, *Cultural Resources*, of this EIR. Mitigation measures CUL-1 and TRI-1 would be implemented to reduce impacts to cultural resources to a less than significant level. The multipurpose building proposed on the northwest portion of the project site would be considered a cultural facility and would be available for community use during non-school hours via the Civic Center Act. The proposed landscaped areas would be irrigated with drip tubing to distribute potable and recycled water. Landscaping would include species of drought-tolerant landscaping near the site entrance, and the remainder of the site would be planted with ornamental trees, shrubs, and grasses. Project-specific grading, erosion control, and site hydrology plans would be reviewed by the City of Encinitas Public Works Department prior to project approval (see Section 5.7, *Hydrology and Water Quality,* for discussion of soil erosion, flooding, and water pollution as a result of the project). Grading for the proposed improvements would occur during the summer, generally around July to August for construction of Phases 1 and 2. The largest thoroughfare near the project site, Pacific Coast Highway (approximately 300 feet west of the site), is buffered from the site by the North County Transit District Rail easement, San Elijo Avenue, and onsite trees planted on the western portion of the site. The project would construct new buildings within the same general area as existing conditions, and would not result in a significant increase in exposure to noise, exhaust, and light pollutants, as discussed throughout this EIR. The project site is located within a residential neighborhood and is heavily used throughout the school-year by students, staff, and visitors. The project site is not part of a native resident or migratory wildlife corridor. The proposed project would not impede movement of native wildlife. Removal of onsite trees would be conducted in accordance with the Migratory Bird Treaty Act and would reduce potential impacts to nesting birds to a less than significant level (see Section 5.3, *Biological Resources*, for discussion of impacts to nesting birds). Therefore, the proposed project would be consistent with the policies of the Resource Management element.

Table 5.8-2 Project Consistency with City of Encinitas LCP Policies

City of Encinitas, Local Coastal Program	Consistency Evaluation
Recreation. Policies 1.4, 1.9, 2.3, 2.4, 2.6, 2.7, 3.1 (Coastal Act, Sections 30212.5, 30221, 30240, 30252) Establish a balance of natural open space and improved recreational open space, and implement measures to maintain the natural environment; develop parks in conjunction with schools and encourage joint use of facilities; encourage the preservation and protection of areas for recreational activities characteristic of Encinitas such as horseback riding, surfing, skindiving, bicycling, walking, and jogging; leave appropriate areas of neighborhood and community parks in a natural state, retaining natural topography and vegetation where preservation is feasible; encourage the provision of recreational facilities distributed throughout the area; encourage the use of appropriate public lands and facilities for park and recreation purposes to the maximum extent feasible consistent with the maintenance of natural resources; the City shall support the acquisition and improvement of additional local park sites through purchase, private donations, establishment of tax benefits, etc.	The proposed improved grass play fields, play structures, and asphalt hardcourt within the Land and Water Conservation Fund 6(3)(f) boundary area would be open for community use, during the school's non-operational hours. Although the project would eliminate a baseball field, the District would install grass to be used as a second soccer field in addition to their existing soccer field. Additionally, the District would expand the area of the 6(f)(3) boundary, which must be maintained in perpetuity as usable public recreational space from 173,173 square feet (sf) to 175,220 square feet, for a total increase of 2,047 square feet. Therefore, the proposed project would be consistent with the policies of the Recreation element.

Source: City of Encinitas General Plan

The District is applying for a Coastal Development Permit (CDP) in conjunction with the preparation of this EIR. The CDP would be reviewed and considered by the City of Encinitas; its approval would verify compliance with the policies of Chapter 3 of the Coastal Act (PRC Code § 30000 et seq.) and the City of Encinitas General Plan/LCP. Therefore, with approval of the CDP, the proposed project would not conflict with the California Coastal Act or the City of Encinitas General Plan/LCP.

Conclusion

The project is consistent with the City of Encinitas Municipal Code regulations; the California Coastal Act Chapter 3, Coastal Resources Planning and Management Policies; and the City of Encinitas General Plan and LCP.

Level of Significance Before Mitigation: Based on the analysis above, Impact 5.8-1 would be less than significant.

Impact 5.8-2: Project implementation would not conflict with the Land Water Conservation Fund Grant. [Threshold LU-2]

Improvements proposed within the 6(f)(3) boundary will require approval by NPS. Changes to the existing 6(f)3 boundary may be categorized as conversions, which are defined as removing, taking, closing, or developing land within a 6(f)(3) boundary map and that conflicts with protecting the integrity of the park experience, public recreation, and outdoor viewshed for the benefit of future generations.[2]

The proposed project is driven by a desire to enhance the outdoor recreation area for the benefit of the community in addition to the need to provide for increased safety and security of students and current educational program at Cardiff School. The project proposes a new building and outdoor PE- and recreation-supporting improvements within the 6(f)(3) boundary. As with the main objective of the proposed project, which is to develop facilities that support the Cardiff School program, the intent of the proposed outdoor recreational improvements would be to support the existing school, but also the community's current public recreation needs at the site. The proposed improvements would not conflict with the integrity of the existing public recreation uses. Instead, they would enhance the existing outdoor recreational space and student and community use of it.

- The existing baseball field is underutilized and would be converted to a soccer/multi-use field.
- The playground apparatus currently bifurcates the two grass fields and makes security and supervision difficult. The playground would be relocated to the southwest corner of the site to improve safety.
- The project proposes new terraced seating west of the proposed multipurpose building for spectator viewing of events at the sports fields and the ocean.
- The project proposes a new picnic area near Montgomery Avenue, west of the parking lot, for public gathering.
- The project includes a new restroom facility with access from the fields that could be used by visitors when the school is not operating.
- The project would improve parking that would serve visitors when not used by the school.
- The project would improve drainage to further reduce offsite runoff.

Because the proposed improvements would encroach on the existing 6(f)(3) boundary and includes uses that are not related to outdoor recreation, i.e., school building, and because there are existing school buildings—constructed in the 2000s—that also encroach on the 6(f)(3) boundary, the project would require an adjustment to the existing 6(f)(3) boundary called a "conversion." Conversions require replacement of the

[2] The following changes, however, are not a conversion: a) replacement of an LWCF-funded facility with a different type of outdoor recreation facility, b) demolition or no replacement of an unusable LWCF-funded facility, or c) development of a natural and scenic outdoor open space area into a heavily built-out, outdoor recreation facility (CDPR 2016).

land removed from public outdoor recreation with new land of "equal utility" and "value," subject to NPS approval.

Although co-signatory to the LWCF agreement and owner of the land contained within the 6(f)3 boundary, the District was not the lead agency in maintaining the agreement with the Office of Grants and Local Services (OGALS), a department within California State Parks responsible for monitoring the LWCF grant agreements. Communication with OGALS was maintained by the City of Encinitas. As a result the District did not maintain institutional memory of the agreement. Since learning of the agreement in 2018 and recognizing the District and City were out of compliance with the LWCF agreement, the District has worked closely with OGALS to prepare a proposal for a "conversion" in order to regain and maintain compliance. This "conversion" proposes an adjustment to the 6(f)3 boundary.

As discussed in Section 4 and shown in Figure 4-6, *Proposed 6(f)(3) Boundary Map,* the project proposes modification of the existing 6(f)(3) boundary to eliminate new and existing buildings and remove non-recreationally supported uses from the 6(f)(3) boundary. The proposed 6(f)(3) boundary adjustment would include two turf fields, outdoor assembly seating area, picnic areas, dog park, vegetable and pollinator gardens, play apparatus area, and parking along Montgomery Avenue. All buildings within the existing boundary would be excluded from the modified 6(f)(3) boundary. The proposed project would increase the 6(f)(3) boundary by 2,047 sf, from 173,173 sf to 175,220 sf.

Proposal Description and Environmental Screening Form

The applicant is required to submit a Proposal Description (PD) and Environmental Screening Form (ESF) (Form 10-904) to provide descriptive and environmental information for National Park Service (NPS) review and decision as part of the conversion approval process. Upon completion, the ESF will indicate the resources that could be impacted by the proposal and be used by States and/or project sponsors to more accurately follow an appropriate pathway for the National Environmental Policy Act analysis: 1) a recommendation for a Categorical Exclusion (CE), 2) production of an Environmental Assessment (EA), or 3) production of an Environmental Impact Statement (EIS). The completed PD/ESF must be submitted as part of the State's LWCF proposal to NPS.

For the purposes of analyzing project consistency with the NPS PD/ESF requirements and determining the level of NEPA analysis that would be required as part of the proposed conversion, the project improvements were compared to parts A and B of the Environmental Screening Form, as shown in Table 5.8-3 and Table 5.8-4 below. Part A requires the project be analyzed for its estimated level of negative impact for each listed resource that may occur directly, indirectly, and cumulatively as a result of proposal approval. Part B contains a list of mandatory impact criteria that preclude the use of categorical exclusions.

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Table 5.8-3 Environmental Screening Form – Step 6 Part A

A. Environmental Resources	**Not Applicable** Resource Does Not Exist	**No/Negligible Impacts** Existing but No or Negligible Impacts	**Minor Impacts**	**Impacts Exceed Minor** EA//EIS Required	**More Data Needed to Determine Degree of Impact** EA/EIS Required
1. Geological resources: soils, bedrock, slopes, streambeds, landforms, etc.			See Section 5.5, *Geology and Soils*. The project site is relatively flat and project construction would comply with the geotechnical and engineering recommendations of the Geotechnical Report prepared for the proposed project Implementation of mitigation measure GEO-1 would reduce impacts associated with geological resources and soil conditions to a less than significant level.	No	No
2. Air quality		See Section 5.2, *Air Quality*. Upon implementation of regulatory requirements, no significant impacts would occur.		No	No
3. Sound (noise impacts)		See Section 5.9, *Noise*. Construction noise is exempt when conducted during allowable hours (7:00 AM to 7:00 PM); the project would be constructed during allowable hours and would not result in a significant noise impact. Best management practices (BMP) would be implemented to reduce noise impacts during construction activity.		No	No

Table 5.8-3 Environmental Screening Form – Step 6 Part A

A. Environmental Resources	**Not Applicable** Resource Does Not Exist	**No/Negligible Impacts** Existing but No or Negligible Impacts	**Minor Impacts**	**Impacts Exceed Minor** EA//EIS Required	**More Data Needed to Determine Degree of Impact** EA/EIS Required
4. Water quality/quantity		See Section 5.7, *Hydrology and Water Quality*. The project would not result in a significant impact to water quality; BMP's would be implemented during project construction and the site would not change operation from its existing school use.		No	No
5. Stream flow characteristics	The project site is fully developed and would not alter any streams.			No	No
6. Marine/estuarine		See Section 5.7, *Hydrology and Water Quality*. The project site is fully developed and does not contain marine/estuarine environment. The site is buffered from the nearest aquatic environment (Pacific Ocean) by a railroad easement and urban development. The project would not impact marine or estuarine environment.		No	No
7. Floodplains/wetlands	See Section 5.7, *Hydrology and Water Quality*. The project site is not within a floodplain and does not contain wetlands.			No	No
8. Land use/ownership patterns; property values; community livability	The project site is owned and operated by the Cardiff School District. The proposed improvements to the school would increase the property value of surrounding residences. The project would be constructed within the existing			No	No

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Table 5.8-3 Environmental Screening Form – Step 6 Part A

A. Environmental Resources	**Not Applicable** Resource Does Not Exist	**No/Negligible Impacts** Existing but No or Negligible Impacts	**Minor Impacts**	**Impacts Exceed Minor** EA//EIS Required	**More Data Needed to Determine Degree of Impact** EA/EIS Required
	District property and would not reduce the livability of the area.				
9. Circulation, transportation		See Section 5.10, *Transportation and Traffic*. The project would reconfigure the existing loading area on Montgomery Avenue. According to the traffic impact analysis prepared for the project, no significant impacts to roadway intersections or circulation would occur.		No	No
10. Plant/animal/fish species of special concern and habitat; state/federal listed or proposed for listing		See Section 5.3, *Biological Resources.* The project would require the removal of trees that could be used to support nesting birds. Implementation of mitigation measure BIO-1 would require a preconstruction nesting bird survey prior to tree removal.		No	No
11. Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.	The project site is an existing school in an urban setting. There are no unique ecosystems including biosphere reserves, World Heritage sites, old growth forests, or others on the project site.			No	No
12. Unique or important wildlife/ wildlife habitat	The project site is fully developed as a school and does not contain unique or important wildlife or wildlife habitat. Implementation of BIO-1 would reduce potential impacts to nesting birds to a less than significant level.			No	No

Table 5.8-3 Environmental Screening Form – Step 6 Part A

A. Environmental Resources	**Not Applicable** Resource Does Not Exist	**No/Negligible Impacts** Existing but No or Negligible Impacts	**Minor Impacts**	**Impacts Exceed Minor** EA//EIS Required	**More Data Needed to Determine Degree of Impact** EA/EIS Required
13. Unique or important fish/habitat	The project site is fully developed as a school and does not contain unique or important fish habitat.			No	No
14. Introduce or promote invasive species (plant or animal)	The project is the reconstruction and modernization of an existing school. Landscaping would not introduce or promote invasive species.			No	No
15. Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc. *Most conversions exceed minor impacts. See Step 3.B*		The project is proposing a 6(f)(3) conversion proposal in accordance with the LWCF Manual (see discussion of Impact 5.8-2, above). The LWCF boundary would increase by 2,047 square feet from existing conditions and existing buildings within the boundary area would be removed, thereby increasing available recreational space.		No	No
16. Accessibility for populations with disabilities	The proposed improvements would be constructed in accordance with the requirements of the ADA.			No	No
17. Overall aesthetics, special characteristics/ features	See Section 5.1, *Aesthetics*. The project would beautify the campus with new facilities and a new entrance along Montgomery Avenue.			No	No

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Table 5.8-3 Environmental Screening Form – Step 6 Part A

A. Environmental Resources	**Not Applicable** Resource Does Not Exist	**No/Negligible Impacts** Existing but No or Negligible Impacts	**Minor Impacts**	**Impacts Exceed Minor** EA//EIS Required	**More Data Needed to Determine Degree of Impact** EA/EIS Required
18. Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc. Attach SHPO/THPO determination.			See Section 5.4, *Cultural Resources*. Excavation for the proposed improvements could potentially uncover subsurface archaeological and paleontological resources. CUL-1 and TRI-1 would reduce impacts to a less than significant level.	No	No
19. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure	The project would not have a direct effect on socio-economics. The increase in one classroom would require the District to hire one new teacher, which would be a negligible increase in staff.			No	No
20. Minority and low-income populations	The project would not have an impact on minority and low-income populations.			No	No
21. Energy resources (geothermal, fossil fuels, etc.)		See Section 5.12, *Energy*. The project would result in an increase in use of gasoline for construction vehicles during construction of the project, but would not require a volume of resources such that significant impacts to energy resources, air quality, or GHG would occur.		No	No
22. Other agency or tribal land use plans or policies			See Section 5.11, *Tribal Cultural Resources*. Excavation for the proposed improvements could potentially uncover subsurface	No	No

Table 5.8-3 Environmental Screening Form – Step 6 Part A

A. Environmental Resources	Not Applicable Resource Does Not Exist	No/Negligible Impacts Existing but No or Negligible Impacts	Minor Impacts	Impacts Exceed Minor EA//EIS Required	More Data Needed to Determine Degree of Impact EA/EIS Required
			archaeological and paleontological resources. CUL-1 and TRI-1 would reduce impacts to a less than significant level.		
23. Land/structures with history of contamination/hazardous materials even if remediated	The project site has historically operated as a school and does not have a history of contamination or hazardous materials.			No	No
24. Other important environmental resources to address.	N/A			No	No

Table 5.8-4 Environmental Screening Form – Step 6 Part B

Mandatory Criterial If your LWCF proposal is approved, would it…	Yes	No	To Be Determined
1. Have significant impacts on public health or safety?		X	
2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands, wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (E.O. 11990); floodplains (E.O 11988); and other ecologically significant or critical areas.		X	
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)]?		X	
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		X	
5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		X	
6. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?		X	
7. Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office. (Attach SHPO/THPO Comments)		X	

Table 5.8-4 Environmental Screening Form – Step 6 Part B

Mandatory Criterial If your LWCF proposal is approved, would it…	Yes	No	To Be Determined
8. Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.		X	
9. Violate a federal law, or a state, local, or tribal law or requirement imposed for the protection of the environment?		X	
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898)?		X	
11. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007)?		X	
12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area, or actions that may promote the introduction, growth, or expansion of the range of		X	

As shown in Table 5.8-3 and Table 5.8-4, above, with implementation of mitigation measures (as identified in their respective sections of the DEIR), the project would result in less than significant impacts. The proposed improvements would not exceed "minor impacts" or require further studies to determine their significance, and preparation of an EIS or EA would not be required; therefore, the project would not conflict with the LWCF Act.

Conclusion

The project would be consistent with requirements of the LWCF Act and requirements for the 6(f)(3) boundary conversion.

Level of Significance Before Mitigation: Based on the analysis above, Impact 5.8-2 would be less than significant.

5.8.4 Cumulative Impacts

The development of the proposed project would take place within the footprint of the project site, the Cardiff School Campus, and thus, would not result in citywide land use and planning impacts. The proposed project would be consistent with applicable state and local plans, and after construction, the project site would continue to be used as a school facility. Therefore, the proposed project combined with related projects would not result in cumulatively considerable impacts to land use and planning.

5.8.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.8-1.

5.8.6 Mitigation Measures

No mitigation measures are required.

5.8.7 Level of Significance After Mitigation

Impacts would be less than significant.

5.8.8 References

California Department of Parks and Recreation (CDPR). 2016, November 29. Land and Water Conservation Fund (LWCF). Park Stewardship: A Guide to Permanent Operation and Maintenance.

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National Park Service (NPS). 2015. Compliance Responsibilities and Legal Protection: Post-Completion Compliance. Land and Water Conservation Fund. https://www.nps.gov/subjects/lwcf/protection.htm.

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5.9 NOISE

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Cardiff School reconstruction to result in noise impacts. This section discusses the fundamentals of sound; examines federal, state, and local noise guidelines, policies, and standards; evaluates potential noise impacts associated with the Cardiff School Modernization and Reconstruction Project; and provides mitigation to reduce vibration impacts at sensitive residential locations. This evaluation uses procedures and methodologies as specified by the City of Encinitas, the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA). The pertinent noise calculations and model outputs are in Appendix 5.9-1 of this Draft EIR.

Terminology

The following are brief definitions of terminology used in this section:

- **Sound:** A disturbance created by a vibrating object, which when transmitted by pressure waves through a medium such as air, is capable of being detected by the human ear or a microphone.
- **Noise:** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unit-less measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}).** The mean of the noise level, energy averaged over the measurement period.
- **L_{max}.** The maximum root-mean-square noise level during a measurement period.
- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period), which is half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."
- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. Note: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent/interchangeable and are treated therefore in this assessment.

- **Peak Particle Velocity (PPV)**. The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.

- **Room Mean Square (RMS)**. RMS is the square root of the average of the squared amplitude of the signal. In vibration, RMS is used to determine the average intensity of a signal.

- **RCNM**. Federal Highway Administration Roadway Construction Noise Model

5.9.1 Environmental Setting

Sound Fundamentals

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves. Sound is described in terms of amplitude or loudness, frequency or pitch, and time variations or duration.

Amplitude

The range of pressure that causes airborne vibrations (i.e., sound) is quite large and would be cumbersome to measure lineally. Therefore, noise is measured on a logarithmic scale, which has a more manageable range of numbers, and a decibel (dB) is the standard unit for measuring sound pressure amplitude.

On a logarithmic scale, an increase of 10 dB is 10 times more intense than 0 dB, 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually not discernible (even under ideal conditions). A 3 dB change in noise levels is considered the minimum change that is detectable by human hearing in outside environments. A change of 5 dB is readily discernible to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound. When describing sound and its effect on a human population, A-weighted decibels (dBA) are typically used to approximate the response of the human ear. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experiences, Table 5.9-2, *Typical Noise Levels*, illustrates typical noise levels from familiar noise sources.

Table 5.9-1 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 2013.

Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of events and their repetitiveness
- Time of day

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Noise Descriptors

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}). Alternately, the time variation can be expressed as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time; half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels measured.

Because sensitive receptors, particularly residences, are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment (or "penalty") of 5 dBA be added to the actual noise level for the evening hours from 7:00 PM to 10:00 PM and 10 dBA for the nighttime hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors are typically within 1 dB of each other, with the CNEL being only slightly more restrictive (i.e., higher).

Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single-point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 79 dBA, and at 200 feet it would be 73 dBA. This drop-off rate is appropriate for noise generated by on-site operation of stationary equipment or construction activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance over a "hard" reflective surface such as concrete or asphalt. Line source noise over "soft" vegetative ground decreases by 4.5 dB for each doubling of distance.

Psychological and Physiological Effects

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. When the noise level reaches 120 dBA, an unpleasant "tickling" sensation occurs in the human ear, even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation becomes painful. This is called the threshold of pain. Elevated noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance, or cause physiological damage such as temporary or permanent hearing loss.

In most cases, environmental noise produces effects in the first two categories (annoyance or activity interference). However, unprotected workers in some industrial work settings may experience hearing loss effects.

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium, such as the ground or a building. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers.

Amplitude

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal, and RMS is the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage, and RMS is typically more suitable for evaluating human response. The units for PPV are normally inches per second (in/sec). However, vibration is often presented and discussed in dB units in order to compress the range of numbers (abbreviated as VdB) when measuring perceptibility and human response.

The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 5.9-2, *Human Reaction to Typical Vibration Levels*, displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 5.9-2 Human Reaction to Typical Vibration Levels

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e. not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Caltrans 2013.

Noise- and Vibration-Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. These uses include residences, schools, libraries, churches, nursing homes, hospitals, and open space/recreation areas where quiet environments are necessary for enjoyment, public health, and safety. Commercial and industrial uses are generally not considered noise- and vibration-sensitive uses, unless noise and vibration would interfere with their normal operations and business activities. Project-specific sensitive land uses in the City of Encinitas are discussed in more detail in subsequent parts of this section.

5.9.1.1 REGULATORY BACKGROUND

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. The following regulations apply to the proposed project.

State

Standards for School Sites

Under Title 5, the California Department of Education (CDE) regulations require public school districts to consider noise in the site selection process. As recommended by CDE guidance, if a school district is considering a potential school site near a freeway or other source of noise, it should hire an acoustical engineer to determine the level of sound that the site is exposed to and to assist in designing the school should that site be chosen.

CALGreen

The California Green Building Standards Code (CALGreen) has requirements for insulation that affect exterior-interior noise transmission for nonresidential structures. Pursuant to CALGreen Section 5.507.4.1,

Exterior Noise Transmission, an architectural acoustics study may be required when a project site is within a 65 dBA CNEL or L_{dn} noise contour of an airport, freeway or expressway, railroad, industrial source or fixed-guideway source. Where noise contours are not readily available, if buildings are exposed to a noise level of 65 dBA L_{eq} during any hour of operation, specific wall and ceiling assembly and sound-rated windows may be necessary to reduce interior noise to acceptable levels.

Local

Although the District is not required to conform to local noise standards, they have been used to make significance determinations for potential noise and vibration impacts for the purposes of CEQA and in the absence of District-adopted thresholds of significance.

City of Encinitas Local Coastal Plan

The California Coastal Commission–approved Encinitas Local Coastal Plan, which is incorporated into the City of Encinitas General Plan, does not specifically address noise.

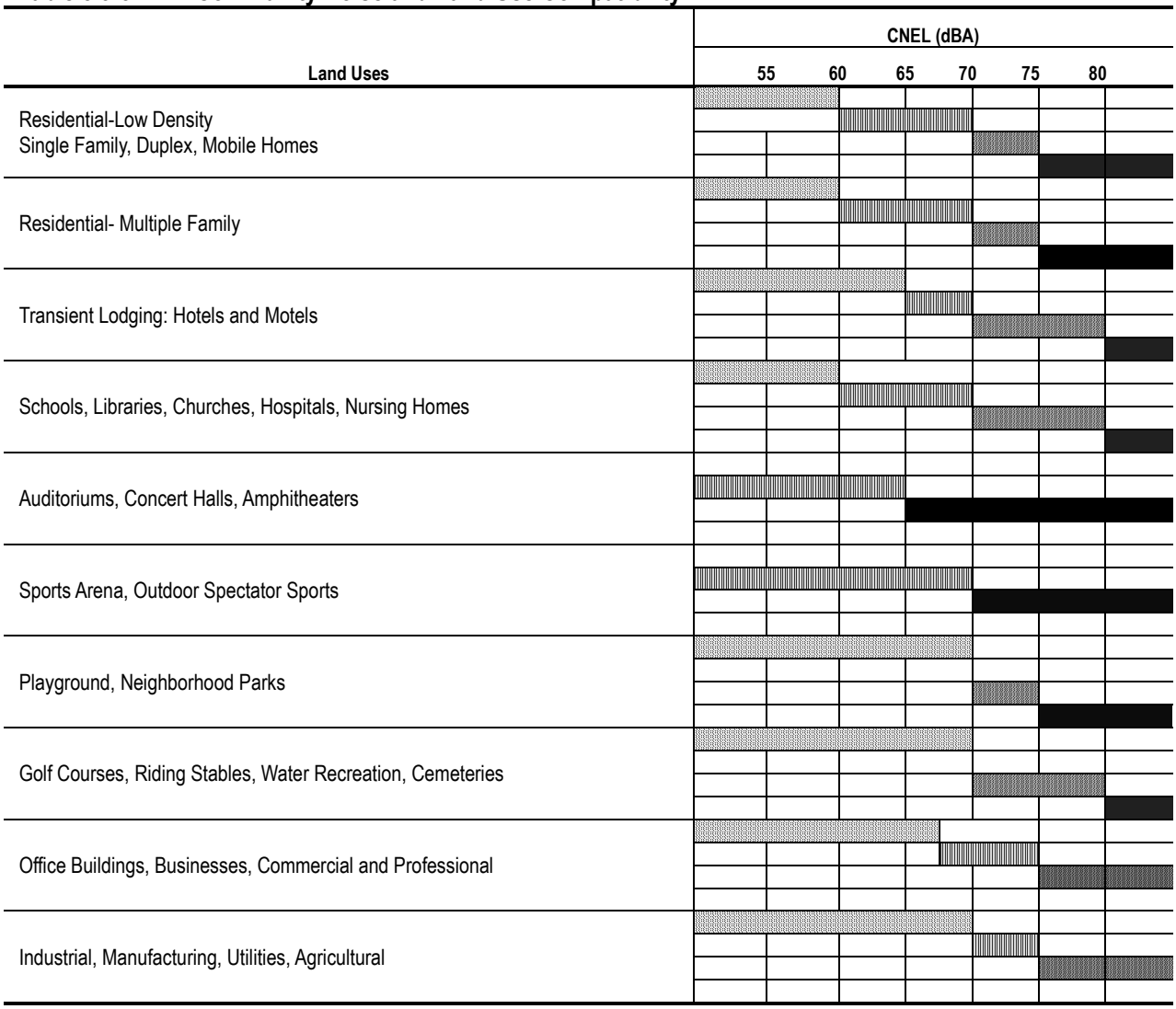
City of Encinitas General Plan

Policy 1.1 of the Encinitas General Plan Noise Element establishes noise thresholds for projects that would result in an increase in traffic. If a project would increase the traffic noise level by more than 5 dB and the resulting Ldn would be over 55 dB, or if a project increases the traffic noise levels by 3 dB or more and the resulting Ldn would exceed 60 dB in outdoor use areas in residential development, noise mitigation must be evaluated. Nontransportation projects must be evaluated case by case.

The noise element contains noise and land use compatibility guidelines, which are the same as the state guidelines promulgated by the Governor's Office of Planning and Research. These guidelines indicate maximum acceptable noise levels for various newly developed land uses. The proposed uses for this project correspond to the "Schools" land use category in the Noise and Land Use Compatibility Guidelines, which are recreated in Table 5.9-3.

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Table 5.9-3 Community Noise and Land Use Compatibility



Explanatory Notes

Normally Acceptable:
With no special noise reduction requirements assuming standard construction.

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design.

Normally Unacceptable:
New construction is discouraged. If new construction does not proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable:
New construction or development should generally not be undertaken.

Source: California Office of Noise Control 1976; Encinitas 1994.

It is important to note that with the December 17, 2015, California Supreme Court decision regarding the assessment of the environment's impacts on proposed projects, it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (No. S 213478) (*CBIA vs. BAAQMD*). As a result, although the noise from existing sources is taken into account as part of the baseline, the direct effects of exterior noise from nearby noise sources relative to land use compatibility of the project is no longer a required topic for impact evaluation under CEQA. Nonetheless, for the complete understanding of the public, this noise analysis will discuss noise compatibility as it applies to the development of the proposed project. No determination of significance is required.

City of Encinitas Municipal Code

The City's noise regulations are implemented and enforced through the Encinitas Municipal Code, Chapter 9.32, which establishes citywide standards to regulate noise. Chapter 30.40 provides day and nighttime exterior noise level limits by receiving land use type, as shown in Table 5.9-4.

Table 5.9-4 Noise Limits

Adjacent Zone	One Hour Average Sound Level	
	7 AM to 10 PM	10 PM to 7 AM
RR, RR-1, RR-2, R-3, R-5, R-8	50 dB	45 dB
R-11, RS-11, R-15, R-20, R-25, MHP	55 dB	50 dB
OP, LLC, LC, GC, L-VSC, VSC	60 dB	55 dB
L-I, BP	60 dB	55 dB

Source: Encinitas Municipal Code, Section 30.40.010(A).

Section 30.40.010(4) also identifies that it is unlawful to create noise or allow the creation of noise that exceeds:

- The noise standard for cumulative period of more than 30 minutes in any hour (L_{50}).
- The noise standard plus five dB for a cumulative period of more than 15 minutes in any hour (L_{25}).
- The noise standard plus up to 15 dB for a cumulative period of more than one minute in any hour (L_{2}).
- The noise standard plus 20 dB for any period of time (Lmax).

Exemptions

Construction

According to Section 9.32.410, construction is exempted between the hours of 7:00 PM to 7:00 AM Monday through Saturday. Construction is prohibited on Sundays, except for personal residential construction, provided such operation of construction equipment is not carried on for profit or livelihood, and does not exceed 75 dBA for more than eight hours during any 24-hour period at a residential property line.

Sporting, Entertainment, and Public Events

Section 9.32.417 identifies school-related sporting, entertainment, and public events as being exempt from noise regulations under specific circumstances. Exempted noise includes reasonable sounds from authorized school bands and school athletic and entertainment events.

Vibration

Section 30.40.010(b) provides allowable vibration limits, as summarized in Table 5.9-5, *City of Encinitas Vibration Standards*. The City of Encinitas vibration threshold reads as follows in that "every use shall be so operated that the ground vibration generated at any time and measured at any point along the lot line of the lot on which the use is located shall not be perceptible and shall not exceed the following." Steady-state vibration is continuous vibration, such as from heavy machinery or rail, whereas, impact vibration is from impulsive sources such as rock blasting at quarry sites. While the City does not specify whether the vibration criteria is in terms of RMS or PPV, it is assumed to be RMS since this is the appropriate descriptor used to measure perceptibility. The City standards apply to operation of the proposed project and not construction period activity.

Table 5.9-5 City of Encinitas Vibration Standards

Adjacent Zone	Vibration (inches per second)	
	Impact	Steady-State
Residential	0.006	0.003
Commercial	0.010	0.005
Light Industrial	0.040	0.020
Public/Semi-Public	0.010	0.005

5.9.1.2 EXISTING CONDITIONS

Ambient Noise Environment

The noise environment around the project site is that of a residential neighborhood with proximity to the nearby rail line. The noise environment is generally controlled by local roadway and rail traffic noise. Secondary noise sources include landscaping, maintenance activities, and air conditioning systems at the surrounding residential uses. According to Figure 4.10-1 of the City of Encinitas 2013-2021 Housing Element, the project site lies within the 65 dBA CNEL noise contour, meaning the ambient noise environment is between 65 and 69 dBA CNEL. The project would be required to comply with CALGreen requirements for exterior-to-interior noise transmission for nonresidential structures.

Sensitive Receptors

The project site is surrounded by residential uses to the north, east, and south. The nearest sensitive receptors would be residences to the north, approximately 50 feet from the project site boundary to the residence property line, residences to the east (50 feet), and residences to the south (55 feet).

5.9.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

N-1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

N-2 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

N-3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

N-4 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

N-5 For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

N-6 For a project within the vicinity of a private airstrip, expose people residing or working the project area to excessive noise levels.

The Initial Study, included as Appendix 1-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold N-5
- Threshold N-6

These impacts will not be addressed in the following analysis.

5.9.3 Environmental Impacts

5.9.3.1 METHODOLOGY

Construction Noise

To estimate project-related construction noise impacts, the Federal Highway Administration Roadway Construction Noise Model (RCNM) program and calculation methodology was used. Estimated construction noise levels were computed at nearby sensitive receptors and analyzed in terms of loudness, overall construction duration, and the time of day that construction would occur.

Traffic Noise

To forecast project-related traffic noise effects, peak hour segment trip volumes were calculated from the turning volumes in the traffic impact analysis (Appendix 5.9-1 to this EIR). The projected traffic noise level increase was estimated by comparing the Existing Plus Project traffic condition to the existing conditions for each study segment. Since the existing noise environment in the project vicinity exceeds 60 dBA Ldn, a traffic noise increase of 3 dBA Ldn or more would be considered potentially significant.

5.9.3.2 IMPACT ANALYSIS

Impact 5.9-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project. [Threshold N-4]

Impact Analysis: Construction of the proposed project would generate temporary noise. Project construction would require demolition of five 1-story buildings, a portion of a sixth building, and eight relocatable classrooms; site preparation and utility trenching; construction of ten 1-story wood-framed buildings and a two-classroom addition to an existing building; and the modernization of two existing buildings on the Cardiff School campus.

Aggregated and adjusted construction-phase noise levels were used to estimate predicted community noise levels at nearby receptor areas using a conservative 6 dB per distance doubling attenuation factor. The proposed project is anticipated to begin in June 2019 and be operational by the fourth quarter of 2020. Staging would occur at the baseball field for construction of the parking lot, multipurpose building, and brick building. Access would be mainly provided on Montgomery Avenue via the two proposed driveway entrances during construction of the improvements to the new parking lot and multipurpose building. Staging for the remaining new building construction would be on the school's blacktop area with access from Mozart Avenue near San Elijo Avenue. Construction activities include building and asphalt demolition, site preparation and rough grading, utility trenching, fine grading, building construction, architectural coating, asphalt paving, finishing, and landscaping.

Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment. Existing uses surrounding the project site would be exposed to construction noise.

Construction Vehicles

The transport of workers and equipment to the construction site would incrementally increase noise levels along site access roadways. The primary access routes for delivery and construction vehicles to the project site would be from the proposed driveway entrances on Montgomery Avenue and the existing driveway on Mozart Avenue, near San Elijo Avenue. Staging would occur at the baseball field for construction of the parking lot and multipurpose building; staging for construction of the remaining improvements would be on the blacktop area.

Project-related construction worker vehicles, haul trucks, and vendor trucks could pass by existing residential and commercial uses along these streets. The demolition and grading phases would generate the most trips due to soil haul. Note that a doubling of traffic flows (i.e., 10,000 vehicles per day to 20,000 per day) would be needed to create a 3 dB increase.

Since the construction-related trips would not double the flow rates on these streets, these project trips would not notably change the daily traffic flow conditions. In addition, truck trips would be intermittent, spread throughout the workday, and primarily during nonpeak traffic periods. While individual construction vehicle pass-bys may create momentary noise levels of up to approximately 85 dBA (L_{max}) at 50 feet from the vehicle, these occurrences—although potentially audible for a few seconds—would generally be infrequent. Due to the infrequency of events, their relatively short-lived durations, and their less than 3 dBA Ldn increase over existing traffic noise conditions, construction vehicle movement noise would be less than significant. No mitigation is needed with respect to construction mobile source noise.

Construction Equipment

Noise generated during construction is based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Each stage of construction involves different kinds of equipment and has distinct noise characteristics.

The noise produced at each construction stage is estimated by using the FHWA RCNM program and methodology. The anticipated construction equipment list was provided by the construction contractor.

Construction Noise Levels

The majority of land uses surrounding the project site consist of residential uses. Project construction would involve demolition of existing buildings; site preparation and grading of existing land; and construction of a new classroom/administration building and a multipurpose building. Noise levels from project-related construction activities were calculated from the simultaneous use of all applicable construction equipment at spatially averaged distances (i.e., from the center of the construction area) to the closest receptors. Although construction may occur across the entire site, the area around the center of the project site best represents the potential average construction-related noise levels to the various sensitive receptors.

The nearest sensitive uses includes homes to the north (approximately 140 feet from the center of the site during Phase 1A improvements and 300 feet for Phases 1B and 2), east (300 feet during all phases), and south (440 feet for Phase 1A and 350 feet for Phases 1B and 2). Using information provided by the District and methodologies and inputs employed in the air quality assessment, the expected construction equipment mix was estimated and categorized by construction activity. The whole of the proposed project would be completed in two phases (each with two subphases), which would begin in summer 2019 and end in the fourth quarter of 2020. The noisiest portions, however (i.e., demolition and grading phases), are expected to take a total of three months. The associated, aggregate sound levels—grouped by construction activity—are summarized in Table 5.9-6.

Table 5.9-6 Project-Related Construction Noise Levels

Construction Activity Phase	Sound Level at Sensitive Receptors, dBA L_{eq}		
	Houses to the North	Houses to the East	Houses to the South
Phase 1A	**(140 feet)**	**(300 feet)**	**(440 feet)**
Demolition and Demo Haul	78	71	68
Site Preparation and Grading	78	72	68
Trenching and Concrete	76	69	66
Paving	72	65	61
Phase 1B	**(300 feet)**	**(300 feet)**	**(350 feet)**
Site Preparation and Grading	73	73	72
Building Construction and Paving	71	71	70
Phase 2A and 2B[1]	**(300 feet)**	**(300 feet)**	**(350 feet)**
Demolition and Demo Haul	72	72	71
Site Preparation, Grading, and Utility Trenching	73	73	71
Building Construction and Paving	71	71	70

Notes: Calculations performed with the FHWA's RCNM software and included in the Appendix 5.9-1.
[1] Phases 2A and 2B were combined because there are overlapping construction activities in Phase 2.

As shown in Table 5.9-6, Phase 1A demolition and demolition haul, site preparation and grading, and trenching and concrete activities would generate the highest noise levels—approximately 78 dBA L_{eq}. However, all phases of construction would occur during the City of Encinitas allowable construction hours.

Conclusion

Construction-related trips would not double the flow rates on the surrounding streets and would not notably change the daily traffic flow conditions. Construction activities would increase noise levels in the vicinity of the project site. Due to their proximity, the nearest residential receptors adjacent to the site to the north would experience the highest construction-related noise levels—up to approximately 78 dBA L_{eq} during construction of the Phase 1A improvements. All construction would occur during the City's allowable hours of construction, the construction duration would be temporary (i.e., three months for the loudest phase), and noise levels above typical ambient conditions would be sporadic and intermittent. However, construction-generated noise levels would be notably higher than ambient noise levels at the nearest receptors. Although the project would not result in a significant impact from construction noise, best management practices are included to further reduce daytime noise produced by project construction.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.9-1 would be less than significant.

Impact 5.9-2 Project implementation would not result in long-term operation-related noise that would exceed local standards. [Thresholds N-1 and N-3]

Impact Analysis: To determine if a project would cause a substantial noise increase from project-related traffic, consideration must be given to the magnitude of the increase and the affected receptors. In general for

community noise, a noise level increase of 3 dB Ldn is considered barely perceptible, and an increase of 5 dB Ldn is considered clearly noticeable. An increase of 3 dB Ldn is often used as a threshold for a substantial increase for noise environments above 60 Ldn. The increase in traffic noise as a result of project implementation was calculated using the peak-hour trip volumes at intersections (and the resulting roadway segment volumes) identified in the traffic impact analysis (IBI Group 2018)(Appendix 5.10-1 of this DEIR). As discussed in Section 5.9.1.2, the project site is within the 65 dBA CNEL noise, meaning the ambient noise environment is between 65 and 69 dBA CNEL and a 3 dB increase is used as the significance threshold. Per the project's traffic study, the project would generate 117 additional average daily trips, with 38 trips (23 inbound and 15 outbound) during the AM peak hour and 10 trips (4 inbound and 6 outbound) during the PM peak hour (IBI Group 2018).

To calculate the incremental increase in noise as a result of the project trip increases, roadway segment volumes from the project traffic study for Existing and Existing Plus Project AM peak hour (from 7:00 AM to 9:00 AM) were input into a data spreadsheet using the formula 10*LOG(Existing Plus Project/Existing) (full calculations are in Appendix 5.9-1). AM peak hour was used instead of PM peak hour because intersection volumes were generally higher, as shown in Appendix 5.9-1. Projected trip volumes and their respective increases in vehicle noise generation were calculated for Existing, Existing Plus Project, Future 2021, and Future 2021 Plus Project conditions in Table 5.9-7, *Project-Related Increase in Traffic Noise*, below.

Table 5.9-7 Project-Related Increase in Traffic Noise

	Peak Hour Traffic Volumes				Noise Level Increase (dB)		
Roadway Segment	Existing	Existing + Project	Future 2021	Future 2021 + Project	Project Increase	Cumulative Increase due to Project	Cumulative Increase with Project
San Elijo Avenue – Montgomery Avenue to Liszt Avenue	914	919	971	976	0.01	0.07	0.29
San Elijo Avenue – Montgomery Avenue to Mozart Avenue	900	900	957	957	0.00	0.06	0.27
Montgomery Avenue – San Elijo Avenue to Westminster Drive	108	113	116	121	0.04	0.12	0.49
San Elijo Avenue – Mozart Avenue to Montgomery Avenue	910	910	968	968	0.00	0.06	0.27
San Elijo Avenue – Mozart Avenue to Birmingham Drive	933	949	993	1,009	0.02	0.08	0.34
Mozart Avenue – San Elijo Avenue to Montgomery Avenue	117	133	127	143	**0.13**	**0.33**	**0.87**
San Elijo Avenue – Birmingham Drive to Mozart Avenue	979	995	1,041	1,057	0.02	0.08	0.33
San Elijo Avenue – Birmingham Drive to Liverpool Drive	1,040	1,048	1,106	1,114	0.01	0.07	0.30
Birmingham Drive – San Elijo Avenue to Rossini Drive	565	573	601	609	0.01	0.08	0.33
Montgomery Avenue – Mozart Avenue to San Elijo Avenue	199	211	214	226	0.06	0.14	0.55
Montgomery Avenue – Mozart Avenue to Rossini Drive	337	354	360	377	0.05	0.12	0.49
Mozart Avenue – Montgomery Avenue to San	196	201	210	215	0.02	0.10	0.40

Table 5.9-7 Project-Related Increase in Traffic Noise

Roadway Segment	Peak Hour Traffic Volumes				Noise Level Increase (dB)		
	Existing	Existing + Project	Future 2021	Future 2021 + Project	Project Increase	Cumulative Increase due to Project	Cumulative Increase with Project
Elijo Avenue							
Montgomery Avenue – Birmingham Drive to Mozart Avenue	177	193	191	207	0.08	0.17	0.68
Montgomery Avenue – Birmingham Drive to Chesterfield Drive	66	66	73	73	0.00	0.11	0.44
Birmingham Drive – Montgomery Avenue to Oxford Avenue	961	977	1,023	1,039	0.02	0.08	0.34
Birmingham Drive – Montgomery Avenue to San Elijo Avenue	786	786	837	837	0.00	0.06	0.27

[1] Segments and values in **bold** would have the greatest increase in noise level.

As shown in Table 5.9-7, the street segment with the greatest noise increase would be the segment of Mozart Avenue from San Elijo Avenue to Montgomery Avenue under project, cumulative, and cumulative with project conditions; this segment would experience predicted traffic noise increases of 0.13, 0.33, and 0.87 dB for each respective scenario. These noise increases would be inaudible and below the 3 dB threshold of significance.

Stationary-Source Noise

Stationary noise sources would include vehicles idling during student drop-off and pick-up times, school buzzers or bells, landscaping equipment, outdoor activities, and heating, ventilation, and air conditioning (HVAC) units. The project would add new sources of stationary HVAC noise at the new buildings, but these would be comparable or quieter than existing, similar sources at the site and would not result in notable changes to the community noise environment in the project vicinity. For idling vehicles, school buzzers/bells, and landscaping activities, there would be a negligible increase due to the increased capacity at the school of 22 students.

Recreational Noise

The project would result in reconfiguration of outdoor space and recreational facilities. The proposed field area, hardcourt area, and play structures would be reconfigured in generally the same orientation on the western part of the site. The existing baseball field would be replaced with a grass playfield and would be lined for soccer. Outdoor activities would be similar to existing conditions and would generate similar noise as the existing site, such as student and staff voices. In addition, the project does not propose changes in operation of the school bell schedule, and recess and lunch periods would remain the same.

The project would increase the area of the multipurpose building and construct an outdoor assembly area and new courtyard areas, which could result in an increase in the noise environment at these onsite locations. Although these activities may incrementally increase noise levels for activities conducted at the multipurpose building, assembly seating area, or courtyards, noise from these activities would be exempt pursuant to the

Encinitas Municipal Code Section 9.32.417, which identifies school-related sporting and entertainment events as being exempt. Therefore, no significant permanent stationary source noise increases would occur.

Conclusion

Project-generated increases in traffic would result in a noise level increase of less than 1 dB and would not exceed the increase threshold of 3 dB. Additionally, project operation would not include new stationary-source noise emitters or an increase in recreational activity noise that would result in a significant impact.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.9-2 would be less than significant.

Impact 5.9-3: The project would not create substantial groundborne vibration and groundborne noise. [Threshold N-2]

Impact Analysis:

Vibration during Operation

Vibration is typically noticed nearby when objects in a building generate noise, such as rattling windows or picture frames. It is typically not perceptible outdoors, and therefore impacts are based on the distance to the nearest building (FTA 2006). The effects of vibration vary depending on soil type, ground strata, and receptor building construction. They range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight damage at the highest levels.

The City of Encinitas threshold for vibration at residential zones is 0.003 in/sec for steady-state or continuous sources (non-impacting and non-impulsive sources). Operation of the project would not generate substantial levels of vibration because there are no notable sources of vibrational energy or vibration-generating equipment associated with operation of the project; the project would continue to operate as a school.

Vibration during Construction

As discussed above, The City standards apply to operation of the proposed project and not construction period activity. Construction activities generate varying degrees of ground vibration, depending on the construction procedures, construction equipment used, and proximity to vibration-sensitive uses, that spread through the ground and diminish in amplitude with distance. Table 5.9-8, *Typical Vibration Levels Produced by Common Construction Equipment Items,* shows the PPV of some common construction equipment and haul trucks (loaded trucks).

Table 5.9-8 Typical Vibration Levels Produced by Common Construction Equipment Items

Equipment	Peak Particle Velocity in inches per second		
	at 25 ft.	at 50 ft.	at 100 ft.
Vibratory Roller	0.210	0.074	0.026
Hoe Ram	0.089	0.031	0.011
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.0004

Source: FTA 2006.

Typically, demolition, grading, and construction activities include equipment such as dozers and delivery/dump trucks. Generally, these types of equipment do not generate substantial levels of vibration beyond 25 feet. Minor grading and excavation would be necessary to install utilities and structural components for some of the proposed structures.

Vibration-Induced Structural/Architectural Damage

The threshold at which there is a risk of architectural damage to normal houses with plastered walls and ceilings is 0.2 in/sec (FTA 2006). Building damage is not typically a concern for normal construction, with the occasional exception of blasting and pile driving (FTA 2006). No blasting, pile driving, or hard rock ripping/crushing activities are anticipated during project construction. Small construction equipment generates vibration levels less than 0.1 PPV in/sec at 25 feet away.

The nearest off-site residential structures are homes approximately 55 feet to the north from the boundary of construction activities, 85 feet to the east and south.[1] As shown in Table 5.9-8, operation of construction equipment would not exceed the 0.200 in/sec PPV threshold for damage for residences approximately 55 feet from the project site boundary. Therefore, the residences within 55 feet of the boundary of construction activities would not experience vibration levels in excess of the damage threshold, and architectural-damage vibration impacts would be less than significant.

Construction will occur within approximately 30 feet of the little brick building. The building was constructed by setting bricks in horizontal and vertical alignments, by slightly projecting or recessing the bricks, and by using full, half, header, and stretcher bricks to achieve the cohesive design that could support and protect sensitive communication equipment. Due to the density of the brick building material and its original use as a repeater hut, the building was designed such that it is unlikely to be affected by the vibrations from the heavy equipment shown in Table 5.9-8.

Conclusion

Operational activities would not create substantial groundborne vibration or groundborne noise that could cause architectural damage or exceed the City's vibration annoyance threshold. Construction-related vibration

[1] Vibration-induced architectural damage analysis typically uses worst-case distances (instead of spatially averaged distances).

would not result in a significant impact related to constructed-related architectural damage or vibration annoyance.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.9-3 would be less than significant.

5.9.4 Cumulative Impacts

5.9.4.1 MOBILE-SOURCE NOISE

Project-related cumulative noise impacts would occur if the project's contribution to cumulative noise increases results in a substantial noise increase in comparison to existing conditions (3 dBA or more with existing CNEL greater than 60 dBA in the vicinity of any noise-sensitive receptors). Project-induced traffic noise increases on local roadways in the vicinity of the project site were previously discussed under Impact 5.9-2.

The project's traffic analyses analyzed several scenarios, including (IBI 2018):

- Existing
- Existing Plus Project
- Future 2021
- Future 2021 Plus Project

The cumulative plus project scenario (Future 2021 Plus Project) traffic noise increases would be less than 1 dBA on affected roadway segments. A significant cumulative traffic noise increase would be identified if project traffic would contribute 1 dBA CNEL or more to a potentially significant cumulative impact. Therefore, project-related traffic noise increases would not contribute to a potentially significant cumulative impact.

5.9.4.2 CONSTRUCTION NOISE

Like stationary-source noise, construction noise and vibration impacts are confined to a localized area of impact. Noise from construction activities would be temporary and would be less than significant. Best management practices would be implemented to reduce impacts from intermittent increases in construction noise above ambient levels. Cumulative impacts would only occur if other projects were being constructed in the vicinity of the project at the same time as the project. There are no other planned and approved projects in the vicinity of the proposed school project that might add simultaneous construction activity noise to the project's construction noise. Therefore, project construction noise impacts would not be cumulatively considerable.

5.9.5 Level of Significance Before Mitigation

Impacts 5.9-1, 5.9-2, and 5.9-3 would be less than significant.

5.9.6 Mitigation Measures

No mitigation measures would be required. The project would be implemented using best management practices identified in Chapter 4, *Project Description*, of the DEIR.

5.9.7 Level of Significance After Mitigation

Impacts would be less than significant.

5.9.8 References

California Department of Transportation (Caltrans). 2013, September. *Transportation- and Construction-Induced Vibration Guidance Manual*. Prepared by ICF International.

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IBI Group. 2018, July 25. Cardiff Elementary School Modernization Traffic Impact Study.

5.10 TRANSPORTATION AND TRAFFIC

This section of the draft environmental impact report (DEIR) evaluates the potential for implementation of the Cardiff School Modernization and Reconstruction Project to result in transportation and traffic impacts in the City of Encinitas. The analysis in this section is based in part on the following technical report(s):

- *Cardiff Elementary School Modernization, Traffic Impact Study,* IBI Group, July 25, 2018 (included as Appendix 5.10-1)
- *Cardiff Elementary School Modernization – Parking Analysis*, IBI Group, July 25, 2018 (included as Appendix 5.10-2)

Complete copies of these studies are in the technical appendices to this Draft EIR.

5.10.1 Environmental Setting

5.10.1.1 REGULATORY BACKGROUND

Federal

Federal rules and regulations govern many facets of the City of Encinitas traffic and circulation system including: transportation planning and programming; funding; design, construction and operation of facilities; and others. The City complies with all applicable rules and regulations of the Federal Highway Administration, the Urban Mass Transit Administration, the Federal Railroad Administration, the Federal Aviation Administration, and other federal agencies. In addition, the City coordinates with federal resource agencies where needed in the environmental clearance process for transportation facilities.

State

California Manual of Uniform Traffic Control Devices, Part 7: Traffic Control for School Areas

The California Manual on Uniform Traffic Control Devices, issued by Caltrans, provides uniform standards and specifications for all official traffic control devices in California, pursuant to the provisions of California Vehicle Code, Section 21400. Part 7 of the manual sets standards for traffic control for school areas, including standards for signs, road markings, and crossing supervision.

California Vehicle Code

California law requires the city or county to implement traffic control devices requested by a school district if they are meant to mitigate safety risks for students traveling to and from school, as described below.

California Vehicle Code, Division 11, Chapter 2, Article 1, Section 21372, Guidelines for Traffic Control Devices near Schools

> The Department of Transportation and local authorities shall, with respect to highways under their respective jurisdictions, establish and promulgate warrants to be used as

guidelines for the placement of traffic control devices near schools for the purpose of protecting students going to and from school. Such devices may include flashing signals. Such warrants shall be based upon, but need not be limited to, the following items: pedestrian volumes, vehicle volumes, width of the roadway, physical terrain, speed of vehicle traffic, horizontal and vertical alignment of the roadway, the distance to existing traffic control devices, proximity to the school, and the degree of urban or rural environment of the area.[1]

California Vehicle Code, Division 11, Chapter 2, Article 1, Section 21373, School Board Request for Traffic Control Devices

The governing board of any school district may request the appropriate city, county, city and county, or state agency to install traffic control devices in accordance with the warrants established pursuant to Section 21372. Within 90 days thereafter, the city, county, city and county, or state agency involved shall undertake an engineering and traffic survey to determine whether the requested crossing protection meets the warrants established pursuant to Section 21372. The city, county, city and county, or state agency involved may require the requesting school district to pay an amount not to exceed 50 percent of the cost of the survey. If it is determined that such requested protection is warranted, it shall be installed by the city, county, city and county, or state agency involved.[2]

California Vehicle Code, Division 11, Chapter 2, Article 1, Section 21368, Crosswalks near Schools

Whenever a marked pedestrian crosswalk has been established in a roadway contiguous to a school building or the grounds, it shall be painted or marked in yellow. Other established marked pedestrian crosswalks may be painted or marked in yellow if either (a) the nearest point of the crosswalk is not more than 600 feet from a school building or the grounds thereof, or (b) the nearest point of the crosswalk is not more than 2,800 feet from a school building or the grounds thereof, there are no intervening crosswalks other than those contiguous to the school grounds, and it appears that the facts and circumstances require special painting or marking of the crosswalks for the protection and safety of persons attending the school. There shall be painted or marked in yellow on each side of the street in the lane or lanes leading to all yellow marked crosswalks the following words, "SLOW-SCHOOL XING," except that such words shall not be painted or marked in any lane leading to a crosswalk at an intersection controlled by stop signs, traffic signals, or yield right-of-way signs. A crosswalk shall not be painted or marked yellow at any location other than as required or permitted in this section.

[1] Amended Ch. 545, Stats. 1974. Effective January 1, 1975.
[2] Amended Ch. 1061, Stats. 1969. Effective November 10, 1969.

Section 21400, Official Traffic Control Devices

This code authorizes Caltrans to adopt rules and regulations for uniform standards and specifications for all official traffic control devices, including, but not limited to, stop signs, yield right-of-way signs, speed restriction signs, railroad warning approach signs, street name signs, and lines and markings on the roadway.

Senate Bill 743

The legislature found that with the adoption of Senate Bill (SB) 375, the state had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). Additionally, AB 1358 (Complete Streets Act) requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users.

On September 27, 2013, SB 743 was signed into law. SB 743 started a process that could fundamentally change transportation impact analysis as part of CEQA compliance. These changes will include the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). As part of the new CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code Section 21099[b][1]). On January 20, 2016, the Governor's Office of Planning and Research released revisions to its proposed CEQA guidelines for the implementation of SB 743. Once the guidelines are prepared and certified, "automobile delay, as described solely by level of service of similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment" (Public Resources Code Section 21099[b][2]). Since the Office of Planning and Research has not yet amended the CEQA Guidelines to implement this change, for the purposes of this EIR, automobile delay is treated as a significant impact, and the City of Encinitas currently uses the established LOS criteria.

California Coastal Act

The California Coastal Act of 1976 dictates certain policies related to shoreline resources, including transportation issues related to state shorelines. The act states how development must maintain access to coastal resources and maintain or distribute parking supply or adequate public transportation to minimize adverse impacts.

Regional

SANDAG Forward: The Regional Plan

The San Diego Association of Governments (SANDAG) is the transportation management area (TMA) for the San Diego region. In conformance with the Federal Highway Administration, the TMA must address congestion management through a variety of multimodal metropolitan-wide strategies that strengthen regional connectivity and encourage integrated management of new and existing transportation facilities (Code of Federal Regulations, Title 23, section 450.320). SANDAG prepared "San Diego Forward: The

Regional Plan," the region's long-range transportation plan and Sustainable Communities Strategy. San Diego Forward incorporates the following federal congestion management process: performance monitoring and measurement of the regional transportation system, land use impact analysis, multimodal alternatives, recommendations for congestion management strategies, and integration with the Regional Transportation Improvement Program process.

SANDAG Congestion Management Program

California Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). The requirements within the State CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the state CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by the Federal Highway Administration requirements to ensure the region's continued compliance with the federal congestion management process.

Local

City of Encinitas General Plan

The Circulation Element of the General Plan establishes the level of service, scale and location of streets, highways, and roadways as they relate to land use compatibility and how they provide access throughout the planning area.

City of Encinitas Municipal Code

The Municipal Code includes regulations and standards that govern traffic, parking and loading, encroachments on the public right-of-way, and development in the City of Encinitas. Any modifications to the roadway network, which includes driveways, curbs, and sidewalks, would be subject to approval by the City of Encinitas, and any construction work within the right-of-way of any public roadway would require the issuance of an encroachment permit by the City of Encinitas.

Local Coastal Program

The City of Encinitas Local Coastal Program contains policies that address local parking conditions, public roadways, pedestrian and bicycle facilities, and beach access road improvements.

5.10.1.2 METHODOLOGY

The traffic analysis follows the requirements and guidelines set forth by the San Diego Traffic Engineers Council (SANTEC)/Institution of Transportation Engineers (ITE) Guidelines for Traffic Impact Studies in the San Diego region. The traffic analysis conducted includes assessment of traffic conditions for five existing intersections and two roadway segments in the vicinity of the project site. Analysis scenarios and horizon years are summarized for the following scenarios:

- Existing Year (2018) No Project
- Existing Year (2018) With Project
- Opening Year (2021) No Project
- Opening Year (2021) With Project

Study Area Intersections and Roadway Segments

Based on the project trip generation and distribution, the following five study area intersections were selected for analysis:

- San Elijo Avenue and Montgomery Avenue
- San Elijo Avenue and Mozart Avenue
- San Elijo Avenue and Birmingham Drive
- Montgomery Avenue and Mozart Avenue
- Montgomery Avenue and Birmingham Drive

Additionally, the following two roadway segments were included:

- Montgomery Avenue from San Elijo Avenue to Mozart Avenue
- Mozart Avenue from San Elijo Avenue to Montgomery Avenue

Level of Service

The peak hour level of service analysis was conducted by calculating the traffic volume and each direction for a specified link segment. Link volumes were derived from the peak hour turning movement volumes between the two adjacent study intersections. A volume-to-capacity (V/C) ratio was taken and a respective letter grade assigned at each location using the range of V/C values shown in Table 5.10-1, *Intersection Level of Service*.

Table 5.10-1 Intersection Level of Service

LOS	Interpretation	Volume to Capacity Ratio
A	**Free Flow**: No stables are fully loaded, and few are close to loaded. No approach phase is fully used by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0.00–0.60
B	**Stable Flow**: Represents stable operation. An occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel somewhat restricted within platoons of vehicles.	0.61–0.70
C	**Stable Flow**: Stable operation continues. Full signal cycle loading is still intermittent, but more frequent. Occasional drivers may have to wait through more than one red signal intersection, and backups may develop behind turning vehicles.	0.71–0.80

Table 5.10-1 Intersection Level of Service

LOS	Interpretation	Volume to Capacity Ratio
D	**Approaching Unstable Flow**: Encompasses a zone of increasing restriction approaching instability. Delays to approaching vehicles may be substantial during short peaks with the peak period, but enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.	0.81–0.90
E	**Unstable Flow**: Represents the most vehicles that any particular intersection approach can accommodate. At capacity (V/C = 1.00), there may be long queues of vehicles waiting upstream of the intersection and delays may be great (up to several signal cycles).	0.90–1.00
F	**Forced Flow**: Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration; hence, volumes carried are not predictable. V/C values are highly variable because full utilization of the approach may be prevented by outside conditions.	>1.00

Source: Transportation Research Circular No. 212, Interim Materials on Highway Capacity, Transportation Research Board 1960.

Intersection Level of Service

The intersection level of service analysis was conducted in accordance with the City of Encinitas guidelines, and the traffic analysis follows the requirements and guidelines set forth by the SANTEC/ITE for Traffic Impact Studies in the San Diego region, and are summarized in Table 5.10-2, *SANTEC/ITE Guidelines: Measure of Significant Project Traffic Impacts*.

Table 5.10-2 SANTEC/ITE Guidelines: Measure of Significant Project Traffic Impacts

	Allowable Change due to Project Impact					
Level of Service with Project[1]	Freeways V/C	Speed (mph)	Roadway Segments V/C	Speed (mph)	Intersections Delay (sec.)	Ramp Metering Delay (min.)
D, E, and F (or ramp meter delays above 15 min.)	0.01	1	0.02	1	2	2

Notes: If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigation (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see [1], above), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating significant impact changes.

[1] All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for roadway segments may be estimated on an ADT/24-hour traffic volume basis (using Table 5.10-2 or a similar LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

Signalized Intersections

The Highway Capacity Manual (HCM) 2010 methodology defines LOS as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of factors such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate

LOS conditions vary based on the type of street and whether the traffic flow is considered interrupted or uninterrupted. The six qualitative categories of LOS and corresponding average delay that have been defined are presented below in Table 5.10-3, *Level of Service for Signalized Intersections*.

Table 5.10-3 Level of Service for Signalized Intersections

LOS	Description	Delay (in seconds)
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.	0.0 – 10.0
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.	10.1 – 20.0
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.	20.1 – 35.0
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.	35.1 – 55.0
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.	55.1 – 80.0
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.	80.1 or more

Source: Highway Capacity Manual 2010.

Unsignalized Intersections

The two types of unsignalized intersections include side-street stop controlled and all-way stop controlled. The level of service for a side-street stop-controlled intersection is determined by the computed or measured control delay at each minor-street movement. LOS F would occur when the volume-to-capacity ratio exceeds 1.0, regardless of the control delay. The delay range for unsignalized intersections is different from those of signalized intersections primarily due to driver expectation. The expectation is that signalized intersections are designed to carry higher volumes of traffic and therefore higher levels of delay are acceptable. The HCM 2010 methodology estimates the delay based on the worse approach at unsignalized intersections. Table 5.10-4, *Level of Service for Unsignalized Intersections*, includes the LOS ranges for both unsignalized intersection types.

Table 5.10-4 Level of Service for Unsignalized Intersections

LOS	Description	Delay (in seconds)
A	Little or no delays.	0.0 – 10.0
B	Short traffic delays.	10.1 – 15.0
C	Average traffic delays.	15.1 – 25.0
D	Long traffic delays.	25.1 – 35.0
E	Very long traffic delays.	35.1 – 50.0
F	Extreme traffic delays with intersection capacity exceeded.	50.1 or more

Source: Highway Capacity Manual 2010.

5.10.1.3 EXISTING CONDITIONS

Roadway Network

The study area encompasses arterial roadways and signalized intersections within the project area. Descriptions of the existing roadway network and intersection level of service analysis results for the Existing Year (2018) No Project scenario are provided, below:

San Elijo Avenue

San Elijo Avenue is a two-lane undivided roadway that runs north and south within the boundaries of the study area. The posted speed limit is 35 miles per hour (mph). Land uses adjacent to the corridor consist of businesses, residences, and an educational facility (Cardiff School). There are no dedicated bicycle lanes on either side of the corridor, and on-street parking is permitted intermittently.

Montgomery Avenue

Montgomery Avenue is a two-lane undivided roadway that runs north and south within the study location. The posted speed limit is 15 mph in the vicinity of the project site. The land uses surrounding the corridor are primarily residential uses. There are no exclusive bicycle lanes, and on-street parking is permitted along both sides of the corridor.

Mozart Avenue

Mozart Avenue is a two-lane undivided roadway that runs east and west within the study perimeters. The posted speed limit is 15 mph in the vicinity of the project site. The land uses surrounding the roadway are primarily residential uses. Bicycle lanes are not present, and on-street parking is permitted along both sides of the roadway.

Birmingham Drive

Birmingham Drive is a two-lane undivided roadway that runs east and west within the study boundary. The posted speed limit is 30 mph. The land uses adjacent to the roadway include businesses and residences. Bicycle lanes are not present on either side of the roadway, and on-street parking is not permitted.

Traffic Count Data

The existing intersection turning movement counts were taken on Thursday, June 8, 2017, and Tuesday April 17, 2018, at the five study intersections during the morning peak period (7:00 AM to 9:00 AM) and the afternoon peak period (4:00 PM to 6:00 PM). The AM and PM peak analyses are based on the hour of highest total intersection volume during the morning and afternoon periods. Average daily traffic volumes were also conducted on Tuesday, April 17, 2018, at the 24 roadway segments. Daily segment and peak hour intersection count data sheets are included in the traffic report (Appendix 5.10-1 of the DEIR).

An ambient growth rate of 2 percent per year was used for both sets of data, establishing the base year 2018 conditions and projecting the 2021 opening year conditions. This growth rate was identified and used to account for cumulative conditions such as local and regional projects.

Site Access and Internal Circulation

A field review of the project site was conducted on April 19th during the morning drop-off and pick-up period to evaluate existing traffic patterns at and near the project site, including access points and parent/guardian drop-off and pick-up patterns. The observation period coincided with the school bell schedule and began an hour before and after classes began in the morning, and an hour before and after classes ended in the afternoon.

Drop-off and Pick-up Points

The campus has three drop-off and pick-up points (loading area); one is on Montgomery Avenue and two are on Mozart Avenue. The Montgomery Avenue loading area is at the southern portion of the parking lot and is accessed by an entrance-only driveway on Montgomery Avenue. Mozart Avenue has a curbside loading area immediately south of the Montgomery Avenue intersection and a second loading driveway to the south (north of the San Elijo Avenue intersection).

Operation

The morning drop-off period occurs approximately 30 minutes before students are allowed onto the playground and ends approximately 10 minutes after classes begin. During the drop-off period, most vehicles park on the street, allowing parents/guardians to walk their children onto campus. This results in high usage of the crosswalks along Montgomery and Mozart Avenues. A crossing guard is present for drop-off and pick-up periods to assist with the crosswalk at the Mozart/Montgomery intersection.

The Montgomery Avenue drop-off/pick-up location operates relatively smoothly—minimal vehicle queueing was observed spilling onto Montgomery Avenue—due to the parking lot allowing vehicles to queue off-street.

The Mozart Avenue drop-off/pick up locations observed slightly higher usage, with vehicle queueing at the Mozart Avenue and Montgomery Avenue intersection. During the field review vehicles traveling west along Montgomery Avenue to access the Mozart Avenue drop-off/pick-up locations resulted in a queuing condition that went back as far as the Stafford Avenue/Rossini Drive and Montgomery Avenue intersection. The Mozart Avenue drop-off/pick-up driveway further south also had minimal queuing because the driveway allowed for vehicles to queue off-street; few vehicles were observed turning left into the driveway, resulting in minimal queue lengths along Mozart Avenue that did not spill onto San Elijo Avenue.

The circulation behavior and patterns for the afternoon pick-up period were observed to be the same as the morning pick-up. However, in the afternoon all students are being picked up at the same time, resulting in higher volumes of vehicles. Queue lengths from loading locations are extended longer, and the parking lot and driveway queues along Mozart Avenue and Montgomery Avenue spill onto the roadways. Although volumes are higher than the morning and congestion builds, the congested pick-up period lasts approximately 15 to 20 minutes, approximately 5 to 10 minutes before classes are released and approximately 10 minutes after. Approximate queue lengths for the afternoon student pick-up period and existing/proposed stacking lengths are summarized in Tables 5.10-5, *Existing Queue Lengths*, and 5.10-6, *Existing and Proposed Loading Stack Lengths*.

Table 5.10-5 Existing Queue Lengths

Period	Location	Observed Vehicle Queue Length
Morning Drop-Off	Montgomery Parking Lot	< 2 cars
	Mozart Curbside	3–4 cars
	Mozart Drop-Off and Pick-Up	< 2 cars
Afternoon Pick-Up	Montgomery Parking Lot	3–4 cars
	Mozart Curbside	4–5 cars
	Mozart Drop-Off and Pick-Up	3–4 cars

Note: Queue lengths were not measured and are approximated based on observations.

Table 5.10-6 Existing and Proposed Loading Stack Lengths

Location	Existing Stack Length	Proposed Stacking Length
Montgomery Parking Lot	6 cars	12 cars
Mozart Curbside	5 cars	5 cars
Mozart Drop-Off and Pick-Up	5 cars	5 cars

Notes: Stacking length is estimated assuming a standard vehicle length of 22 feet per car.

Pedestrian Safety and Speed Survey

Due to the nature of loading operations and the presence of children at the project site, pedestrian safety and circulation were considered as part of the traffic impact analysis. As part of the traffic study, a speed survey

was conducted for a typical weekday (Tuesday, April 17, 2018) to understand roadway conditions. The speed survey was conducted for the two adjacent roadways, Montgomery Avenue between San Elijo Avenue and Mozart Avenue, and Mozart Avenue between San Elijo Avenue and Montgomery Avenue. On average, the daily bi-direction speed was observed to be 16 mph along Montgomery Avenue and 14 mph along Mozart Avenue. Speeds for the morning pick-up and afternoon drop-off are within the posted 15 miles per hour for school zones, indicating vehicle speeds are acceptable along these roadway segments (complete data sheets are included in Appendix 5.10-1). Field observations conducted for the traffic impact analysis for pick-up and drop-off periods did not reveal pedestrian safety concerns.

Intersection Level of Service

The peak hour turning movement volumes in the traffic impact study were used to assess the intersection performance. Intersection level of service was determined using the analysis methodology identified in Section 5.10.1.2. Table 5.10-7, *Existing Year (2018) No Project Intersection LOS,* summarizes the existing levels of service at the study area intersections. Existing study intersection geometries are shown in Figure 5.10-1, *Existing Year (2018) No Project.* Additionally, Figures 5.10-2, *Existing Year (2018) No Project – AM Volumes,* and Figure 5.10-3, *Existing Year (2018) No Project – PM Volumes*, identify AM and PM peak hour volumes at selected intersections.

Table 5.10-7 Existing Year (2018) No Project Intersection LOS

	Intersection	Intersection Control	AM		PM	
			V/C or Delay (S)	LOS	V/C or Delay (S)	LOS
1	San Elijo Ave. and Montgomery Ave.	TWSC	14.9	B	12.4	B
2	San Elijo Ave. and Mozart Ave.	TWSC	17.7	C	13.5	B
3	San Elijo Ave. and Birmingham Dr.	Signalized	17.5	B	18.1	B
4	Montgomery Ave. and Mozart Ave.	TWSC	9.6	A	8.9	A
5	Montgomery Ave. and Birmingham Dr.	TWSC	15.4	C	15.1	C

5.10.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project could:

T-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

T-2 Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

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T-3 Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

T-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

T-5 Result in inadequate emergency access.

T-6 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

T-7 Result in inadequate parking capacity.

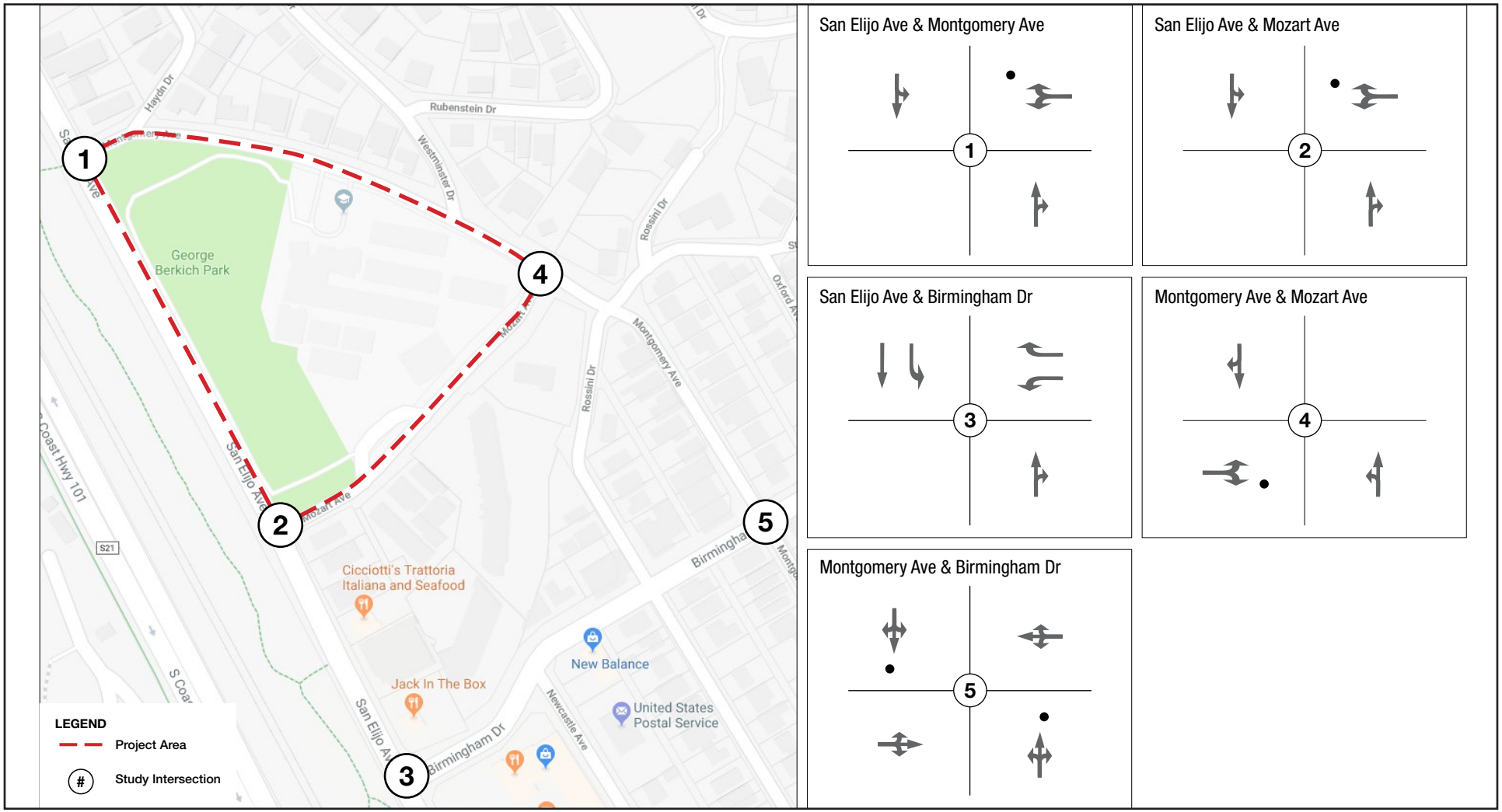
The Initial Study, included as Appendix 1-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold T-3
- Threshold T-5
- Threshold T-6

These impacts will not be addressed in the following analysis.

Figure 5.10-1 - Existing Year (2018) No Project

5.10 Transportation and Traffic



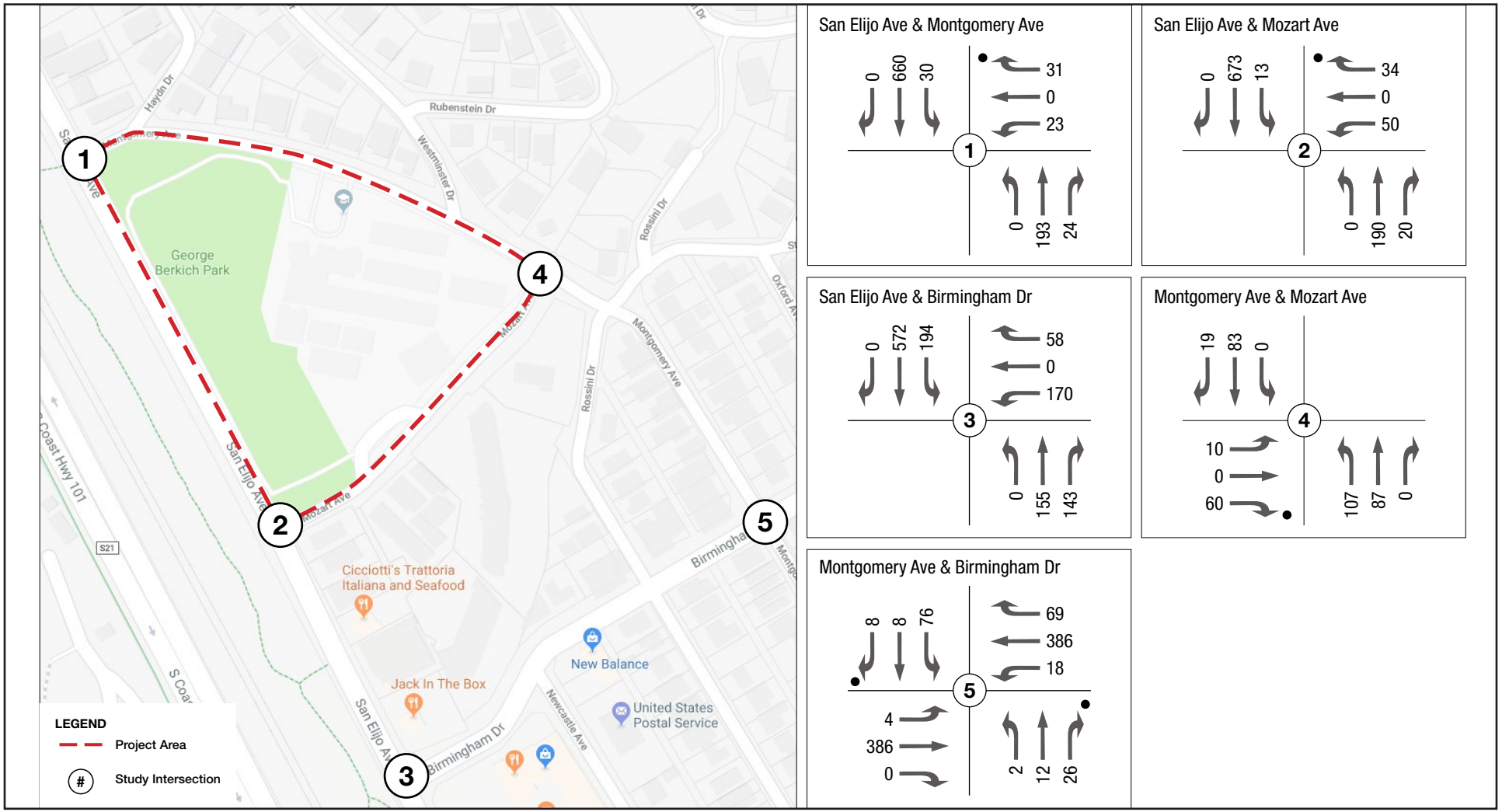
Source: IBI Group, 2018

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Figure 5.10-2 - Existing Year (2018) No Project - AM Volumes

5.10 Transportation and Traffic



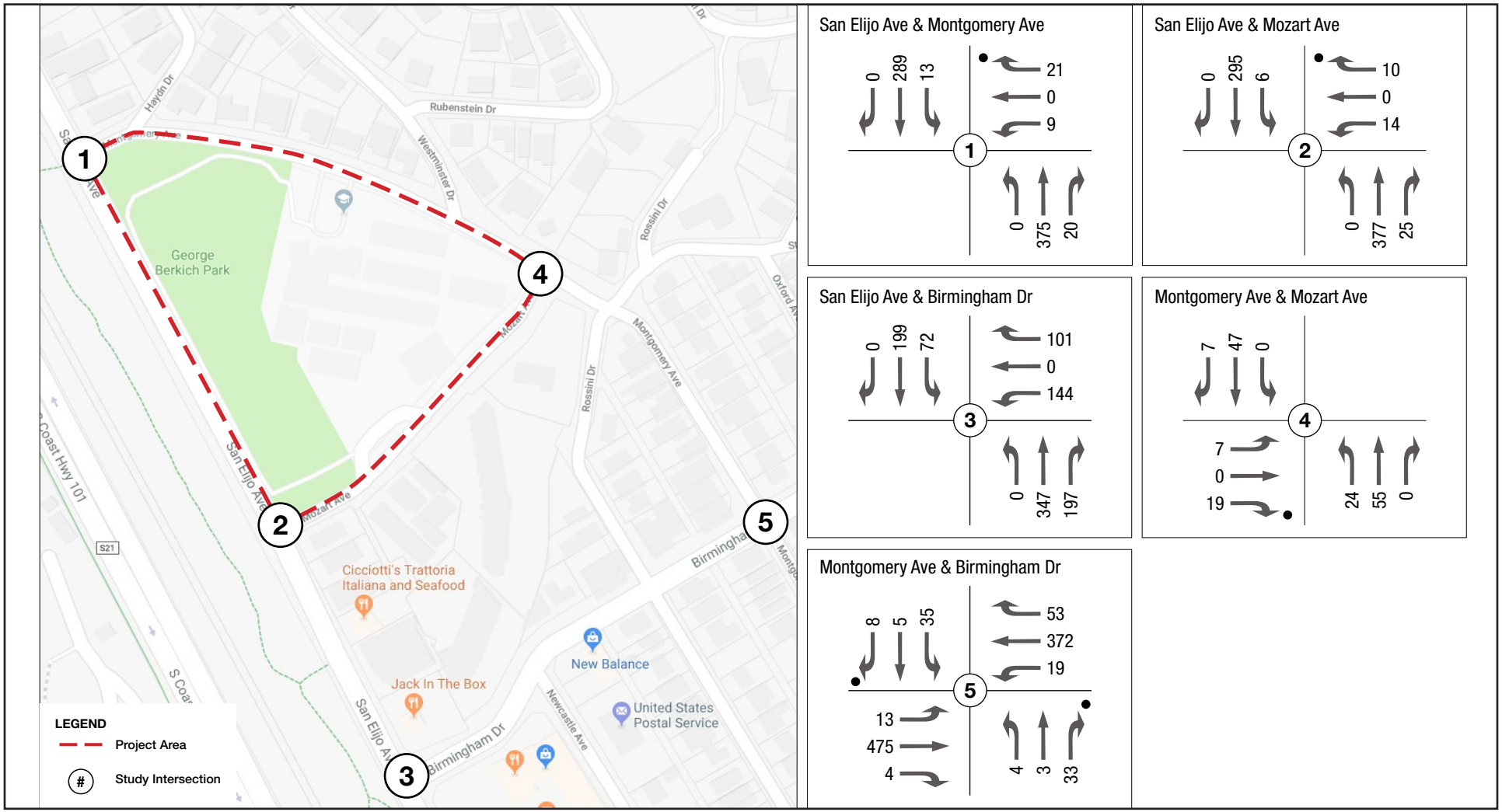
Source: IBI Group, 2018

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Figure 5.10-3 - Existing Year (2018) No Project - PM Volumes

5.10 Transportation and Traffic



Source: IBI Group, 2018

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5.10.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.10-1: Project-related trip generation and student relocation during construction phasing would not impact levels of service for the existing area roadway system. [Threshold T-1]

Impact Analysis:

Construction Phasing

Construction of the proposed improvements would occur in two phases, each including two subphases (see Chapter 4, *Project Description*). Phase 1A and 1B would begin in June 2019 and end in August 2019. Phase 1A includes construction of the new parking lot on Montgomery Avenue, and Phase 1B includes construction of new classrooms. During construction of the Phase 1A and 1B improvements, kindergarteners and first graders would remain at Cardiff School, and the second and third graders would be relocated to Ada Harris Elementary School, approximately 0.5 mile east of the site. The second graders would be brought back to Cardiff School in August 2020, and third graders in August 2021. Phases 2A and 2B include construction of new classrooms and facilities, which would not impact circulation on roadways in the vicinity of the project site. The interim housing of students at Ada Harris would be temporary, and all second- and third-grade students would return to Cardiff Elementary School after project implementation.

According to the traffic impact analysis, based on the 2017-2018 enrollment at Cardiff Elementary, 147 second- and third-grade students would be moved to Ada Harris School during the 2019-2020 school year, and 50 third-grade students during the 2020-2021 school year.

Ada Harris School

Ada Harris School has two separate drop-off and pick-up locations at the southern and northern sides of the campus. The second and third graders are designated to be picked up at the southern parking lot. There is approximately 800 feet of off-street drop-off curb space on Windsor Road nearest to campus—from Kings Cross Drive to Woodlake Drive—that is allowed to be utilized. According to the traffic impact analysis, anticipated trip generation of the 147 transfer students (235 daily trips, 75 AM trips, and 21 PM trips) from Cardiff School would not meet the requirements for a traffic study (i.e., 500 total daily trips and more than 50 peak hour trips). Although 75 trips are anticipated to occur during the AM peak hour, once distributed between inbound and outbound trips through the five study area intersections, no single intersection would carry more than 50 peak hour trips, the threshold for a traffic study.

Existing and Future Traffic Conditions

LOS C is acceptable at all study roadway segments and intersections. Based on the City of Encinitas General Plan Circulation Element, a project would have a significant impact under CEQA when the addition of

project traffic causes an intersection that operates at an acceptable LOS (C or better) under existing traffic conditions to fall to an unacceptable LOS (D or worse).

The following condition scenarios are evaluated for the proposed project:

- Opening Year (2021) No Project
- Existing (2018) With Project
- Opening Year (2021) With Project

An ambient growth rate of 2 percent per year was used for all sets of data from the base year 2018 conditions to project the 2021 opening year no project conditions.

Intersection Level of Service

The projected peak hour turning movement volumes in the traffic impact study were used to assess the intersection performance and are identified in Figure 5.10-4, *Opening Year (2021) No Project Volumes – AM Peak Hour*, and Figure 5.10-5, *Opening Year (2021) No Project Volumes – PM Peak Hour*. A summary of the AM and PM peak-hour intersection LOS analysis results for the Opening Year (2021) No Project are presented in Table 5.10-8.

Table 5.10-8 Opening Year (2021) No Project Intersection LOS

Intersection		Intersection Control	AM		PM	
			V/C or Delay (S)	LOS	V/C or Delay (S)	LOS
1	San Elijo Ave. and Montgomery Ave.	TWSC	15.9	C	12.8	B
2	San Elijo Ave. and Mozart Ave.	TWSC	19.4	C	14.1	B
3	San Elijo Ave. and Birmingham Dr.	Signalized	19.9	B	21.0	C
4	Montgomery Ave. and Mozart Ave.	TWSC	9.7	A	9.0	A
5	Montgomery Ave. and Birmingham Dr.	TWSC	16.2	C	16.2	C

As shown in Table 5.10-8, during year 2021 without the project, LOS values would be reduced from B to C for San Elijo Avenue and Montgomery Avenue in the AM peak hour, and for San Elijo Avenue and Birmingham Drive in the PM peak hour.

Existing Year (2018) With Project and Opening Year (2021) With Project

Project Trip Generation

The trip generation calculations for implementation of the Cardiff Elementary School Modernization and Reconstruction Project was estimated using the rates published in the SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego region. The proposed project would not eliminate the school's existing programs, and it is not the intent of the District to expand the enrollment; however, the project would result in an increase in one classroom or 22 seats. To better estimate enrollment that fluctuates from year to year, a 10-year enrollment history average was used for the school's existing baseline. Additionally, the trip generation analysis assumed an average classroom size of 22 students per classroom. Over the past 10 years, the average

enrollment at Cardiff Elementary School was 367 students. The project proposed a buildout total of 20 classrooms with a maximum design capacity of 440 students. For the purposes of a conservative analysis, the trip generation assessment assumed an enrollment increase of 73 students.[3]

Table 5.10-9, *Project Trip Generation Rates*, shows the projected AM and PM peak hour trip generation based on the increase of 73 students.

Table 5.10-9 Project Trip Generation Rates

Source	Land Use	Units (Students)	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Rates									
SANDAG	Elementary School	Students	1.6	0.31	0.2	0.51	0.06	0.08	0.14
Trips									
SANDAG	Elementary School	73	117	23	15	38	4	6	10

Source: SANDAG (No So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region 2002.

As shown in Table 5.10-9, the increase in students as a result of the project would generate 117 daily trips, with 38 trips (23 inbound and 15 outbound) during the AM peak hour and 10 trips (4 inbound and 6 outbound) during the PM peak hour.

When the project trip generation is established, the need for a traffic study can be determined. Determination for the need of a traffic study was based on the SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, March 2000 (Whitson 2000). The SANTEC guidelines state:

> A TIS [Traffic Impact Study] should be prepared for all projects which generate traffic greater than 1,000 total average daily trips (ADT) or 100 peak-hour trips. If a proposed project is not in conformance with the land use and/or transportation element of the general or community plan, use threshold rates of 500 ADT or 50 peak-hour trips.

Since the project traffic is calculated to be less than the 500 ADT threshold, and the peak hours are calculated to be less than the 50 peak hour trips, the project would not require a TIS based on the SANTEC/ITE guidelines. However, for the purpose of conducting a focused traffic and circulation analysis and because there would be interim student housing at Ada Harris, a traffic impact analysis was prepared to assess traffic conditions for five existing intersections and two roadway segments providing access to the site.

Trip Distribution

According to the existing pick-up and drop-off locations, the project site would operate with one driveway on Montgomery and two on Mozart Avenue for student loading and unloading. Figure 5.10-6, *Estimated Trip Distribution*, illustrates the local trip distribution; Figure 5.10-7, *Project Turning Movement Volumes – AM Peak Hour*, shows the AM peak hour turning movement volumes; and Figure 5.10-8, *Project Turning Movement Volumes – PM Peak Hour*, presents the PM peak hour turning movement volumes.

[3] 440 seats (proposed enrollment capacity) – 367 students (10-year average enrollment) = 73 seats increase.

Intersection Level of Service

The projected peak hour turning movement volumes conducted in the traffic impact study were used to assess the intersection performance, and are identified in Figure 5.10-9, *Existing Year (2018) With Project Volumes – AM Peak Hour*, and Figure 5.10-10, *Existing Year (2018) With Project Volumes – PM Peak Hour*. A summary of the AM and PM peak hour intersection LOS analysis results for the Existing Year (2018) With Project are presented in Table 5.10-10.

Table 5.10-10 Existing Year (2018) With Project Intersection LOS

Intersection		Intersection Control	AM		PM	
			V/C or Delay (S)	LOS	V/C or Delay (S)	LOS
1	San Elijo Ave. and Montgomery Ave.	TWSC	14.8	B	12.4	B
2	San Elijo Ave. and Mozart Ave.	TWSC	18.5	C	13.8	B
3	San Elijo Ave. and Birmingham Dr.	Signalized	17.7	B	18.2	B
4	Montgomery Ave. and Mozart Ave.	TWSC	9.7	A	8.9	A
5	Montgomery Ave. and Birmingham Dr.	TWSC	15.4	C	15.1	C

As shown in Table 5.10-10, the project's increase in trips would not change the LOS of roadway intersections for AM or PM peak hour volumes compared to Existing (2018) No Project conditions. Therefore, no impact to roadway intersections would occur under Existing Year (2018) With Project conditions.

Opening Year (2021) with Project

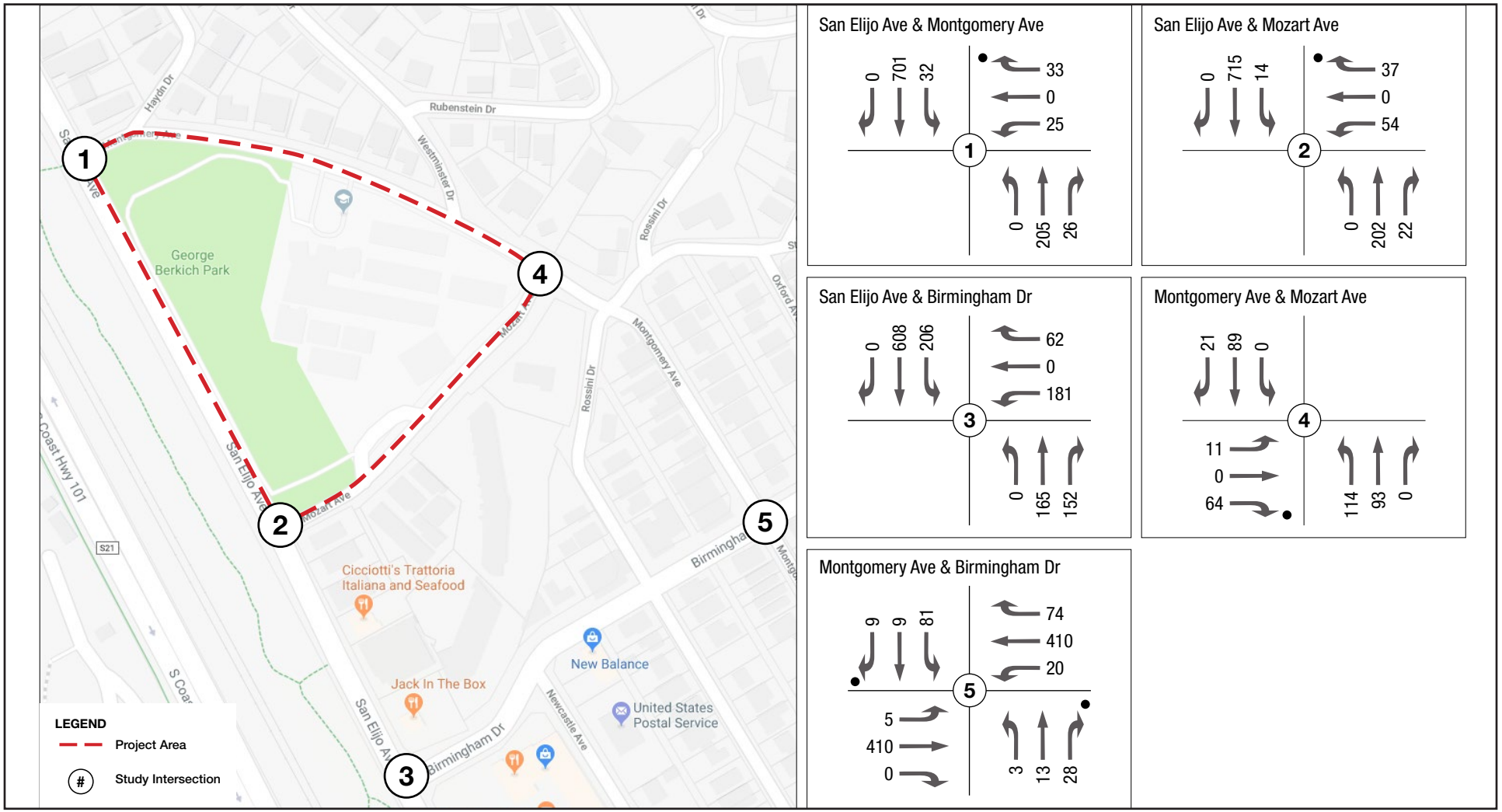
The projected peak hour turning movement volumes in the traffic impact study were used to assess the intersection performance and are identified in Figure 5.10-11, *Opening Year (2021) With Project Volumes – AM Peak Hour*, and Figure 5.10-12, *Opening Year (2021) With Project Volumes – PM Peak Hour*. A summary of the AM and PM peak hour intersection LOS analysis results for the Opening Year (2021) are presented in Table 5.10-11.

Table 5.10-11 Opening Year (2021) With Project Intersection LOS

Intersection		Intersection Control	AM		PM	
			V/C or Delay (S)	LOS	V/C or Delay (S)	LOS
1	San Elijo Ave. and Montgomery Ave.	TWSC	15.9	C	12.8	B
2	San Elijo Ave. and Mozart Ave.	TWSC	20.5	C	14.4	B
3	San Elijo Ave. and Birmingham Dr.	Signalized	20.1	C	21.1	C
4	Montgomery Ave. and Mozart Ave.	TWSC	9.8	A	9.0	A
5	Montgomery Ave. and Birmingham Dr.	TWSC	16.4	C	16.2	C

Figure 5.10-4 - Opening Year (2021) No Project Volumes - AM Peak Hour

5.10 Transportation and Traffic

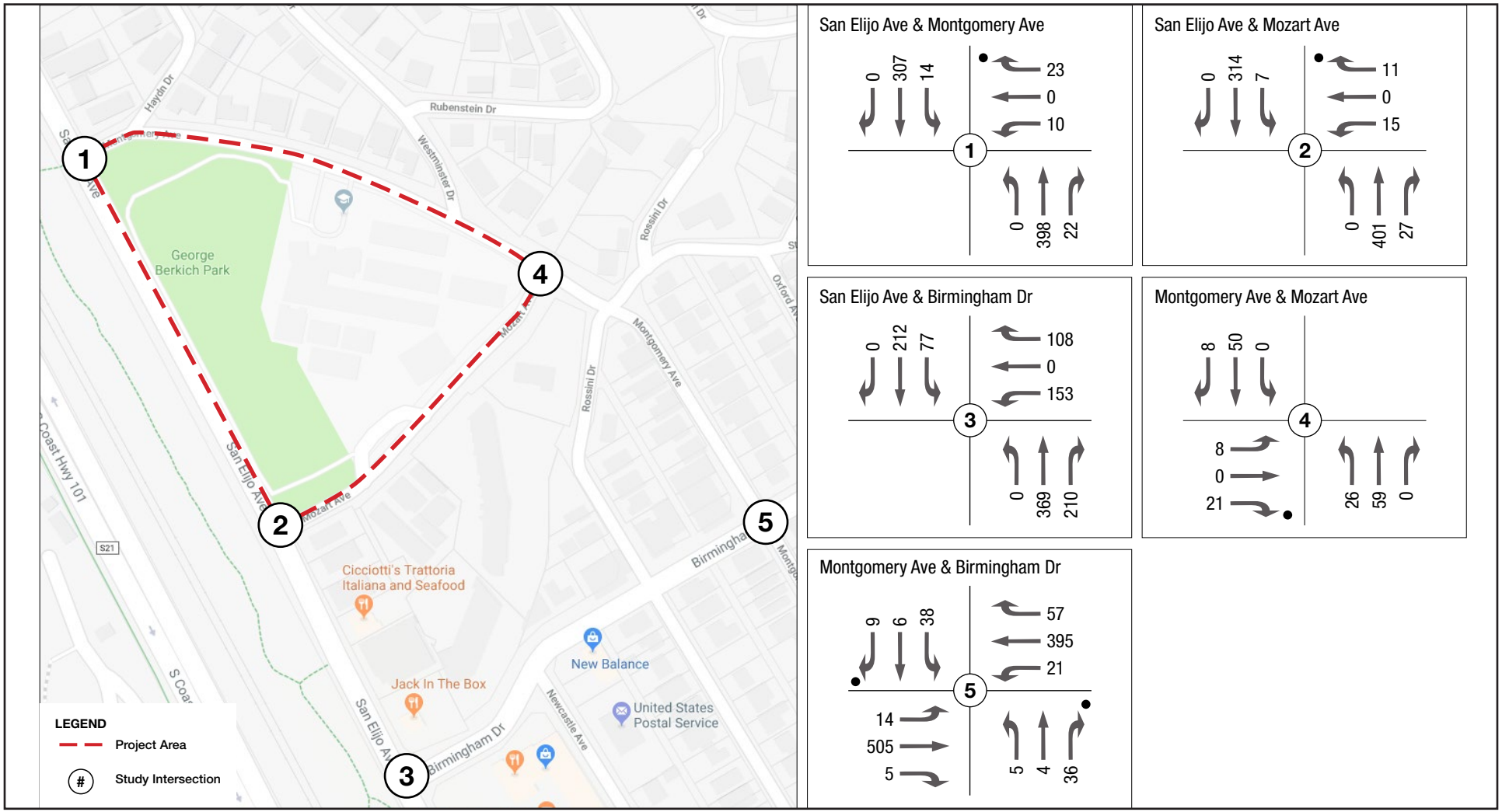


Source: IBI Group, 2018

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Figure 5.10-5 - Opening Year (2021) No Project Volumes - PM Peak Hour



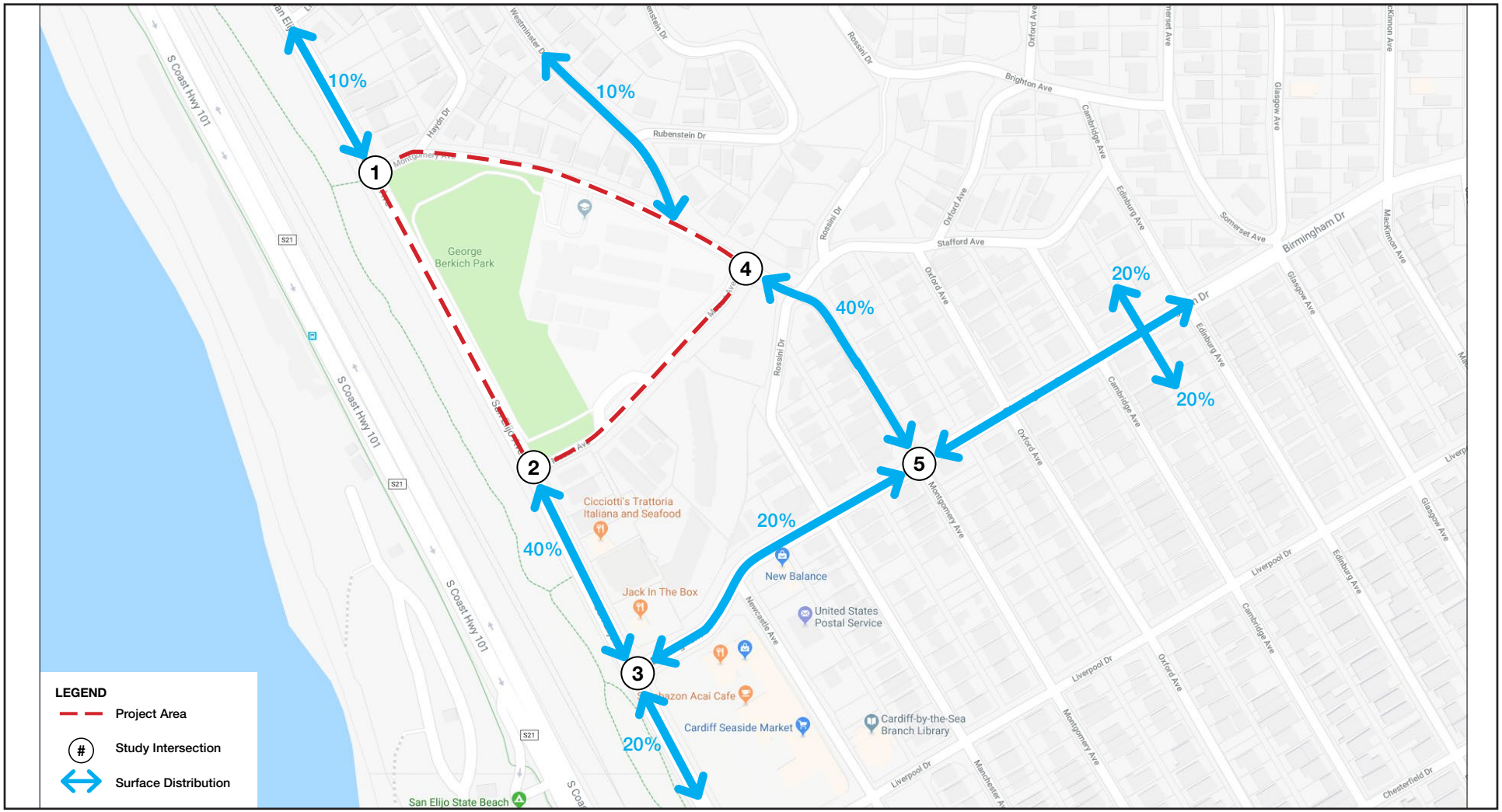
Source: IBI Group, 2018

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Figure 5.10-6 - Estimated Trip Distribution

5.10 Transportation and Traffic



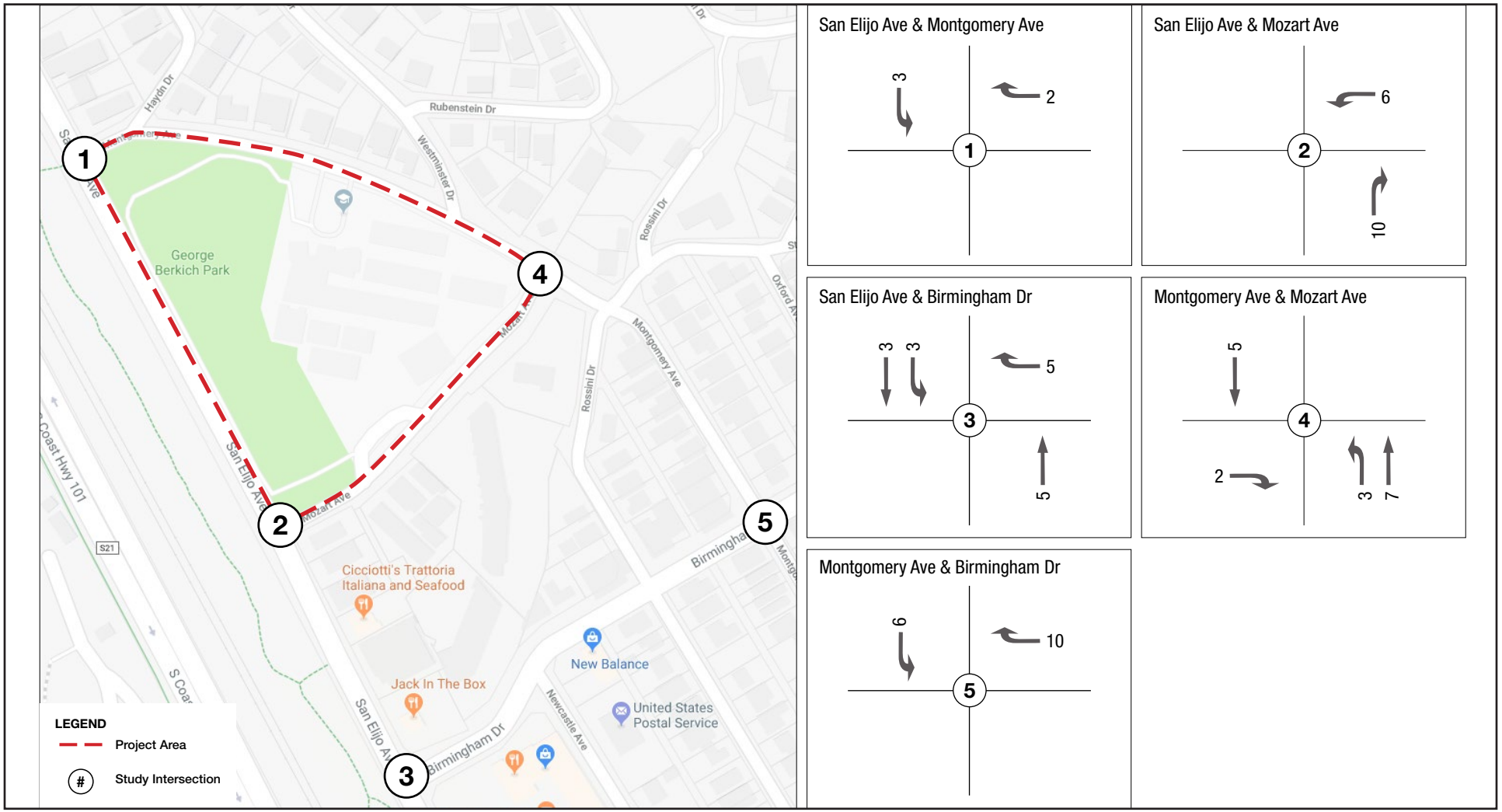
Source: IBI Group, 2018

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Figure 5.10-7 - Project Turning Movement Volumes - AM Peak Hour

5.10 Transportation and Traffic

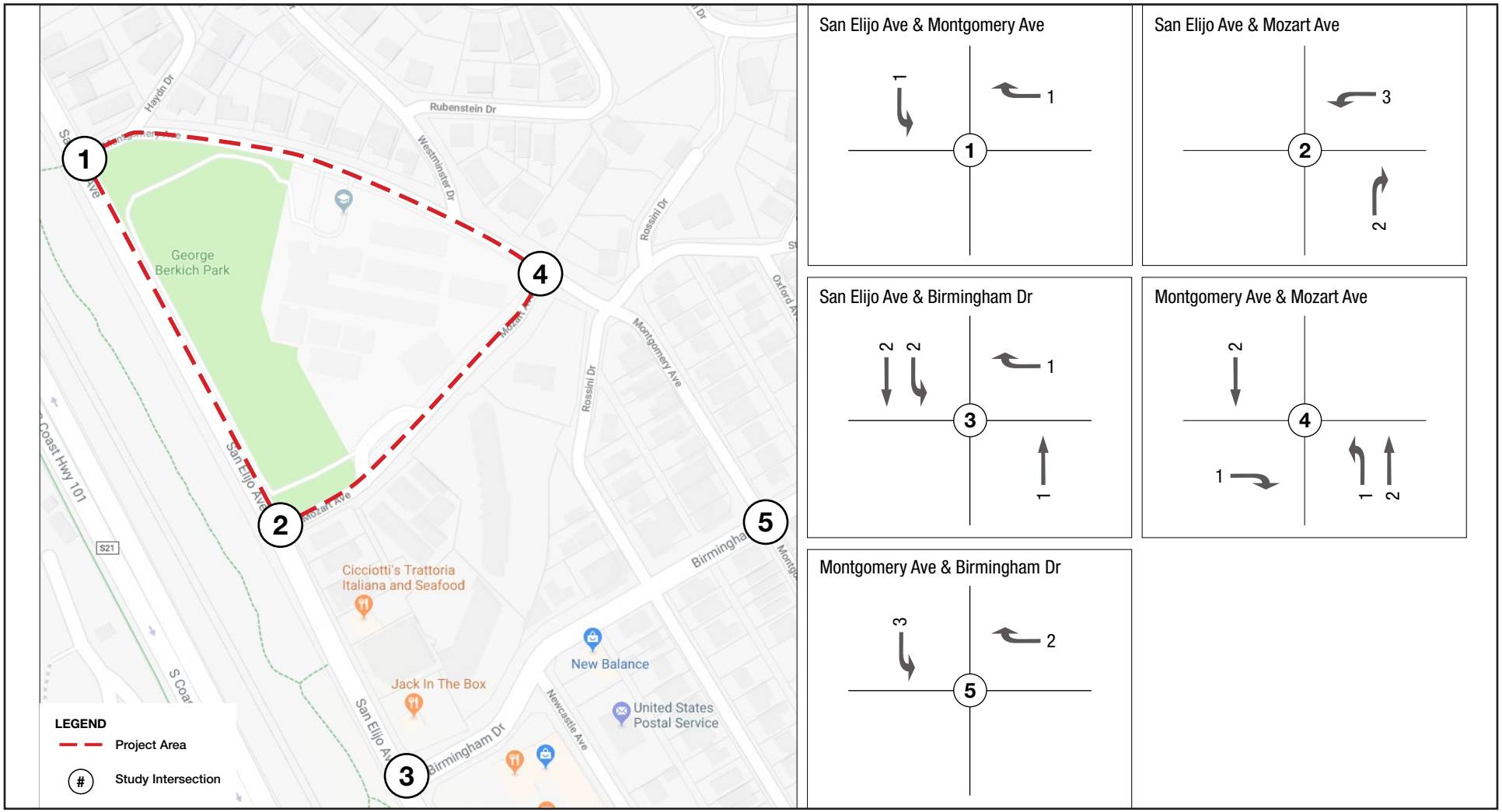


Source: IBI Group, 2018

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Figure 5.10-8 - Project Turning Movement Volumes - PM Peak Hour

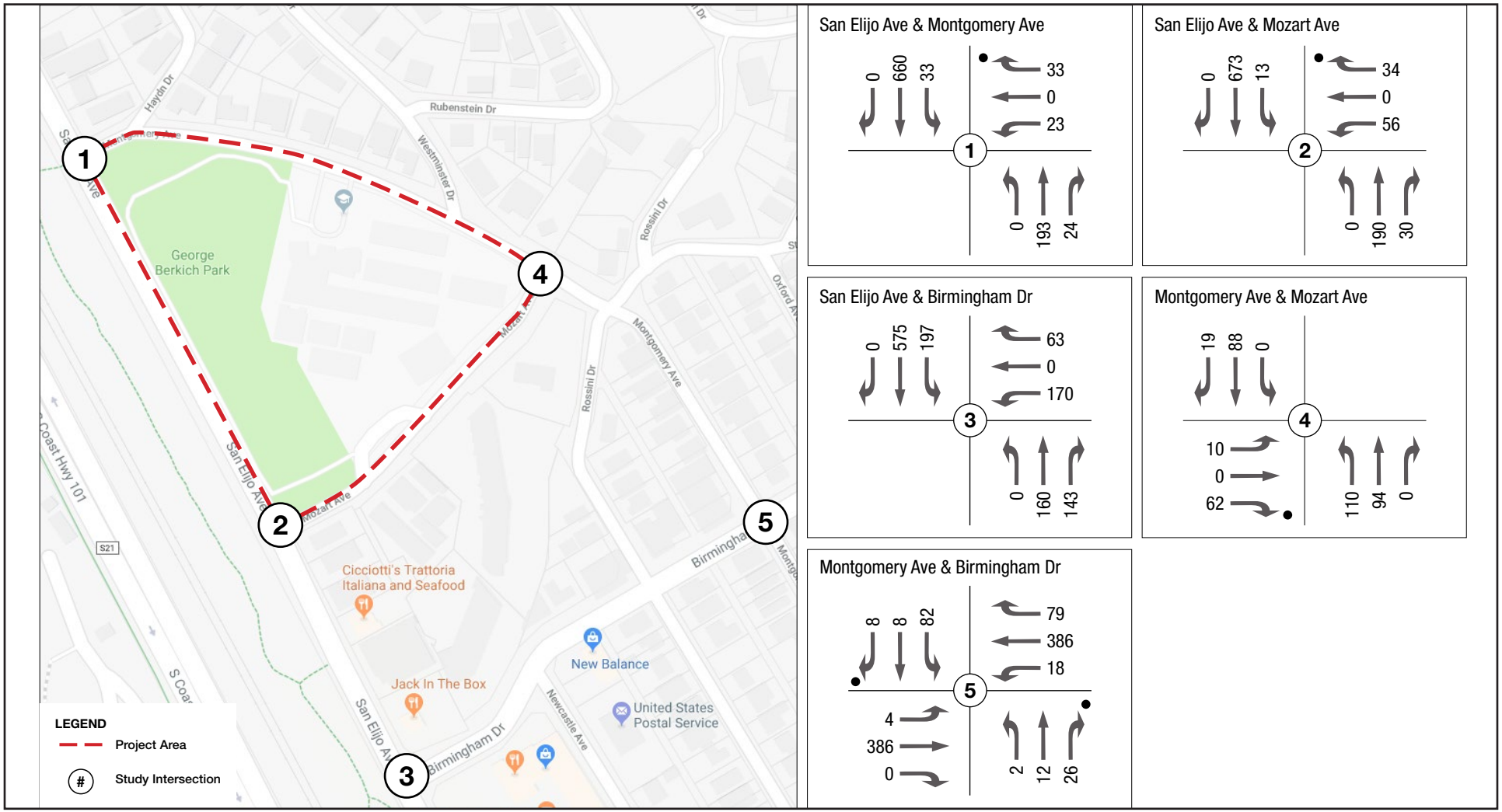


Source: IBI Group, 2018

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Figure 5.10-9 - Existing Year (2018) With Project Volumes - AM Peak Hour

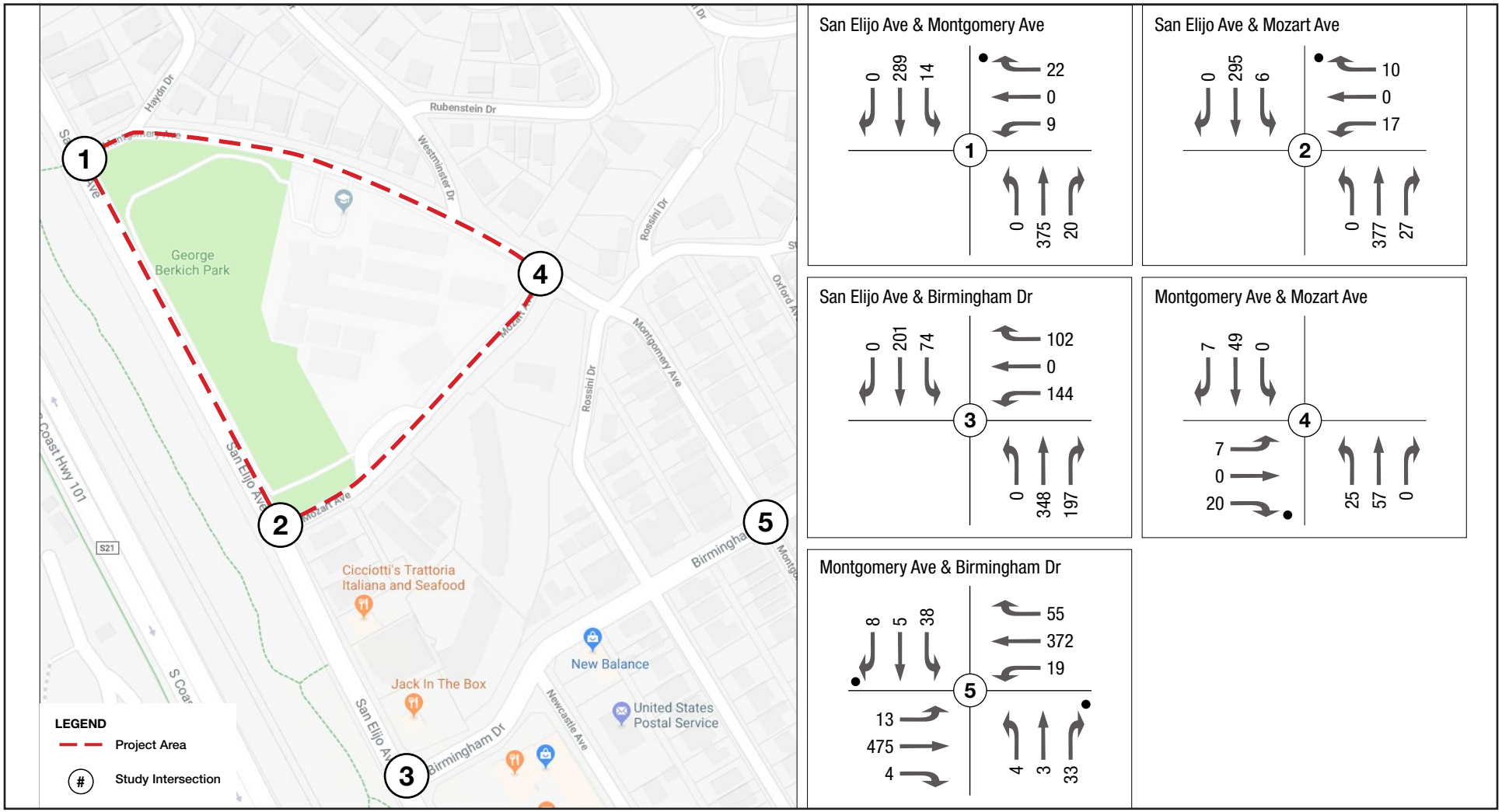


Source: IBI Group, 2018

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Figure 5.10-10 - Existing Year (2018) With Project Volumes - PM Peak Hour



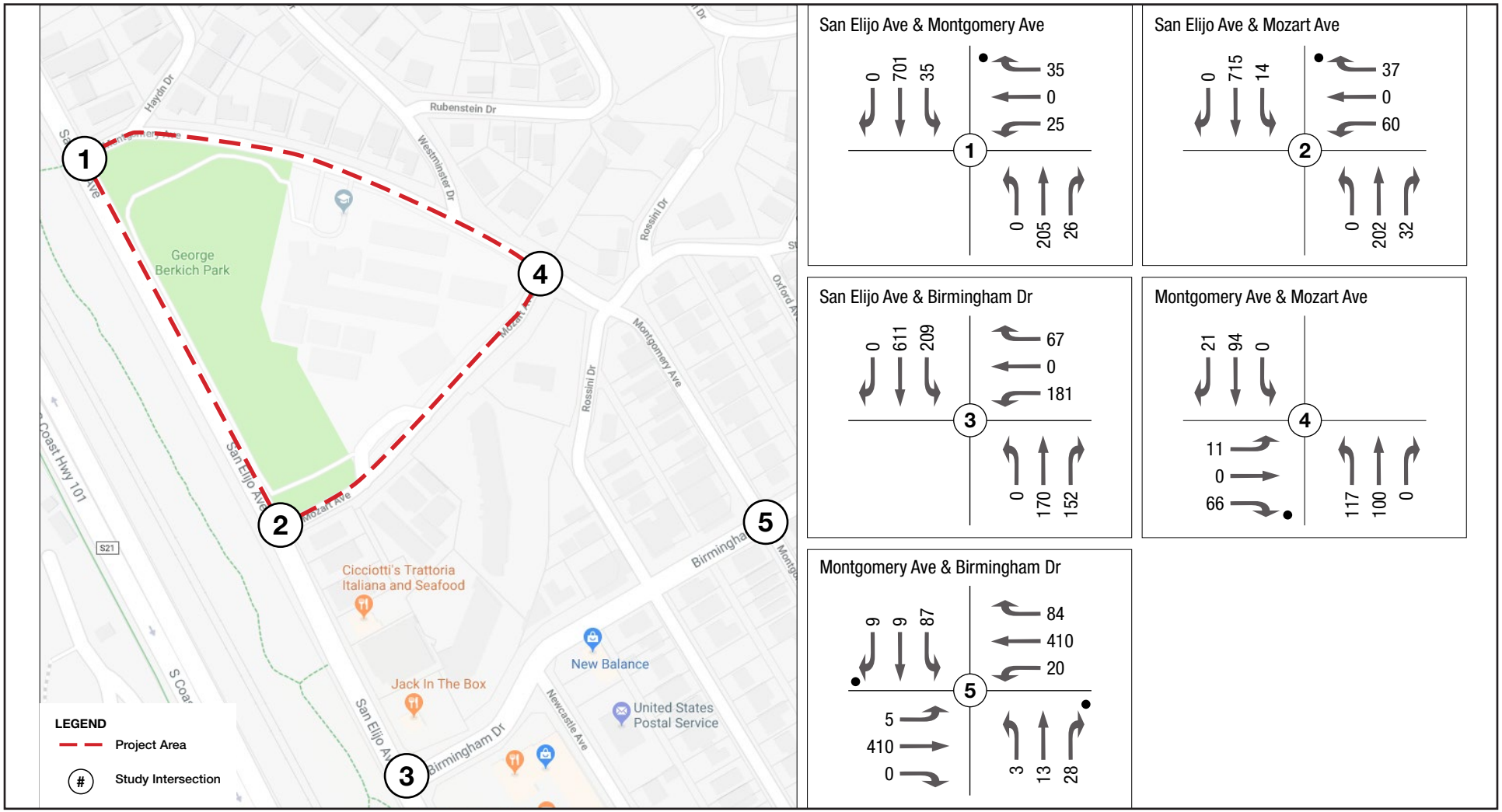
Source: IBI Group, 2018

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Figure 5.10-11 - Opening Year (2021) With Project Volumes - AM Peak Hour

5.10 Transportation and Traffic

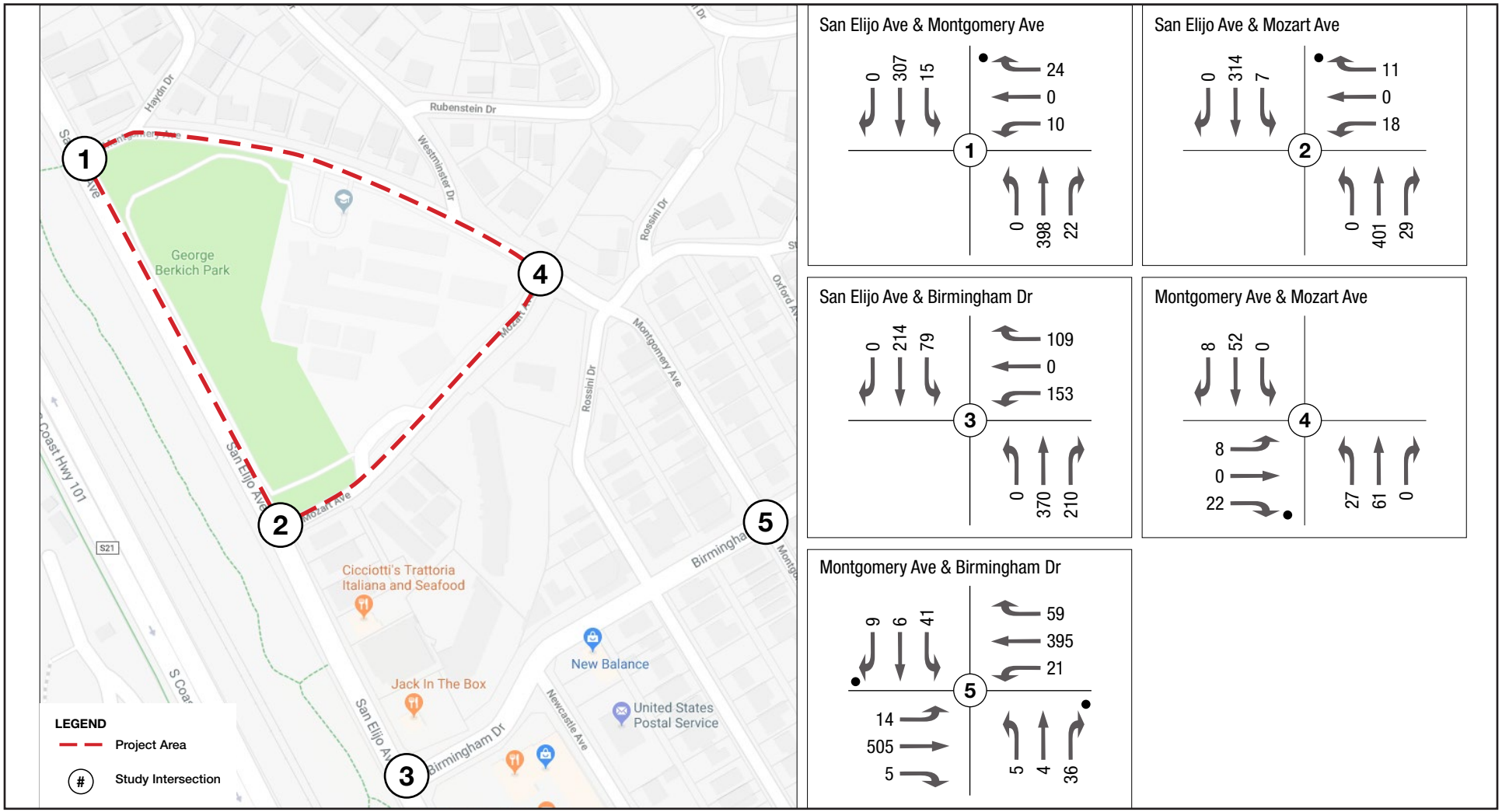


Source: IBI Group, 2018

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Figure 5.10-12 - Opening Year (2021) With Project Volumes - PM Peak Hour



Source: IBI Group, 2018

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As shown in Table 5.10-11, LOS values would be reduced from B to C for AM intersection LOS of San Elijo Avenue and Montgomery Avenue, and for AM and PM LOS of the San Elijo Avenue and Birmingham Drive intersection. However, this reduction in LOS value would not cause an intersection operating at an acceptable LOS (C or better) to deteriorate to LOS D or worse; therefore, project implementation under Opening Year (2021) With Project would result in a less than significant impact.

Conclusion

Construction phasing of the project would reduce traffic volumes at Cardiff School during student loading and unloading, and would not significantly impact loading operations at Ada Harris School. Based on the analysis conducted in the Traffic Impact Analysis, the proposed project would not significantly impact study area intersections or street segments. The project would reduce the LOS of San Elijo Avenue and Montgomery Avenue and San Elijo Avenue and Birmingham Drive; however, no intersection would be reduced to a LOS D. All five study intersections and two roadway segments would continue to operate at an acceptable level of service under Existing Year (2018) and Opening Year (2021) conditions, with and without the project.

Level of Significance Before Mitigation: Based on the analysis above, Impact 5.10-1 would be less than significant.

Impact 5.10-2: Project-related trip generation in combination with existing and proposed cumulative development would not exceed CMP performance standards. [Threshold T-2]

Impact Analysis: The County's CMP was prepared by SANDAG. San Diego Forward: The Regional Plan, is the region's long-range transportation plan and sustainable communities strategy. The CMP arterial route closest to the project site is Manchester Avenue / El Camino Real from Interstate 5 to State Route 78, approximately 1.7 miles east of the project site.

The project would result in approximately 38 trips during the morning peak hour, which generates the highest traffic volume throughout a 24-hour period, and 117 daily trips total. As this is below the CMP threshold of 200 trips per hour or 2,400 average daily trips, a detailed CMP intersection analysis is not required, and the project would not have a significant impact at a CMP intersection. The project would not have an adverse impact during the afternoon peak hour because the proposed elementary school would generate little or no traffic during the afternoon commuter peak period on a typical day of operation. Additionally, the traffic study did not assume that school traffic would use any particular freeway segment as an access route.

Conclusion

The proposed project would not exceed CMP thresholds for arterial and mainline freeway congestion. Consequently, the project would not conflict with SANDAG's CMP.

Level of Significance Before Mitigation: Based on the analysis above, Impact 5.10-2 would be less than significant.

Impact 5.10-3: The proposed project would provide adequate parking. [Threshold T-7]

Impact Analysis:

Construction

Construction vehicles would be staged on the northwestern and southern parts of the site during construction of the proposed improvements. The northwestern staging area would be on the field area west of the proposed parking lot and south of the "little brick building"; it would be accessed via the proposed driveway entrances on Montgomery Avenue. The other staging area would be on the southern side of the site on the existing blacktop hardcourt area and would be accessed via an existing driveway on Mozart Avenue, near San Elijo Avenue. Under both project phases, construction vehicles would be staged on the project site and would not impact offsite parking availability.

Additionally, the District would prohibit its construction contractors from parking construction vehicles, equipment, and employees' personal vehicles on the surrounding residential streets. Construction contractor vehicles would either park on the project site within the staging areas or on the western side of San Elijo Avenue, which provides at least 705 feet of parking area. Assuming a standard vehicle parking space length of 22 feet, there would be space for approximately 32 vehicles.

Operation

Off-Street Parking

The project would result in an increase in onsite parking spaces compared to existing conditions. The existing campus includes 19 classrooms, 2,260 square feet of auditorium space, and 28 off-street parking stalls. The proposed project would result in 20 classrooms, 3,141 square feet of auditorium space, and 45 parking spaces (31 off-street spaces and 14 parallel spaces at drop-off and pick-up areas); the project would result in an increase in 17 parking spaces compared to existing conditions.

According to the City of Encinitas Municipal Code Section 30.54.030, the minimum parking requirement for schools is 1.5 spaces for each classroom and 1 space for each 100 square feet of auditorium floor area. Table 5.10-12, *Project Parking Requirements*, shows the existing, proposed, and increase in parking according to the requirements of the municipal code.

Table 5.10-12 Project Parking Requirements

Unit Type	Municipal Code Requirement	Existing	Proposed	Net Gain	Required Spaces
Classroom	1.5 spaces per classroom	19 classrooms	20 classrooms	1 room	2
Auditorium	1 space per 100 square feet	2,260 square feet	3,141 square feet	881 square feet	9
				Total	**11**

Source: City of Encinitas Municipal Code § 30.54.030, Schedule of Required Off-Street Parking.

As shown in Table 5.10-12, the project increase of 1 classroom and 881 square feet of auditorium space would result in the need for 11 more parking spaces. The project would add 17 spaces from existing conditions—6 more parking spaces than the parking space requirements. Therefore, the project would result in a beneficial impact to onsite parking availability.

On-Street Parking

The eastern side of San Elijo Avenue, Mozart, and Montgomery Avenues provide on-street parking in addition to parking provided on the site. The eastern portion of San Elijo Avenue provides approximately 705 feet of parking space, and there is approximately 1,585 feet of available curb parking space on Montgomery and Mozart Avenues. Assuming a standard vehicle space off 22 feet, there are approximately 104 on-street parking spaces available along the eastern portion of San Elijo Avenue, Montgomery Avenue, and Mozart Avenue. The improvements to the parking lot and driveways on Montgomery Avenue would result in a loss of 2 on-street parking spaces. The loss of 2 on-street spaces would be accommodated by the project increase in 17 parking spaces, and would result in a negligible difference in on-street parking availability compared to existing conditions.

Special Events

There would be several special events throughout the year—back-to-school night, performances, etc.—when the demand for parking could exceed the number of spaces in the parking lot. During these events, most of the event attendees would have to find parking on the nearby streets or in parking lots in the vicinity of the school. Within the streets adjacent to the project site (San Elijo Avenue, Montgomery Avenue, and Mozart Avenue), there would be approximately 2,290 feet of available on-street parking space and approximately 104 parking spaces. The adjacent streets have been able to adequately accommodate special events during recent operation of the Cardiff School program, and the project would provide an increase in parking beyond what is required as a result of the increase in student capacity (see Table 5.10-12). In addition, these parking situations would be temporary—a few hours—and would occur approximately four to six times annually, which would not constitute a significant environmental impact. For field trips, buses would be used to transport students to and from the school site. Buses would use the student loading area near Montgomery Avenue and would not impact onsite or offsite parking.

Conclusion

According to the requirements of the City of Encinitas Municipal Code, a total of 11 additional spaces would be required for the project. The project would result in an additional 17 parking spaces, 6 more than required. Although 2 spaces would be lost on Montgomery Avenue, these would be more than made up by the 6 surplus parking spaces. In addition, existing on-street parking would supplement on-site parking; therefore, the project would not impact parking availability.

Level of Significance Before Mitigation: Based on the analysis above, Impact 5.10-3 would be less than significant.

Impact 5.10-4: Project circulation improvements have been designed to adequately address potentially hazardous conditions, such as long queues and emergency access. [Threshold T-4]

Impact Analysis:

Construction

Construction staging would occur at the northwestern and southwestern portions of the site with direct access from existing driveways on Montgomery Avenue and Mozart Avenue. Operation of construction vehicles would comply with applicable City requirements, including following the City-designated truck routes. It is also possible that certain activities may require temporary roadway or sidewalk closures and/or traffic detours that could increase roadway hazards. However, a construction worksite traffic control plan would be prepared and implemented by the District. The plan would identify haul routes, hours of construction, protective devices, warning signs, and access. The active construction and staging areas would be on the campus and clearly marked with barriers to separate public access from the construction zone. The plan will be submitted to the City of Encinitas Public Works Department for approval and would be followed during construction.

Operation

Vehicular circulation to and from the school site would be constrained during peak arrival and departure times at the beginning and ending of each school session as parents drop off and pick up students (see discussion of Impact 5.10-1, above). However, the existing roadways in the vicinity of the project site are able to operate at an acceptable level of service, and street segments would not be constrained such that safety hazards would arise outside of normal loading and unloading activities.

Passenger Loading

The proposed project would reconfigure and expand the existing onsite loading area on Montgomery Avenue from approximately 80 feet to 250 feet in length. The one-way, student-loading loop from west to east would allow vehicles to access the new parking lot or exit the loop via the easternmost driveway and would increase loading area for onsite vehicle queuing. The driveway would allow for the safe curbside pick-up and drop-off of students and accommodate required fire department truck access. Additionally, approximately 280 feet of offsite curbside loading would be available on Montgomery Avenue north of the onsite loading area. The project increase in loading space would reduce loading queues and reduce traffic hazards from passenger loading. Existing loading on Mozart Avenue would remain unchanged.

Vehicular, Bicycle and Pedestrian Safety

The increased levels of traffic, bicycles, pedestrians, and vehicular turning movements at the site, nearby intersections, and in the general vicinity of the school as a result of the project would result in an increased number of traffic conflicts and a corresponding increase in the probability of an accident occurring. Potential safety concerns include:

- Pedestrians attempting to cross Montgomery Avenue and Mozart Avenue outside of designated crosswalks.

- No sidewalks along the northern portion of Montgomery Avenue near the northern portion of campus.

Although the project would result in an increase in 22 seats, the school would continue its current bell schedule and drop-off and pick-up operations. A crossing guard would continue to be provided at the existing crosswalk at the intersection of Montgomery Avenue and Mozart Avenue during drop-off and pick-up periods. The increase in students would result in a negligible change to operations over the morning drop-off and afternoon pick-up periods, and would not exacerbate existing safety concerns such that a significant impact would occur.

Conclusion

The project increase in traffic is typical for schools during drop-off and pick-up, and the surrounding streets would be able to handle the increased traffic flow. Expansion of the loading area would improve traffic operations during student drop-off and pick-up, and would reduce traffic hazards. The increase in pedestrians would be negligible and would have a less than significant impact to crosswalks and traffic operations.

Level of Significance Before Mitigation: Based on the analysis above, Impact 5.10-4 would be less than significant.

5.10.4 Cumulative Impacts

Cumulative traffic impacts are created when the proposed project combined with other future developments contributes to the overall traffic impacts, requiring additional improvements to maintain acceptable LOS operations. A significant cumulative impact is identified when a facility is projected to operate below the LOS standards due to cumulative future traffic and project-related traffic. Six cumulative projects in the vicinity of the school were provided by the City of Encinitas Planning Department. The cumulative development projects were assumed in the traffic analysis to evaluate potential impacts at 2021 buildout conditions. The project's incremental effect to congested intersections would not be significant at study area intersections. In consideration of the preceding factors, the project's contribution to cumulative traffic impacts would be rendered less than significant; therefore, project impacts would not be cumulatively considerable.

5.10.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.10-1, 5.10-2, 5.10-3, and 5.10-4.

No impacts would be potentially significant.

5.10.6 Mitigation Measures

No mitigation measures would be required.

5.10.7 Level of Significance After Mitigation

No mitigation measures would be required.

5.10.8 References

SANDAG. 2008, July 16. Final 2008 Congestion Management Program Update. http://www.sandag.org/uploads/publicationid/publicationid_1403_14037.pdf.

_____. 2002, April. SANDAG (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region. http://sandiegohealth.org/sandag/sandag_pubs_2009-7-25/publicationid_1140_5044.pdf .

Whitson, Kent A. 2000, March 2. SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region.

5.11 TRIBAL CULTURAL RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Cardiff School Modernization and Reconstruction Project to impact tribal cultural resources (TCR).

The analysis in this section is based in part on the following information:

- *California Historical Resources Information System Records Search,* South Central Coastal Information Center, March 29, 2018 (included as Appendix 5.4-1)
- *Historic Resources Assessment Report of Cardiff School*, Pamela Daly, M.S.H.P, June 2018 (included as Appendix 5.4-2)
- *Paleontological Records Search: Cardiff School Modernization and Reconstruction Project,* San Diego Natural History Museum, May 8, 2018 (included as Appendix 5.4-3)

Complete copies of these studies are included in the appendices of this Draft EIR.

Terminology

Local Register of Historical Resources means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution (Public Resources Code [PRC] Section 5020.1[k]).

Tribal Cultural Resources (TCR) are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are any of the following:

- Included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR); or
- Included in a local register of historical resources; or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, and considering the stated importance to the tribe, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1 of the CRHR.

5.11.1 Environmental Setting

5.11.1.1 REGULATORY BACKGROUND

Federal

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (United States Code, Title 16, Sections 470aa–mm) became law on October 31, 1979, and has been amended four times. It regulates the protection of archaeological resources and sites that are on federal and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (United States Code, Title 25, Sections 3001 et seq.) is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants and culturally affiliated Indian tribes.

National Register of Historic Places

The National Register of Historic Places (NRHP) includes districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Properties are nominated to the NRHP by the State Historic Preservation Officer of the state in which the property is located, by the Federal Preservation Officer for properties under federal ownership or control, or by the Tribal Historic Preservation Officer if a property is on tribal lands.

Properties may qualify for the NRHP when they meet any of four basic criteria:

1) Are associated with events that have made a significant contribution to the broad patterns of history.

2) Are associated with the lives of persons significant in our past.

3) Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; or represent a significant and distinguishable entity whose components may lack individual distinction.

4) Have yielded, or may be likely to yield, information important in prehistory or history.

State

Assembly Bill 52

The Native American Historic Resource Protection Act (AB 52) took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to TCR into the CEQA process. It requires TCRs to be analyzed

like any other CEQA topic and establishes a consultation process for lead agencies and California tribes. Projects that require a Notice of Preparation of an EIR or Notice of Intent to adopt a ND or MND are subject to AB 52. A significant impact on a TCR is considered a significant environmental impact and requires feasible mitigation measures.

TCRs must have certain characteristics:

1) Sites, features, places, cultural landscapes (must be geographically defined), sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. (PRC Section 21074(a)(1))

2) The lead agency, supported by substantial evidence, chooses to treat the resource as a TCR. (PRC § 21074(a)(2))

The first category requires that the TCR qualify as a historical resource according to PRC Section 5024.1. The second category gives the lead agency discretion to qualify that resource—under the conditions that it support its determination with substantial evidence and consider the resource's significance to a California tribe. The following is a brief outline of the process in PRC Sections 21080.3.1 to 3.3.

1. A California Native American tribe asks agencies in the geographic area with which it is traditionally and culturally affiliated to be notified about projects. Tribes must ask in writing.

2. Within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it.

3. A tribe must respond within 30 days of receiving the notification if it wishes to engage in consultation.

4. The lead agency must initiate consultation within 30 days of receiving the request from the tribe.

5. Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a TCR, OR a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached.

6. Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on TCRs and discuss feasible alternatives or mitigation that avoid or lessen the impact.

Native American Historic Resource Protection Act

PRC Sections 5097 et seq. codify the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal public lands. California Public Resources Code 5097.9 states that no public agency or private party on public property shall "interfere with the free expression or exercise of Native American Religion." The code further states that:

> No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine… except

on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, expect for parklands larger than 100 acres.

Human Remains

California Health and Safety Code Section 7050.5 requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

California Register of Historical Resources

The CRHR is the state version of the NRHP program. It was enacted in 1992 and became official January 1, 1993. The CRHR was established to serve as an authoritative guide to the state's significant historical and archaeological resources. Resources that may be eligible for listing include buildings, sites, structures, objects, and historic districts. According to subsection (c) of PRC Section 5024.1, a resource may be listed as a historical resource in the California Register if it meets any of the four National Register of Historic Places criteria, as listed above.

Local

City of Encinitas General Plan and Local Coastal Program

The City of Encinitas Resource Management Element provides a resource management plan for cultural resources and identifies areas in the City of Encinitas that have greater sensitivity for cultural resources. The General Plan identifies policies that require survey and recordation of paleontological, archaeological, and historical resources. The Cultural Resource Sensitivity map identifies areas in the city that have low, moderate, or high likelihood for presence of sensitive cultural resources. According to the Cultural Resources Sensitivity map, the project site would have low sensitivity for presence of cultural resources (Encinitas 2011).

City of Encinitas Municipal Code

The City of Encinitas Municipal Code includes policies oriented at preservation of historical, archaeological, and paleontological resources. The municipal code also includes policies for the Cultural/Natural Resources Overlay zone (Section 30.34, Special Purpose Overlay Zone), which provides protections for cultural and biological resources for designated areas in the city.

Encinitas Register of Historic Places

The City of Encinitas has a formal application process to designate a local landmark, building, or district as a historical resource. The Encinitas Register of Historic Places currently has two officially designated historic

places: the Olivenhain Town Meeting Hall, which is also listed on the National and California Registers, and a residence at 221 Sunset Drive (Encinitas 2018; NPS 2018; OHP 2018).

5.11.1.2 EXISTING CONDITIONS

Native American Heritage Commission

A sacred lands file search conducted by the Native American Heritage Commission (NAHC) for the project site did not identify any sacred lands. The NAHC identified 14 local Native American representatives as potentially having local knowledge:

- Barona Group of the Capitan Grande
- Campo Band of Mission Indians
- Ewiiaapaayp Tribal Office
- Iipay Nation of Santa Ysabel
- Inaja Band of Mission Indians
- Jamul Indian Village
- Kwaaymii Laguna Band of Mission Indians
- La Posta Band of Mission Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Mission Indians
- Pauma Band of Luiseno Indians – Pauma and Yuima Reservation
- San Pasqual Band of Mission Indians
- Sycuan Band of the Kumeyaay Nation
- Viejas Band of Kumeyaay Indians

PlaceWorks notified all 14 tribal representatives about the proposed project and asked for information about potential resources at or near the project site. Responses were received from the Pauma Band of Luiseno Indians and the Iipay Nation of Santa Ysabel. The Pauma Band of Luiseno Indians stated that due to the age of the onsite structures, the possibility of cultural surveys having been completed for the site is not likely, and recommended that an archeologist and a Native American monitor be present onsite during the demolition phase (Devers 2018). The Iipay Nation of Santa Ysabel responded, requesting that a Kumeyaay Native American Monitor be present for all ground-disturbing activities (Clint 2018).

5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

TCR-1 Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or

TCR-2 A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.11.3 Environmental Impacts

5.11.3.1 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.11-1: The project site is not listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources. [Threshold TCR-1]

Impact Analysis: According to the historical resources assessment report prepared for the project, the buildings on the project site were constructed between the 1950s and 1960s and replaced the previous Cullen School buildings, and the new administration buildings were constructed in 2002 (Appendix 5.4-2). The brick building on the project site was constructed in the late 1930s, and it may have held telephone repeater equipment (Appendix 5.4-2). As provided in Section 5.11.1, *Environmental Setting*, only two locations in Encinitas have been designated as historic places, according to Encinitas Register of Historic Places. Moreover, the Cardiff School campus and the brick building are not listed in the California Register of Historical Resources (OHP 2018).

The Cardiff School campus is not eligible for listing in the National Register or California Register because it does not meet the requirements listed in Criteria A/1 through D/4 (Appendix 5.4-2). The brick building would be eligible for listing in the National Register or California Register under Criterion A/1 because it is associated with telecommunications from the 1930s to 1960s (Appendix 5.4-2). The brick building is also eligible for listing under Criterion C/3 as a rare example of an early twentieth-century telephone system repeater hut designed in the Colonial Revival–style architecture (Appendix 5.4-2). The site has historically operated as a school, and none of the buildings on the project site are associated with TCRs. A records search of the NAHC Sacred Lands File in February 2018 resulted in negative results (see Appendix 11-1, *Agency Coordination*).

Conclusion

The project site is not listed on the California Register of Historical Resources or in a local register of historical resources. The brick building on the project site is eligible for listing on the National Register and California Register, under Criteria A/1 and C/3. The project site has historically operated as a school and does not have ties to TCRs.

Level of Significance before Mitigation. Based on the analysis above, Impact 5.11-1 would be less than significant.

Impact 5.11-2: It is possible that tribal cultural resources could be discovered on the project site by the lead agency or a California Native American tribe during ground-disturbing activities. [Threshold TCR-2]

Impact Analysis: Effective July 1, 2015, AB 52 added TCRs as a resource subject to review under CEQA. AB 52 requires meaningful consultation between lead agencies and California Native American tribes on potential impacts to TCRs, as defined in PRC Section 21074. A TCR is a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that is either on or eligible for inclusion in the California Historic Register or a local historic register, or is a resource that the lead agency, at its discretion and supported by substantial evidence, determines should be treated as a TCR (PRC §§ 21074[a][1–2]).

TCRs may be found throughout San Diego County, but information about them is much more difficult to obtain than for most archaeological resources. Currently, there is no database of such resources, and most cannot be identified by surveying the land. Identification of TCRs requires coordination with Native American tribes, and their precise location is often difficult to determine because they are often only documented through the oral history of the tribe.

The District has not received a tribal request to be notified about projects. However, with the results of a Sacred Lands search, the NAHC sent a list of 14 tribes that might have local knowledge. On February 9, 2018, the District issued letters informing tribes of the proposed project and requested information on the project site and tribal cultural resources sensitivity. The Pauma Band of Luiseno Indians indicated the project site is within their traditional use area and recommended provision of a tribal monitor in conjunction with an archaeological monitor during ground-disturbing activities. The Iipay Nation also recommended that a Kumeyaay Native American Monitor be present for all ground-disturbing activities. As excavation for the proposed buildings' foundations and footings may encounter previously undisturbed soils, it is possible that construction-related earthwork may inadvertently uncover buried tribal cultural artifacts.

Conclusion

Although the project site was previously graded during construction of the existing facilities, excavation required for installation of the proposed improvements may encounter undisturbed native soils, and it is possible that discovery of subsurface tribal resources could occur, the disturbance of which could cause a substantial adverse change in the significance of the resource(s) if not mitigated.

Level of Significance before Mitigation. Based on the analysis above, Impact 5.11-2 would be potentially significant.

5.11.4 Cumulative Impacts

As with the proposed project, each related cumulative project would be required to comply with AB 52 and PRC Section 21083.2(i), which addresses accidental discoveries of archaeological sites and resources, including tribal cultural resources. Therefore, any discoveries of TCRs caused by the project or related projects would be mitigated to a less than significant level, and therefore project impacts would not be cumulatively considerable.

5.11.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.11-1.

Without mitigation, the following impact would be **potentially significant:**

- **Impact 5.11-2** Project implementation could result in an adverse change in Native American resources during construction activities.

5.11.6 Mitigation Measures

Impact 5.11-2

CUL-2 Prior to the start of construction, Cardiff School District shall retain a qualified archaeologist to monitor ground-disturbing activities. The archaeologist shall attend a meeting with the grading contractor, engineering geologist, grading engineer, and school authorities to establish a protocol for monitoring during all earth-disturbing activities. The meeting shall briefly summarize the prehistoric and historic use of the land, describe the types of cultural resources that may be encountered in the project area, and outline steps to follow in the event a discovery is made. The training shall be developed and presented by a registered professional archaeologist (RPA) and may run concurrently with other environmental training (biological, paleontology, safety training, etc.). The training may be videotaped or presented in an informational brochure for future use by field personnel not present at the start of the project phase. The RPA shall have the authority to stop grading or construction work within 25 feet of any discovery of potential historical or archaeological resources in order to test, analyze, and make a finding of significance under Section 15064.5 of the California Environmental Quality Act Guidelines; develop a plan for recovery, analysis, report, and curation of the recoveries, as appropriate; and report to an accredited and permanent scientific institution, such as the South Central Coastal Information Center and San Diego Natural History Museum.

TCR-1 The RPA shall also monitor for potential tribal cultural resources. If tribal cultural resources are recovered, the RPA shall contact the liaisons for the local Native American tribes, including their Native American monitors, to assess the find and as appropriate return the artifact to the appropriate tribe(s).

5.11.7 Level of Significance After Mitigation

Impacts would be less than significant with implementation of Mitigation Measures CUL-2 and TCR-1.

5.11.8 References

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Devers, Chris. 2018, February 13. Email correspondence with Pauma Band of Luiseno Indians.

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5. Environmental Analysis
TRIBAL CULTURAL RESOURCES

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5.12 ENERGY

In accordance with Appendix F of the State CEQA Guidelines, this Draft EIR includes relevant information and analyses that address the energy implications of the proposed project. This section represents a summary of the proposed project's anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the project's energy implications, are discussed in greater detail elsewhere in this Draft EIR, including Chapter 4, *Project Description*, and Sections 5.2, *Air Quality*, 5.6, *Greenhouse Gas Emissions*, and 5.10, *Transportation and Traffic*. This chapter also relies on the results of a CalEEMod estimation of fuel for construction found in Appendix 5.2-1 of this EIR.

5.12.1 Environmental Setting

5.12.1.1 REGULATORY BACKGROUND

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The act sets increased corporate average fuel economy standards; the renewable fuel standard; appliance energy-efficiency standards; building energy-efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration.

State

Renewables Portfolio Standard

The California Renewables Portfolio Standard was established in 2002 under Senate Bill (SB) 1078 and was amended in 2006, 2011, and was most recently amended as SB 100 on September 10, 2018. The program requires investor-owned utilities, electricity service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. SB 100 revised the goal of the program to achieve 50 percent renewable resources by December 31, 2016, and to achieve a 60 percent target by December 31, 2030.

State Alternative Fuels Plan

Assembly Bill 1007 requires the California Energy Commission (CEC) to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with the California Air Resources Board (CARB) and in consultation with other federal, state, and local agencies to reduce petroleum consumption, increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen), reduce greenhouse gas (GHG) emissions, and increase in-state production of

biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that will increase the use of alternative fuels, result in significant improvements in the energy efficiency of vehicles, and reduce trips and vehicle miles traveled through changes in travel habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation (Assembly Bill 118, Statutes of 2007) proactively implements this plan (CEC 2007).

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations (California Code of Regulations [CCR], Title 20, Parts 1600–1608) contain energy performance, energy design, water performance, and water design standards for appliances that are sold or offered for sale in California (e.g., refrigerators, vending machines, water heaters, boilers, pool equipment, plumbing fittings). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.

Building Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings (24 CCR Part 6) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The CEC adopted the 2008 changes to the Building Energy Efficiency Standards in order to (1) "Provide California with an adequate, reasonably-priced, and environmentally-sound supply of energy" (CEC 2008) and (2) Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its GHG emissions to 1990 levels by 2020.

Most recently, the CEC adopted the 2016 Building and Energy Efficiency Standards, which went into effect on January 1, 2017. The 2016 standards improve upon the 2013 standards for new construction of and additions and alterations to residential and nonresidential buildings. The 2016 standards do not achieve zero net energy, but they get very close to the state's goal and make important steps toward changing residential building practices in California. The 2019 standards will take the final step to achieve zero net energy for electricity use in newly constructed residential buildings throughout California (CEC 2018).

Green Building Standards

The California Green Building Standards Code (24 CCR Part 11), also known as CALGreen, has mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. In short, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impacts during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires

building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency (ICC 2017).

Local

City of Encinitas General Plan

The City of Encinitas Resources Management element includes policies that encourage the use of alternative energy systems, including passive solar and architectural and mechanical systems. The General Plan also states that energy conservation is integral in preserving nonrenewable fuels and improving air quality impacts.

City of Encinitas Municipal Code

The Encinitas Municipal Code Chapter 23.12.080 adopts the 2016 California Electrical Code by reference. The municipal code also includes other standards related to utility easements, undergrounding utilities (including cable, video, and telecommunications service providers), and solar energy system regulations.

City of Encinitas Climate Action Plan

The City of Encinitas adopted a climate action plan (CAP) in January 2018. The CAP establishes a comprehensive roadmap to reduce GHG emissions while supporting the community in adapting and improving resiliency to a changing climate over the long term. Components of the CAP are as follows: prepare a baseline GHG emissions inventory; calculate GHG emissions forecasts and develop reduction targets; identify local GHG emissions reduction strategies, goals, actions, and supporting measures to help the City achieve the 2020 and 2030 targets; develop implementation and monitoring mechanisms that will help the City ensure the goals and targets are achieved; and address climate change vulnerability with adaptation strategies that would improve community sustainability and resilience.

5.12.1.2 EXISTING CONDITIONS

Electricity

Electricity is quantified using kilowatts (kW) and kilowatt-hours (kWh). A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the CEC's "Tracking Progress" regarding statewide energy demand, total electric energy usage in California was 285,701 gigawatt hours in 2016 (CEC 2017). A gigawatt is equal to one billion (10^9) watts or 1,000 megawatts (1 megawatt = 1,000 kW).

The electricity supply for Encinitas is provided by San Diego Gas and Electric (SDGE), which provides electricity to a population of 3.6 million through 1.4 million electric meters in San Diego and southern Orange counties in a 4,100-square-mile service area. SDGE provided over 323,978 megawatt-hours of electricity in the City of Encinitas in 2013; approximately 52 percent was used by residential uses, and 48 percent was commercial and industrial (Encinitas 2018).

Natural Gas

Gas is typically quantified using "therms", which is a unit of heat energy equal to 100,000 British thermal units (Btu), and is the energy equivalent of burning 100 cubic feet of natural gas. SDGE also provides natural gas to the project site. SDGE operates 873,000 natural gas meters in San Diego and Orange Counties and over 117,000 miles of transmission lines within their 4,100-square-mile service area. SDGE provided approximately 11.9 MMTherms (one MMTherm is the equivalent of 10,000,000 therms) of natural gas to the City of Encinitas in 2013 (the most recent year for which data were available); approximately 71 percent was used by residential uses and 29 percent was commercial and industrial (Encinitas 2017). There is one 12.75-inch natural gas transmission pipeline for Southern California Gas Company with a maximum allowable operating pressure of 400 pounds per square inch approximately 18 feet west of the school site beneath San Elijo Avenue.

5.12.2 Thresholds of Significance

In accordance with State CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix F of the State CEQA Guidelines, the proposed project would have a significant impact related to energy consumption if it would:

- Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation.

5.12.3 Environmental Impacts

5.12.3.1 METHODOLOGY

The impact analysis focuses on the three sources of energy that are relevant to the proposed project: electricity, natural gas, transportation fuel for vehicle trips associated with new development, and the fuel necessary for project construction. The analysis of electricity/natural gas usage is based on California Emissions Estimator Model (CalEEMod) GHG emissions modeling, which quantifies energy use for occupancy (see Appendix 5.2-1).

The amount of operational fuel use was estimated using CARB's Emissions Factor 2017 (EMFAC2017) computer program, which provides projections for typical daily fuel usage in San Diego County. The amount of construction-related fuel use was estimated using ratios provided in the Climate Registry General Reporting Protocol for the Voluntary Reporting Program, Version 1.0.2. The results of EMFAC2017 modeling and construction fuel estimates are included in Appendix 5.12-1.

5.12.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts.

Impact 5.15-1: Construction activities would not result in wasteful, inefficient, and unnecessary consumption of energy or have excessive energy requirements.

Impact Analysis: During construction, the project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Transportation Energy

Vehicle Miles Traveled

Transportation energy use depends on the type and number of trips, vehicle miles traveled (VMT), fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would be temporary and would fluctuate according to the phase of construction. The majority of construction equipment during demolition and grading would be gas powered or diesel powered, and the later construction phases would require electricity-powered tools.

Tables 5.12-1, 5.12-2, and 5.12-3 provide the VMT for construction worker trips, vendor trips, and haul trips, respectively, generated by the proposed project.

Table 5.12-1 Construction Worker Trips

Activity	Number of Daily Trips[1]	Number of Days	Average Trip Distance (Miles)	TOTAL VMT (vehicle miles traveled)
2019 Construction Activity VMT				
Phase 1A	107	65	10.8	9,871
Phase 1B	81	129	10.8	45,166
			2019 Total	**55,037**
2020 Construction Activity VMT				
Phase 1B	72	197	10.8	82,132
Phase 2	70	143	10.8	21,665
			2020 Total	**103,799**
TOTAL CONSTRUCTION WORKER TRIPS				**158,836**

Notes: Building construction would take place in 2019 and 2020, with approximately 33.47 percent of the trips in 2019 and 66.53 percent in 2020. The full calculations for all construction phases are in Appendix 5.12-1 of the DEIR.
[1] Based on information provided by the project applicant.

Table 5.12-2 Construction Vendor Trips

Activity	Number of Daily Trips[1]	Number of Days	Average Trip Distance (Miles)	TOTAL VMT (vehicle miles traveled)
2019 Construction Activity VMT				
Phase 1A	16	65	7.3	1,023
Phase 1B	25	129	7.3	11,738
			2019 Total	**12,761**
2020 Construction Activity VMT				
Phase 1B	17	197	7.3	20,725
Phase 2	22	143	7.3	5,111
			2020 Total	**25,836**
TOTAL CONSTRUCTION WORKER TRIPS				**38,597**

Notes: Building construction would take place in 2019 and 2020, with approximately 33.47 percent of the trips in 2019 and 66.53 percent in 2020. The full calculations for all construction phases are in Appendix 5.12-1 of the DEIR.
[1] Based on information provided by the project applicant.

Table 5.12-3 Construction Haul Trips

Activity	Number of Daily Trips[1]	Number of Days	Average Trip Distance (Miles)	TOTAL VMT (vehicle miles traveled)
2019 Haul VMT				
Building Demolition Haul	7	23	20	3,060
Asphalt Demolition Haul	7	15	20	2,240
			2019 Total	**5,300**
2020 Haul VMT				
Site Preparation Soil Haul	23	8	20	3,740
Rough Grading Soil Haul	14	2	20	560
			2020 Total	**4,300**
TOTAL CONSTRUCTION HAUL TRIPS				**9,600**

[1] Based on information provided by the project applicant.

Project-Related Fuel Consumption

Based on the estimated vehicle miles traveled and duration of construction, Table 5.12-4 provides the estimated fuel usage for construction vehicles. As discussed in Section 5.2 *Air Quality*, all diesel-fuel commercial motor vehicles must not idle for more than five consecutive minutes at any location.

Table 5.12-4 Off-Road Construction Equipment Fuel Use

Construction Activity	Units	Working Days	Gasoline Days	Gasoline Gallons	Diesel Days	Diesel Gallons
2019 Construction Equipment Fuel Use						
1A – Demolition	6	69	22	17	47	3,688
1A – Site Preparation	7	10	0	0	10	888
1A – Grading	6	12	0	0	12	327
1A - Utility Trenching	2	8	1	1	7	43
1A – Canopy Installation	4	8	3	90	5	70
1A – Concrete Curb and Gutter	8	35	15	6	20	182
1B – Site Preparation	7	30	0	1	30	2663
1B – Rough Grading	6	60	0	1	60	1639
1B – Utility Trenching	3	30	2	2	28	283
1B – Building Construction	9	420	206	1,957	214	4,611
2020 Construction Equipment Fuel Use						
1B – Building Construction	9	835	411	3,892	424	9,164
1B – Asphalt Paving	7	56	31	15	25	251
1B – Architectural Coating	1	16	9	10	7	43
2 – Demolition	5	24	8	6	16	1,332
2 – Site Preparation	3	9	0	0	9	180
2 – Grading	4	6	0	0	6	160
2 – Utility Trenching	2	6	0	0	6	32
2 – Building Construction	8	530	260	1772	270	3886
2 – Asphalt Paving	6	35	15	5	20	181
2 – Architectural Coating	1	14	8	9	6	38
			Total Gasoline Gallons 2019	**2,075**	**Total Diesel Gallons 2019**	**14,394**
			Total Gasoline Gallons 2020	**5,709**	**Total Diesel Gallons 2020**	**15,267**

Note: The full calculations for all construction phases and fuel use are included in Appendix 5.12-1 of the DEIR.

As shown in Table 5.15-4, the project's fuel consumption from construction would be 7,784 gallons of gasoline and 29,662 gallons of diesel fuel over the 19-month construction period; therefore, the project would result in a daily consumption of 13.6 gallons of gasoline and 52 gallons of diesel fuel per day. According to the EMFAC Fuel Usage estimates for San Diego County, the county uses 3,915,607 gallons of gas per day and 556,349 gallons of diesel per day. The project increase in gasoline and diesel consumption would be 0.0003 percent and 0.009 percent, respectively, of San Diego County's daily consumption.[1] Therefore, project construction would not represent a substantial increase in demand for local or regional energy supplies. Construction fuel use for the proposed project would cease upon completion of project construction. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or state. Therefore, it is

[1] 13.6 gallons of gasoline (project) / 3,915,607 gallons of gasoline per day (County) = 0.002 or 0.2%.
52 gallons of diesel (project) / 556,349 gallons of diesel per day (County) = 0.053 or 5.3%.

expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than similar development projects. Impacts related to the use of transportation energy during construction would not require expanded energy supplies or the construction of new infrastructure. Impacts would be less than significant.

Construction Materials

Construction building materials may include recycled materials and products originating from nearby sources in order to reduce the costs of transportation. The District may use recycled materials for construction of the proposed improvements, as appropriate and as available. With increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

The type of construction is conventional and would be similar to other schools in the District. Substantial reductions in energy inputs for construction materials can be achieved by building with recycled materials, which require substantially less energy to produce than nonrecycled materials. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ reasonable energy conservation practices in the interest of minimizing the cost of doing business. Construction of the school is conventional and is not expected to use unnecessary amounts of material or to use materials in a wasteful manner, since both would increase the cost of construction. Impacts to energy from construction materials would be less than significant.

Conclusion

The proposed project would not result in wasteful, inefficient, or unnecessary use of energy during construction. It is anticipated that the construction equipment would be well maintained and meet the appropriate tier ratings per CALGreen or US Environmental Impact Agency emissions standards, such that an adequate energy-efficiency level is achieved. Also, the proposed project would minimize energy inefficiency by implementing CCR Section 2449, which requires nonessential idling of construction equipment to be restricted to five minutes or less. Construction trips would not result in unnecessary use of energy because the project site is centrally located in an urban area and served by regional highways (e.g. US 101 and Interstate 5) that provide the most direct and shortest routes from various areas of the region. Electrical energy would be available for use during construction from existing power lines, minimizing the need to use generators, which are less efficient than tying into existing infrastructure.

All contractors and waste haulers are required to comply with the City of Encinitas Construction and Demolition Debris Ordinance (Chapter 11.22 of the municipal code), which requires 60 percent of construction waste (including but not limited to asphalt, concrete, brick, dirt, rock, landscaping material, lumber) to be reused, salvaged, or recycled from the project. Therefore, energy use during construction of the project would not be considered inefficient, wasteful, or unnecessary.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.12-1 would be less than significant.

Impact 5.15-2: Operation of the school does not create a land use and pattern that cause wasteful, inefficient, and unnecessary consumption of energy or create buildings that would have excessive energy requirements.

Impact Analysis:

Electricity and Gas

Operational use of energy would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems, security, and control center functions; use of on-site equipment and appliances; and indoor, outdoor, perimeter, and parking lot lighting. The CalEEMod model used to calculate air quality impacts also generates natural gas and electricity usage. As shown in Table 5.15-5, the proposed project would result in less natural gas and electricity use than the existing school use. The reduction in energy use is attributed to the new building standards associated with the proposed project.

Table 5.12-5 Electricity and Gas Consumption

Land Use	Natural Gas Usage (kBTU/yr)	Electricity Usage (kWh/yr)
Existing		
Cardiff Elementary School	278,399	256,953
Existing Parking Lot	0	16,113
Total	**278,399**	**273,066**
Proposed		
Cardiff Elementary School	249,972	221,259
Proposed Parking Lot	0	4,449
Total	**249,972**	**225,708**
NET CHANGE	**-28,427**	**-47,358**

Source: CalEEMod 2016.3.2

Transportation Energy

Student Relocation (2019-2021)

Approximately 147 second- and third-grade students would be temporarily relocated to Ada Harris School during construction activities; kindergarten and first grade would remain at Cardiff School. Second grade would return to Cardiff School in August 2020, and third grade would return to Cardiff School in August 2021. No new trips would be generated as a result of relocation since existing trips to Cardiff School would be rerouted to Ada Harris School. However, student relocation during construction could increase VMT by altering student and teacher trips to and from campus. The two schools are approximately 1.1 miles apart, and

any change in VMT during construction of the proposed project would be short term and would not generate substantial criteria air pollutant emissions.

Operation at Buildout

For the purposes of this analysis, it is assumed that the existing trips and traffic associated with operation of the school would not change. Implementation of the proposed project would result in an increase in one classroom and 22 seats, which would result in an increase in 117 net daily trips, with 38 trips (23 inbound and 15 outbound) during the AM peak hour and 10 trips (4 inbound and 6 outbound) during the PM peak hour (see Section 5.10, *Transportation and Traffic*).

The CalEEMod program estimates average trips associated with commercial and employment land uses. The VMT estimate ranges from 10.8 to 16.6 miles for commercial-customer and commercial-work trips. These trip lengths are longer than necessary for travel to the school; therefore, for this analysis, a VMT more representative of the proposed project has been calculated.

The average trip lengths associated with students were determined by measuring the longest possible home-to-school trip for the school, approximately 0.75 mile north, 1.75 mile east, and 1 mile south. The analysis assumes that the shortest vehicle trip would be 1,000 feet because people closer than 1,000 feet to a school are more likely to walk or ride a bike. The average trip length for Cardiff School is 1.16 miles. Therefore, assuming an increase in 117 daily trips, the project would result in an increase in approximately 24,430 annual VMT.[2]

Fuel Usage

CARB publishes the EMFAC2017 Web Database, which was used to calculate fuel consumption for the 24,430 new vehicle miles traveled. The database search was limited to San Diego County and assumed the 2017 calendar year and light-duty private vehicles with a range of model years and fuel types. Based on the CARB database, the average miles per gallon (mpg) for vehicles in San Diego is 14.3 for the year 2018.[3] Using this estimate, the new vehicle trips associated with the school could result in use of approximately 1,708.4 gallons of fuel for the school year. This is a conservative figure, because as fuel efficiency in passenger cars increases, electric vehicle use expands and fuel usage will decrease. The calculated fuel use represents less than 0.001 percent of the total fuel usage for light vehicles in the region over the same 180-day school year for the year 2018 (177 million gallons) (see Appendix 5.12-1). This increase in fuel usage represents a conservative estimate, with the real use likely being less than calculated. The 0.001 percent increase in VMT associated with this project is considered negligible when compared to the region as a whole.

Conclusion

The proposed project would not result in inefficient, wasteful, and unnecessary consumption of energy. As shown in Table 5.15-4, the proposed project would result in a reduction of energy use compared to existing conditions.

[2] 1.16 miles x 117 daily trips = 135.72 daily miles
135.72 daily miles X 180-day school year = 24,430 annual VMT.
[3] (13.49 mpg [EMFAC 2017 gasoline average] x 15.11 [EMFAC 2017 diesel average]) / 2 fuel types = 14.3 average mpg.

The City of Encinitas and its surrounding area are highly urbanized, with numerous gasoline fuel facilities and infrastructure. Consequently, the proposed project would not result in a substantial demand for energy that would require expanded supplies, the construction of other infrastructure, or expansion of existing facilities. This impact is considered less than significant.

Level of Significance before Mitigation: Based on the analysis above, Impact 5.15-2 would be less than significant.

5.12.4 Cumulative Impacts

The proposed project will have a stable energy use over time and, as shown in Table 5.15-4, will reduce energy use from the current condition. The project would not significantly contribute to VMT or gasoline consumption and would therefore not add to the cumulative demand for power in the region. Therefore, impacts from the proposed project would be less than cumulatively considerable.

5.12.5 Applicable Regulations

- 24 California Code of Regulations Part 6
- 2016 Building and Energy Efficiency Standards
- California Green Building Standards Code (CAL Green)

5.12.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.15-1 and 5.15-2.

5.12.7 Mitigation Measures

No mitigation measures are required.

5.12.8 Level of Significance After Mitigation

Impacts would be less than significant.

5.12.9 References

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6. Significant Unavoidable Adverse Impacts

At the end of Chapter 1, *Executive Summary*, is a table that summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. Mitigation measures would reduce the level of impact, and the project would not result in significant unavoidable adverse impacts.

6. Significant Unavoidable Adverse Impacts

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7. Alternatives to the Proposed Project

7.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines § 15126.6[a]).

This chapter identifies and evaluates potential alternatives to the proposed project.

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives analysis in an EIR. Key provisions are:

- "[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (15126.6[b])

- "The specific alternative of 'no project' shall also be evaluated along with its impact." (15126.6[e][1])

- "The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." (15126.6[e][2])

- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." (15126.6[f])

- "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6[f][1]).

- "Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." (15126.6[f][2][A])

- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (15126.6[f][3])

For each development alternative, this analysis:

- Describes the alterative.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

According to Section 15126.6(d) of the CEQA Guidelines, "[i]f an alternative would cause…significant effects in addition those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed."

7.1.1 Project Objectives

The following objectives have been established for the proposed Cardiff School Modernization and Reconstruction Project and will aid decision makers in their review of the project and project alternatives.

1. Implement facility improvements at Cardiff School per the District's Guiding Principles for electorate-approved Measure GG:
    a. Create a safe and secure environment.
    b. Connect the school to the community: place community and active uses along the school's perimeter.
    c. Prioritize green space and public views; provide ample play space.
    d. Improve traffic flow and safety for pick-up.
    e. Emphasize sustainability and environmentally focused design.
    f. Prioritize learning spaces; create useable outdoor learning environments.
2. Replace portable classrooms with permanent classroom facilities.
3. Renovate/retrofit the "Brick Building."
4. Maximize use of limited District funds.
5. Maximize use of District-owned property.
6. Regain and maintain compliance with the Land and Water Conservation Fund agreement.

7.2 POTENTIALLY SIGNIFICANT IMPACTS OF THE PROJECT

A primary consideration in defining project alternatives is their potential to reduce or eliminate significant impacts and to meet most of the objectives. Pursuant to CEQA Guidelines Section 15126.6(b), alternatives to the proposed project include those that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be costlier.

Based on the analyses in Chapter 5, *Environmental Analysis*, the proposed project would result in significant environmental effects prior to mitigation on these environmental resource topics:

- **Biological Resources.** Development of the project could impact special status bat and migratory nesting bird species.
- **Cultural Resources.** Earthmoving activities during construction may uncover buried archaeological and paleontological resources. Improvements to the Little Brick Building could result in impacts to an historical resource.
- **Geology and Soils.** Project construction could expose people and structures to unstable and expansive soils.
- **Tribal Cultural Resources.** Earthmoving activities during construction may uncover buried tribal cultural artifacts.

All environmental resource topics would result in less than significant impacts after implementation of regulatory requirements and mitigation measures.

7.3 ALTERNATIVES CONSIDERED AND REJECTED DURING THE PROJECT PLANNING PROCESS

The District considered numerous design alternatives during its planning process. The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this EIR.

7.3.1 Alternative 1, Maintain Multipurpose Room in Current Location

During planning exercises for Bond Measure GG, which is funding this project, the Cardiff School District had determined the existing multipurpose building was not large enough per code to legally accommodate entire school events and had also determined that the current location compromised student safety and campus security. The District held a community workshop in June 2017 where the District and public attendees confirmed the desire to locate the multipurpose building where it was directly accessible to the public without jeopardizing student safety and security. The District conducted conceptual design and planning meetings where the District addressed key site constraints and concerns related to existing

conditions. The District and planning meeting attendees confirmed that the existing multipurpose building is not an adequately sized facility and is not appropriate in its current location at the southeastern portion of the site due to visibility and access difficulties and the threat to student safety and campus security. Multiple versions of the conceptual design and one preferred conceptual site plan have showed the auditorium proposed at various locations throughout the site, none of which presented the auditorium in its existing location. Since the conceptual design meeting, Cardiff residents have requested the District consider keeping the auditorium in its existing condition and location, as there are concerns that the proposed new multipurpose building would block views of the ocean from Montgomery Avenue.

Conclusion

The District considered Alternative 1, Maintain Multipurpose Room in Current Location, as a potential project alternative and determined that it was infeasible for the following reasons:

- The existing auditorium space is inadequate to support the site occupants, as proposed in the project.
- The location of the multipurpose building would not have convenient access to parking, and people would have to walk across the campus from the parking area on Montgomery Avenue to access the building, compromising campus security and increasing the risk to student safety.
- The location of the multipurpose building would be isolated and would be inferior as related to supervision of students compared to the proposed project.
- The large auditorium space would not be located adjacent to the large public gathering areas in order to support school and community activities.
- The proposed food service building (Building J), and Buildings F and G would need to be relocated, which would impact site configuration and design.
- The proposed 6(f)(3) boundary conversion would need to be reconfigured and could result in insufficient required recreational space.

Additionally, Alternative 1 fails to meet the following project objectives:

- Implement facility improvements at Cardiff School per the District's Guiding Principles for electorate-approved Measure GG:
  - Create a safe and secure environment.
  - Prioritize learning spaces; create useable outdoor learning environments.
- Maximize use of limited District funds.

- Maximize use of District-owned property.
- Regain and maintain compliance with the Land and Water Conservation Fund agreement.

7.3.2 Alternative 2, Scheme B Site Plan

At the Cardiff School Conceptual Site Design Meeting #2, held on August 3, 2017, the District presented four site design schemes based on site design principles and main program elements. The District and planning committee attendees determined that of the four project alternatives, Scheme B met the best combination of site design principles and main program elements. The Scheme B Site Plan is included as Figure 7-1, *Scheme B Site Plan.*

The Scheme B Site Plan proposed to increase the number of classrooms from 25 to 27 and projected that a minimum of 14 classrooms would be needed for interim housing. The Scheme B classroom facilities would also be reconfigured from the proposed project site plan, but would be constructed within generally the same locations. An asphalt hardcourt, kindergarten and extended day care buildings, and a dedicated drop-off and parking area would be constructed over the existing baseball field, and the grass playfield would be extended to the southern portion of the site near the intersection of Mozart Avenue and San Elijo Avenue. The existing brick building would be converted to a new "coffee spot".

The Scheme B Site Plan proposes four total driveways on Montgomery Avenue; the western and easternmost driveways would provide west to east access to the student loading area, and the two interior driveways would provide east to west access to parking spaces. The Scheme B Site Plan proposed expansion of the southern drop-off area on Mozart Avenue. Additionally, Alternative 2 proposed conversion of the existing brick building at the northwestern portion of campus into a new coffee shop with an ocean view terrace.

Conclusion

The District considered Alternative 2, Scheme B Site Plan, as a potential project alternative and determined that it was infeasible for the following reasons:

- Extended day and kindergarten drop-off and parking needs and the projected traffic and loading queues proposed to be accommodated by the expanded drop-off on Mozart Avenue could be accommodated by the proposed loading improvements on Montgomery Avenue.
- Expansion of the grass playfield would remove play structures from the site.
- The proposed hardcourt area would be not be sufficient for the needs of the students.
- The queuing at the expanded drop-off on Mozart Avenue would be accommodated by the new parking and loading area on Montgomery Avenue.
- The Scheme B Site Plan proposed an increase of 6 to 8 classrooms from existing conditions.

Additionally, Alternative 2 fails to meet the following project objectives:

- Implement facility improvements at Cardiff School per the District's Guiding Principles for electorate-approved Measure GG:
  - Improve traffic flow and safety for pick-up.
  - Emphasize sustainability and environmentally focused design.
  - Prioritize learning spaces; create useable outdoor learning environments.
- Replace portable classrooms with permanent classroom facilities.
- Renovate/retrofit the "Brick Building."
- Maximize use of limited District funds.
- Maximize use of District-owned property.
- Regain and maintain compliance with the Land and Water Conservation Fund agreement.

7.4 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Two alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain some of the basic objectives of the project, but which may avoid or substantially lessen any of the significant effects of the project.

- Alternative A. No Project
- Alternative B. Reduced Capacity Alternative

7.5 ALTERNATIVE A. NO PROJECT ALTERNATIVE

The CEQA Guidelines require analysis of a No Project Alternative. The purpose of this alternative is to describe and analyze a scenario under which the proposed project is not implemented to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The No Project Alternative analysis must discuss the existing site conditions as well as what would reasonably be expected to occur in the foreseeable future based on any current plans if the project were not approved, and it must be consistent with available infrastructure and community services.

Under Alternative A, the proposed improvements at Cardiff School would not be implemented. The existing facilities at the project site would remain in their current state and the program would continue its current operations.

Figure 7-1 - Scheme B Site Plan

7. Alternatives



0 200
Scale (Feet)

Source: Spurlock Landscape Architects; Studio E Architects, June 6, 2018.

7. Alternatives to the Proposed Project

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7.5.1 Aesthetics

Under Alternative A, the existing facilities at the Cardiff School would remain as they are. Since no physical or operational changes would occur at the project site, Alternative A would result in no impact to visual/aesthetic resources. Although the proposed project would beautify the campus through landscaping, new buildings, renovated buildings, and new paving, these impacts would result in changes of views across the project site to the ocean from adjacent properties. While Alternative A may result in changes to landscaping, overall the existing views across the property would remain unchanged. Because this alternative would result in no change to views across the property it is considered to have less impact to aesthetics when compared to the proposed project.

7.5.2 Air Quality

No construction would occur under this alternative, and no new emissions would be generated. Alternative A would be environmentally superior to the proposed project for air quality.

7.5.3 Biological Impacts

Because no changes would be made to the project site under Alternative A, no impact to biological resources would occur. Alternative A would be environmentally superior to the proposed project for biological resources.

7.5.4 Cultural Resources

The existing improvements would remain unchanged, and no earthwork or soil disturbance would occur under Alternative A. Any undiscovered, subsurface cultural resources below the project site would remain in their existing condition and would not be affected. No work to stabilize and provide seismic retrofit of the little brick building would occur. Therefore, Alternative A would be environmentally superior to the proposed project for cultural resources.

7.5.5 Geology and Soils

No construction would occur under this alternative, and the existing geologic conditions would remain unchanged. Alternative A would be environmentally superior to the proposed project for geology and soils.

7.5.6 Greenhouse Gas Emissions

No construction would occur under this alternative, and no new emissions that could contribute to climate change would be generated. Alternative A would be environmentally superior to the proposed project for GHG emissions.

7.5.7 Hydrology and Water Quality

No soil disturbance or changes to site hydrology and water quality would occur. Alternative A would be environmentally superior to the proposed project for hydrology and water quality.

7.5.8 Land Use and Planning

Both the existing school and the proposed project are consistent with local and regional plans. As a result, this alternative would have impacts identical to those of the proposed project.

7.5.9 Noise

No construction would occur under this alternative, and existing ambient noise levels would remain unchanged. Alternative A would be environmentally superior to the proposed project for noise.

7.5.10 Transportation and Traffic

Alternative A would not generate new trips to the project site or change traffic patterns in the community. Therefore, Alternative A would be environmentally superior to the proposed project for traffic.

7.5.11 Tribal Cultural Resources

No earthwork or soil disturbance would occur under Alternative A, and any undiscovered, subsurface cultural resources below the project site would not be altered. Alternative A would be environmentally superior to the proposed project for tribal cultural resources.

7.5.12 Energy

No construction would occur under this alternative, and effects to energy would not occur. However, because the existing buildings are outdated in terms of energy use, Alternative A would use more energy than the proposed project. The renovation and construction of the proposed project would result in buildings that are consistent with Title 24 and the Green Building Code of the state. Therefore, Alternative A would result in the consumption of more energy than the proposed project; it would have greater impacts than the proposed project.

7.5.13 Conclusion

Alternative A, No Project, would be environmentally superior to the proposed project for all environmental resources analyzed in the EIR except for land use and planning, in which it would be environmentally similar, and energy, in which it would be environmentally inferior. Alternative A would not meet the below project objectives:

- Implement facility improvements at Cardiff School per the District's Guiding Principles for electorate-approved Measure GG:
  - Prioritize green space and public views; provide ample play space.
  - Improve traffic flow and safety for pick-up.
  - Emphasize sustainability and environmentally focused design.
  - Prioritize learning spaces; create useable outdoor learning environments.
- Replace portable classrooms with permanent classroom facilities.
- Renovate/retrofit the "Brick Building."
- Maximize use of limited District funds.
- Maximize use of District-owned property.
- Regain and maintain compliance with the Land and Water Conservation Fund agreement.

7.6 ALTERNATIVE B. REDUCED CAPACITY

Alternative B, Reduced Capacity, is a reduced intensity alternative that proposes no net change in the number of classrooms from existing conditions. The improvements as proposed by the project would occur, minus one new classroom. The classroom would be reduced either by conversion of a proposed space to a nonclassroom use, or via a redesign of one of the proposed buildings with one less room. The operating capacity of the school would be reduced under Alternative B compared to the proposed project, and therefore operational impacts would incrementally decrease and would be similar to existing conditions.

7.6.1 Aesthetics

The proposed Alternative B improvements would continue to be constructed with one less classroom space, which would slightly modify the proposed interior spaces or exterior configuration. The new facilities would be constructed with the same materials in the same locations. New lighting proposed would continue to be installed. Therefore, Alternative B impacts would be similar to the proposed project for aesthetics.

7.6.2 Air Quality

The proposed Alternative B area of impact of construction would be the same or slightly less than that of the proposed project. The amount of construction required would be similar to the proposed project but would likely result in a shorter construction schedule; therefore, construction related emissions and air quality impacts would be less than the proposed project. The operational emissions would be similar to those experienced under the proposed project; the reduction in one classroom space would not result in operational changes to air quality emissions compared to the project. Therefore, Alternative B impacts would be less than the proposed project for air quality.

7.6.3 Biological Impacts

The proposed Alternative B would continue to construct the proposed improvements within the general existing developed footprint, and would not impact sensitive habitat. Similar to the proposed project, the loss of trees would require mitigation to address potential impacts to nesting birds and special status bats. Therefore, after mitigation, Alternative B impacts would be similar to the proposed project for biological resources.

7.6.4 Cultural Resources

Alternative B would result in the same amount of earthwork and grading. Similar to the proposed project, any potential discoveries of subsurface cultural resources would be treated in accordance with the provisions of Public Resources Code, Section 21083.2. Therefore, after mitigation, Alternative B impacts would be similar to the proposed project for cultural resources.

7.6.5 Geology and Soils

Similar to the proposed project, the improvements would be constructed to account for site-specific geotechnical considerations in accordance with the 2016 California Building Code. Therefore, after mitigation, Alternative B impacts would be similar to the proposed project for geology and soils.

7.6.6 Greenhouse Gas Emissions

See Section 7.6.2, *Air Quality*. Construction emissions caused by Alternative B would be similar or slightly less than the proposed project with construction of one less classroom; therefore, its contribution to GHG emissions during construction would be incrementally less than the proposed project's. Therefore, Alternative B impacts would be less than the proposed project for GHG emissions.

7.6.7 Hydrology and Water Quality

The combined area of disturbance under Alternative B would be the same as the proposed project. Therefore, potential impacts during construction would be the same as the proposed project. Alternative B would have the same operation as the proposed project. Therefore, Alternative B impacts would be similar to the proposed project for hydrology and water quality impacts.

7.6.8 Land Use and Planning

Similar to the proposed project, Alternative B would not change operation of the site as a school. Alternative B would be consistent with applicable land use planning policies and regulations; therefore, Alternative B impacts would be similar to the proposed project for land use and planning.

7.6.9 Noise

Alternative B would generate a similar amount of construction noise to the proposed project. Construction would occur at the same locations and would be conducted for a similar amount of time as the proposed project; Alternative B would continue to comply with the allowable construction hours and noise volumes. Best management practices and mitigation would continue to be implemented; therefore, Alternative B impacts would be similar to the proposed project for noise.

7.6.10 Transportation and Traffic

Construction of the Alternative B improvements would result in a similar number of construction vehicle and worker trips as the proposed project. Operation of the site under Alternative B would result in a similar volume of traffic compared to existing conditions and a reduced volume of traffic compared to the proposed project. Therefore, Alternative B impacts would be superior to the proposed project for traffic.

7.6.11 Tribal Cultural Resources

Alternative B would result in the same amount of earthwork and grading. Similar to the proposed project, any potential findings of subsurface tribal cultural resources would be treated in accordance with the provisions of Public Resources Code, Section 21083.2. Therefore, Alternative B impacts would be similar to the proposed project for tribal cultural resources.

7.6.12 Energy

Under Alternative B, construction efforts would be similar to the proposed project but would result in a shorter construction schedule for construction of one less classroom, and would result in less energy consumption. The Alternative B improvements would operate with the same electrical, gas, and plumbing fixtures, but would use less energy over the life of the project with one less classroom. Therefore, Alternative B impacts would be less than the proposed project for energy.

7.6.13 Conclusion

Overall, Alternative B, Reduced Capacity, would not create new significant environmental impacts at the project site. Project impacts under Alternative B are mainly related to conversion of space within the proposed project facilities or redesign of a proposed building to have one less classroom. As provided above, this would result in an incremental reduction in the environmental impacts to air quality, GHG, traffic, and energy compared to the proposed project. Alternative B would be neither superior nor inferior to the

proposed project in the environmental impacts to biological resources, cultural resources, geology and soils, hydrology and water quality, land use and planning, noise, and tribal cultural resources.

Alternate B would not meet the following project objectives:

- Maximize use of limited District funds.
- Maximize use of District-owned property.

7.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As required by CEQA Guidelines, Section 15126.6, an EIR must identify an "environmentally superior alternative," which is the alternative that has the least impact on the environment or would be capable of avoiding or substantially lessening any significant impacts of the project. Table 7-1, *Summary of Alternatives Compared to the Proposed Project,* shows each alternative's environmental impacts compared to the impacts of the proposed project.

Table 7-1 Summary of Alternatives Compared to the Proposed Project

	Proposed Project	No Project (Alternative A)	Reduced Capacity (Alternative B)
1. Aesthetics	LTS	NI / +	LTS / =
2. Air Quality	LTS	NI / +	LTS / +
3. Biological Resources	LTS-MM	NI / +	LTS-MM / =
4. Cultural Resources	LTS-MM	NI / +	LTS-MM / =
5. Geology and Soils	LTS	NI / +	LTS/ =
6. Greenhouse Gas Emissions	LTS	NI / +	LTS / +
7. Hydrology and Water Quality	LTS	NI / +	LTS / =
8. Land Use and Planning	LTS	NI / =	LTS / =
9. Noise	LTS-MM	NI / +	LTS-MM / =
10. Transportation and Traffic	LTS	NI / +	LTS / +
11. Tribal Cultural Resources	LTS-MM	NI / +	LTS-MM / =
12. Energy	LTS	NI / -	LTS / +
		+ 10 = 1 -- 1	+ 4 = 8

NI	Finding of no environmental impact
LTS	Finding of less than significant environmental impact
LTS-MM	Finding of less than significant environmental impact with mitigation measure
SU-MM	Finding of significant and unavoidable environmental impact with mitigation measure
+	Alternative is superior (reduced impacts compared) to the proposed project
-	Alternative is inferior (greater impacts compared) to the proposed project
=	Alternative is neutral to the proposed project or there is not enough information to make a superior or inferior determination

The alternative that results in the least environmental impact, considering both the frequency and magnitude of the impact, is the environmentally superior alternative. In cases where the No Project Alternative is environmentally superior, the EIR is required to identify the next environmentally superior alternative among the others evaluated. Alternative A is the alternative that results in the least environmental impact. As shown in Table 7-1, Alternative A, the No Project Alternative, would be environmentally superior to the proposed project under 10 resource areas analyzed in the EIR, environmentally neutral under 1 resource area, and environmentally inferior under 1 resource area; Alternative B, Reduced Capacity Alternative, would be environmentally superior in 4 resource areas and environmentally neutral under 8 resource areas. Therefore, the No Project Alternative is the environmentally superior alternative, and the Reduced Capacity is the next environmentally superior alternative.

Though it is necessary to identify the environmentally superior alternative, decision-makers are free to select the proposed project or any of the alternatives evaluated in this EIR. It should be noted that none of the alternatives considered met all of the project objectives. The No Project Alternative did not meet 9 of the 12 objectives and the Reduced Capacity Alternative did not meet 2 of the 12 objectives.

7. Alternatives to the Proposed Project

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8. Impacts Found Not to Be Significant

California Public Resources Code Section 21003 (f) states: "…it is the policy of the state that…[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." This policy is reflected in the State California Environmental Quality Act (CEQA) Guidelines (Guidelines) Section 15126.2(a), which states that "[a]n EIR [Environmental Impact Report] shall identify and focus on the significant environmental impacts of the proposed project" and Section 15143, which states that "[t]he EIR shall focus on the significant effects on the environment." The Guidelines allow use of an Initial Study to document project effects that are less than significant (Guidelines Section 15063[a]). Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant, and were therefore not discussed in detail in the Draft EIR.

8.1 ASSESSMENT IN THE INITIAL STUDY

The Initial Study prepared for the proposed project in May 2018 determined that impacts listed below would either have no impact or a less than significant impact on the environment. Consequently, they have not been further analyzed in this Draft EIR (DEIR). Please refer to Appendix 1-1 for explanation of the basis of these conclusions. Impact categories and questions in Table 8-1, below, are summarized directly from the CEQA Environmental Checklist, as contained in the Initial Study.

8. Impacts Found Not to Be Significant

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
I. AESTHETICS. Would the project:	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less Than Significant
II. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant
e) Create objectionable odors affecting a substantial number of people?	Less Than Significant
IV. BIOLOGICAL RESOURCES. Would the project:	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less Than Significant
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact

8. Impacts Found Not to Be Significant

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
V. CULTURAL RESOURCES. Would the project:	
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	Less Than Significant
VI. GEOLOGY AND SOILS. Would the project:	
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	No Impact
ii) Strong seismic ground shaking?	Less Than Significant
iv) Landslides?	Less Than Significant
b) Result in substantial soil erosion or the loss of topsoil?	Less Than Significant
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant
b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less Than Significant
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Less Than Significant
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	No Impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	No Impact
IX. HYDROLOGY AND WATER QUALITY. Would the project:	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	No Impact

8. Impacts Found Not to Be Significant

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	No Impact
j) Expose people or structures to inundation by seiche, tsunami, or mudflow?	Less Than Significant
X. LAND USE AND PLANNING. Would the project:	
a) Physically divide an established community?	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	No Impact
XI. MINERAL RESOURCES. Would the project:	
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	No Impact
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No Impact
XII. NOISE. Would the project result in:	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	No Impact
XIII. POPULATION AND HOUSING. Would the project:	
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less Than Significant
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	No Impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	No Impact
XIV. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	
a) Fire protection?	Less Than Significant
b) Police protection?	Less Than Significant
c) Schools?	No Impact
d) Parks?	No Impact
e) Other public facilities?	No Impact
XV. RECREATION.	
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	Less Than Significant
XVI. TRANSPORTATION/TRAFFIC. Would the project:	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	No Impact
e) Result in inadequate emergency access?	Less Than Significant

Table 8-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	Less Than Significant
XVIII. UTILITIES AND SERVICE SYSTEMS. Would the project:	
a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?	Less Than Significant
b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less Than Significant
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less Than Significant
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	Less Than Significant
e) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less Than Significant
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Less Than Significant
g) Comply with federal, state, and local statutes and regulations related to solid waste?	Less Than Significant

8. Impacts Found Not to Be Significant

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9. Significant Irreversible Changes Due to the Proposed Project

The CEQA Guidelines requires that an Environmental Impact Report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. Specifically, Section 15126.2(c) of the CEQA Guidelines states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highways improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The following significant irreversible changes would be caused by implementation of the proposed Cardiff School Modernization and Reconstruction project:

- Construction of the proposed improvements would require the commitment of nonrenewable and/or slowly renewable energy resources, including gasoline, diesel fuel, electricity; human resources; and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, and water.

- Operation of the proposed project would require continued use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water, similar to existing school operations.

- Operation of the proposed improvements would require a continued commitment of social services and public maintenance services (e.g., police, fire, and sewer and water services), similar to that existing for the school's current operations.

The commitment of resources required for the reconstruction and continued operation of the site as an elementary school would limit the availability of resources for future generations or for other uses during the life of the project.

9. Significant Irreversible Changes Due to the Proposed Project

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10. Growth-Inducing Impacts of the Proposed Project

Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects will be examined through analysis of the following questions:

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?

- Would this project result in the need to expand one or more public services to maintain desired levels of service?

- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?

The proposed Cardiff School Modernization and Reconstruction project is the redevelopment and modernization of an existing school campus with similar facilities for continued use of the site as a school that serves the surrounding community. The project site is in an urban area served by existing infrastructure, including water and sewer mains and electricity and natural gas services. The improvements would only affect the existing school site and would not remove obstacles to growth or affect population growth.

10. Growth-Inducing Impacts of the Proposed Project

Would this project result in the need to expand one or more public services to maintain desired levels of service?

The project would modernize and reconstruct an existing school campus with similar uses. It is not growth inducing. Though the project would increase enrollment capacity by 22 seats (1 classroom), the expanded capacity would not result in the need for additional public government services or expanded utility infrastructure; see section 5.14*, Public Services,* and section 5.18, *Utilities and Service Systems,* of the Initial Study (Appendix 1-1).

Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

Construction of the proposed project would generate short-term employment, which would be absorbed from the regional labor force and would not attract new workers to the region. Operation of the project would increase total employment at the District by one teacher—to accommodate the increase in enrollment capacity (1 classroom / 22 seats)—that would also be absorbed from the regional labor force.

Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

The need for the project is to improve facilities at the Cardiff School campus in order to maintain the school's programs. District approval would not set a precedent that could encourage and facilitate local and regional activities and government actions that could significantly affect the environment. School modernization, expansion, and reconstruction projects and programs are common statewide and nationwide.

11. Organizations and Persons Consulted

EDCO Waste and Recycling Services

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11. Organizations and Persons Consulted

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12. Qualifications of Persons Preparing EIR

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Appendix 1-1 Initial Study and Notice of Preparation

Appendices

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May 2018 | **Notice of Preparation and Initial Study**





CARDIFF SCHOOL MODERNIZATION AND RECONSTRUCTION PROJECT

Cardiff School District

PLACEWORKS

CARDIFF SCHOOL DISTRICT

FILED
Ernest J Dronenburg, Jr. Recorder County Clerk
MAY 07 2018
BY DEPUTY

BOARD OF TRUSTEES
Dave Clark, Member
Mark Whitehouse, Member

Notice of Preparation of a Draft Environmental Impact Report for Proposed Cardiff School Modernization and Reconstruction Project

Date: May 8, 2018

To: State Clearinghouse, County Clerk, Responsible Agencies, Organizations, and Interested Parties

From: Cardiff School District, 1888 Montgomery Avenue, Cardiff-by-the-Sea, CA 92007

Subject: Notice of Preparation of a Draft Environmental Impact Report for the Proposed Cardiff School Modernization and Reconstruction Project

Cardiff School District (District) will initiate preparation of an Environmental Impact Report (EIR) for the proposed Cardiff School Modernization and Reconstruction Project (project). The District is the Lead Agency under the California Environmental Quality Act (CEQA) and State CEQA Guidelines (Public Resources Code, §§ 21000 et seq.; California Code of Regulations, Title 14, Chapter 3 §§ 15000–15387) and will prepare an EIR for the proposed project.

This Notice of Preparation (NOP), which is supported by an Initial Study, provides information describing the proposed project and its potential environmental effects in order to solicit public and agency comments as to the scope of environmental issues, reasonable alternatives, and mitigation to be explored in the Draft EIR.

The Draft EIR will describe the project need, goals, and objectives; baseline environmental conditions in the project study area; and the potential direct, indirect, and cumulative environmental effects associated with implementation of the proposed project. Mitigation measures and alternatives to the proposed project and the potential effects of those alternatives will also be discussed in the Draft EIR.

Project Location

The project site is at Cardiff Elementary School, 1888 Montgomery Avenue, in the beach community of Cardiff-by-the-Sea, City of Encinitas, California. The site is 7.4 acres and roughly triangular in shape. It is surrounded by Montgomery Avenue on the north, Mozart Avenue on the south, and San Elijo Avenue on the west.

CARDIFF SCHOOL DISTRICT

Jill Vinson, Superintendent

BOARD OF TRUSTEES
Siena Randall, President
David Ross, Clerk
Nancy Orr, Member
Dave Clark, Member
Mark Whitehouse, Member

Project Description

The proposed project entails demolition of five 1-story buildings, a portion of another building, and eight relocatable classrooms; construction of ten 1-story wood-framed buildings and a two-classroom addition to an existing building; and modernization of two existing buildings. The project would increase the school's building area by 4,760 net square feet, including one new classroom and one specialty lab. The project would also enhance onsite passenger loading and parking. Construction would commence summer 2019 and be completed in 18 months.

Probable Environmental Effects to Be Evaluated in the Draft EIR

Potential environmental effects anticipated to be evaluated in the Draft EIR are: aesthetics, air quality, biological resources, cultural resources, geology/soils, greenhouse gas emissions, hydrology/water quality, land use/planning, noise, transportation/traffic, and tribal cultural resources. The project site is not on a list of sites enumerated under Government Code § 65962.5.

Response to the Notice of Preparation

Please provide your written comments, including the specific statutory responsibilities of your agency, as applicable. Written comments on the NOP and on the contents of the forthcoming Draft EIR should be submitted by **June 6, 2018**, and addressed to:

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007
E-mail: csdbpm@gmail.com

Document Availability

Copies of the NOP and Initial Study are available for review at:

- Cardiff School District Office: 1888 Montgomery Avenue, Encinitas
- Cardiff-by-the-Sea Library: 2081 Newcastle Avenue, Encinitas
- District website: https://www.cardiffschools.com/cardiffschools

FILED IN THE OFFICE OF THE COUNTY CLERK
San Diego County on MAY 07 2018
Posted MAY 07 2018 **Removed** _____
Returned to agency on _____
Deputy C. Reison

May 2018 | Initial Study

CARDIFF SCHOOL MODERNIZATION AND RECONSTRUCTION PROJECT

Cardiff School District

Prepared for:

Cardiff School District
Contact: Randy Peterson, Bond Program Manager
1888 Montgomery Avenue
Cardiff, CA 92007
760.632.5890

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Abbreviations

AAQS	ambient air quality standards
AB	Assembly Bill
afy	acre-feet per year
APN	Assessor's Parcel Number
BMP	best management practice
CalRecycle	California Department of Resources, Recycling, and Recovery
CARB	California Air Resources Board
CBC	California Building Code
CEQA	California Environmental Quality Act
EIR	environmental impact report
GHG	greenhouse gas
gpd	gallons per day
mgd	million gallons per day
MHCP	multiple habitat conservation program
MRZ	mineral resource zone
NCTD	North County Transit District
O_3	ozone
PM	particulate matter
RAQS	regional air quality strategy
SANDAG	San Diego Association of Governments
SB	Senate Bill
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDWD	San Dieguito Water District
tpd	tons per day
UWMP	urban water management plan
WRF	water reclamation facility

Abbreviations

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1. Introduction

Cardiff School District (District) proposes to modernize and reconstruct Cardiff Elementary School, 1888 Montgomery Avenue in the community of Cardiff-by-the-Sea, City of Encinitas, San Diego County. The modernization project will address the most critical physical needs of buildings and grounds at the campus through building replacement, renovation, modernization, and reconfiguration. The proposed project is required to undergo an environmental review pursuant to the California Environmental Quality Act (CEQA).

As the lead agency with the principal responsibility for carrying out and approving the project, the District is required to consider the project's potential environmental consequences and determine if its benefits outweigh any significant effects. This document is an "initial study" of the effects.

1.1 ENVIRONMENTAL PROCESS

A "project," which is an activity that may cause a direct or indirect physical change in the environment, is required to undergo environmental review, which is governed by two principal regulations: CEQA (Public Resources Code Sections 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Sections 15000 et seq.).

CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of discretionary activities and to identify ways to avoid or reduce their environmental effects by requiring implementation of feasible mitigation measures and/or alternatives. Compliance with CEQA applies to all California government agencies at all levels, including local, regional, and state agencies, boards, commissions, and special districts, such as school districts.

1.1.1 Initial Study

This initial study has been prepared to determine if the proposed project could have a significant impact on the environment. The purposes of this initial study, as described in the State CEQA Guidelines Section 15063(c), are to

1) provide the lead agency with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR), Mitigated Negative Declaration or Negative Declaration (ND);

2) enable the lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration;

3) assist the preparation of an EIR, if one is required by: (A) focusing the EIR on the effects determined to be significant, (B) identifying the effects determined not to be significant, (C) explaining the reasons for determining that potentially significant effects would not be

significant, and (D) identifying whether a program EIR, tiering or another appropriate process can be used for analysis of the project's environmental effects;

4) facilitate environmental assessment early in the design of a project;

5) provide documentation of the factual basis for the finding in a ND that a project will not have a significant effect on the environment;

6) eliminate unnecessary EIRs; and

7) determine whether a previously prepared EIR could be used with the project.

The findings in this initial study have determined that a focused, Project EIR is the appropriate level of environmental documentation for the proposed project.

1.1.2 Environmental Impact Report

The EIR will include information necessary for agencies to meet statutory responsibilities related to the proposed project. State and local agencies will use the EIR when considering any permit or other approvals necessary to implement the project. The environmental topics that have been identified for study in the EIR are provided in an environmental checklist; see Section 4.2, *Environmental Factors Potentially Affected*.

Following consideration of any public comments on the initial study, a Draft EIR will be completed and then circulated to the public and affected agencies for review and comment. One of the primary objectives of CEQA is to enhance public participation in the planning process, and public involvement is an essential feature of CEQA. Community members are encouraged to participate in the environmental review process, request to be notified, monitor newspapers for formal announcements, and submit substantive comments at every possible opportunity afforded by the District. The environmental review process provides several opportunities for the public to participate through public notice and public review of CEQA documents and public meetings. Additionally, lead agencies are required to respond to public comments in the Final EIR and consider comments from the scoping process in the preparation of the Draft EIR.

1.2 IMPACT TERMINOLOGY

The following terminology is used to describe the level of significance of impacts.

- A finding of ***no impact*** is appropriate if the analysis concludes that the project would not affect the particular topic area in any way.
- An impact is considered ***less than significant*** if the analysis concludes that the project would cause no substantial adverse change to the environment.
- An impact is considered ***less than significant with mitigation incorporated*** if the analysis concludes that the project may have a substantial adverse effect on the environment; however, with the inclusion of environmental commitments or other enforceable mitigation measures, those adverse effects would be

reduced or avoided and the project would ultimately result in no substantial adverse change to the environment.

- An impact is considered ***potentially significant*** if the analysis concludes that the project could have a substantial adverse effect on the environment. If any impact is identified as potentially significant, additional analysis and preparation of an EIR is required. The EIR need only include those potentially significant impacts identified in the Initial Study.

1.3 ORGANIZATION OF THE INITIAL STUDY

The content and format of this report are designed to meet the requirements of CEQA. This Initial Study contains the following sections:

- **Section 1, *Introduction***, identifies the purpose and scope of the initial study and the terminology used.
- **Section 2, *Environmental Setting,*** describes the existing conditions, surrounding land uses, general plan designation, and existing zoning at the project site and surrounding area.
- **Section 3, *Project Description,*** identifies the location and background and describes the proposed improvements.
- **Section 4, *Environmental Checklist,*** presents the CEQA checklist and the significance finding for each resource topic.
- **Section 5, *Environmental Analysis,*** provides an evaluation of the impact categories in the environmental checklist and identifies mitigation measures, if applicable.
- **Section 6, *References,*** identifies all references and individuals cited in this initial study.
- **Section 7, *List of Preparers,*** identifies the individuals who prepared the initial study and technical studies and their areas of specialty.

1. Introduction

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2. Environmental Setting

2.1 PROJECT LOCATION

The project site encompasses the Cardiff School property at 1888 Montgomery Avenue in the beach community of Cardiff-by-the-Sea, City of Encinitas. The property is roughly triangular and surrounded by Montgomery Avenue on the north, Mozart Avenue on the south, and San Elijo Avenue on the west. The City of Encinitas is surrounded by the City of Carlsbad to the north, the City of Solana Beach to the south, and unincorporated areas of San Diego County to the east. Figure 1, *Regional Location*, and Figure 2, *Local Vicinity,* show the project site from its regional and local contexts.

2.2 EXISTING CONDITIONS

The project site is approximately 7.4 acres and consists of Assessor's Parcel Numbers (APNs) 260-3400-100 and 260-3400-200. The site gently slopes down from east to west toward the ocean; site elevations range from 102 feet above mean sea level near the intersection of Montgomery Avenue and Mozart Avenue to 81 and 78 feet in the southwest and northwest corners, respectively.

Facilities

The Cardiff School campus includes school buildings on the eastern portion of the site and open space and field areas on the western portion. The campus's 40,465 net square feet of building area includes 19 instructional classrooms, programmatic laboratories (art, learning, and computer), a library/media center, District administration offices, a multipurpose building, and a kitchen with outdoor lunch court. The administration building, library/media center, and academic labs/rooms were constructed in 2001; portable classrooms were installed between 1985 and 1995; the multipurpose building was constructed in 1960; and the remaining permanent classroom buildings were built between 1950 and 1960.

Outdoor recreational uses include baseball and soccer fields at the northwest and southwest portions of the campus, respectively; three areas with playground structures and swings, one between the two fields and two at the eastern portion of the site for the school's kindergarten program; and a blacktop play area east of the soccer field. The westernmost portion of the site is recognized as outdoor recreational space by the Land and Water Conservation Fund Act.

The property contains a brick building near the corner of San Elijo Avenue and Montgomery Avenue that was built in the mid-1940s and is used by the District for storage. The school also operates a vegetable garden east of the brick building and a pollinator garden near the corner of Mozart Avenue and San Elijo Avenue. An informal dog park—operated by community members—is on Montgomery Avenue next to the vegetable garden. Figure 3, *Aerial Photograph,* shows the site facilities from an aerial view. Figures 4a and 4b, *Site Photographs,* show photos of the project site.

2. Environmental Setting

Access and Parking

The main entrance to the campus is through the school's parking lot on Montgomery Avenue. Vehicular access is via two 1-way driveways. The parking lot contains 29 stalls and an approximately 80-foot passenger loading area adjacent to the administration building that can safely accommodate two vehicles at a time. Two other drop-off areas are on Mozart Avenue.

Operations

Cardiff School is one of two schools operated by the District. Cardiff School offers kindergarten and grades 1 through 3. The District also operates Ada Harris School at 1508 Windsor Road, approximately one mile east of the project site. Ada Harris School offers programs for grades 3 through 6.

Cardiff School follows the District's attendance calendar. During the fall, the kindergarten bell schedule starts at 8:15 AM and ends at 12:15 PM. Beginning January, the kindergarten program is extended to full-day and class ends at 2:35 PM. Grades first through third start school at 8:15 AM and end 2:35 PM every day, except Wednesday, which follows a minimum day schedule that ends at 12:15 PM.

Based on a classroom count of 19 and the District's classroom loading ratio of 22 students per classroom, Cardiff School has a maximum seating capacity of 418 students. In April 2018, Cardiff School enrolled 347 students in kindergarten through 3rd grade. Its highest enrollment of 440 students occurred during the 2001-02 school year, and over the last ten school years, the school had an average enrollment of 367 students. Table 1, *Cardiff School 10-Year Enrollment History*, shows the 10-year enrollment history for Cardiff School.

Table 1 Cardiff School 10-Year Enrollment History

School Year	Enrollment
2017–18	347
2016–17	337
2015–16	376
2014–15	361
2013–14	366
2012–13	395
2011–12	384
2010–11	377
2009–10	364
2008–09	366
10-Year Average Enrollment:	**367**

Source: CDE, Enrollment Report.

The District also operates an extended daycare program on the campus to accommodate families that require care of students before and after the school bells. These are the same students enrolled at Cardiff School.

The District owns the entire project site and allows community use of the dog park during the school day. When the facilities are not in use by the District, community use is allowed through a joint use agreement with the City of Encinitas and via the Civic Center Act.[1] Organized uses at the site include Cardiff Soccer and other sports practices, numerous afterschool enrichment classes and programs, summer camps, and evening community meetings.

2.2.1 Surrounding Land Uses

The project site is in a residential community interspersed with low-density, single- and multifamily residences and is roughly 500 feet east of the Pacific Ocean. The site is surrounded by the land uses described below.

- **North:** Montgomery Avenue is north of the campus and lined with single-family residences.
- **East:** Single-family residences are along the intersection of Montgomery Avenue and Mozart Avenue.
- **South:** Mozart Avenue intersects San Elijo Avenue at the southern tip of the triangular campus. Single- and multifamily residences are located along Mozart Avenue.
- **West:** San Elijo Avenue borders the campus to the west. San Elijo Avenue parallels the North County Transit District Rail easement, U.S. Highway 101 (South Coast Highway), and the beach. The Coastal Rail Trail, parallel and east of the train tracks, is currently under construction.

2.3 ZONING, GENERAL PLAN, AND LOCAL COASTAL PLAN

The City of Encinitas General Plan Land Use Designation for the project site is Public/Semi-Public (Encinitas 2013a). The site is zoned P/SP (Public/Semi-Public). The P/SP land use is for activities operated by governmental agencies, including school districts (Encinitas 2017a). The site is also in a Coastal Bluff Overlay Zone (Encinitas 2017b).

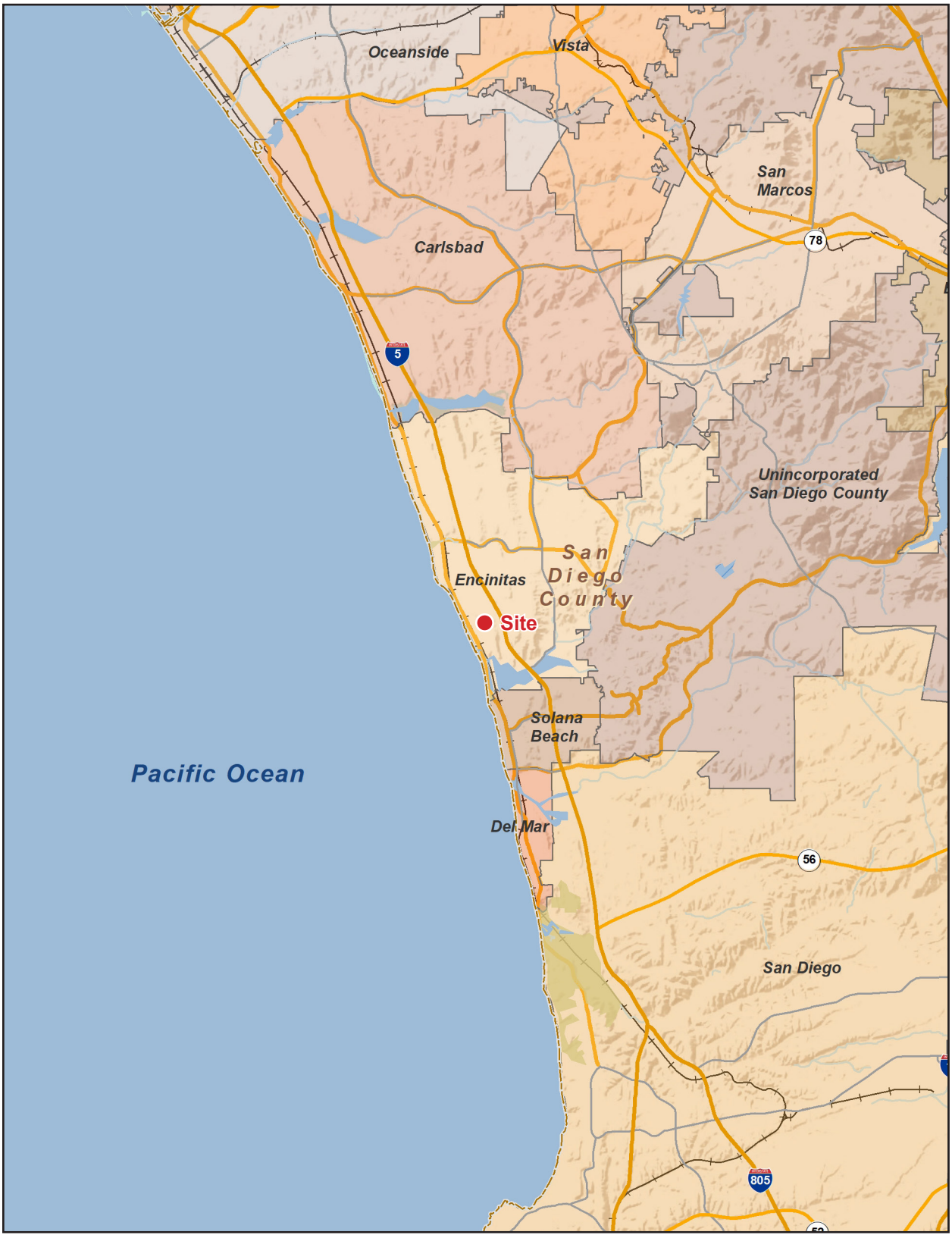
Surrounding land use designations include: Residential R8 (5.01–8.00 density units [du]/acre [ac]) and Residential R11 (8.01–11.00 du/ac) to the north; transportation corridor (TC) to the west; Residential R8 to the south; and Residential R8 and R11 to the east.

[1] Sections 38130 et seq. of the California Education Code, known as the Civic Center Act, state that every public school in the state must make available a "civic center" for community use. Specific uses and users of the civic center are in the Education Code.

2. Environmental Setting

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Figure 1 - Regional Location



Source: ESRI, 2017

PlaceWorks

2. Environmental Setting

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Figure 2 - Local Vicinity



Source: ESRI, 2017

PlaceWorks

2. Environmental Setting

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Figure 3 - Aerial Photograph



Source: Google Earth, 2017

PlaceWorks

2. Environmental Setting

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Figure 4a - Site Photographs



View of the school entrance and parking lot from Montgomery Avenue.



View of the southern student loading area on Mozart Avenue.



View of the northern student loading area on Mozart Avenue.

2. Environmental Setting

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Figure 4b - Site Photographs



View of the playground from San Elijo Avenue. Existing fields are to the left and right.



View of the brick building at northwest corner of the campus. Behind the building is the school's vegetable garden and a dog run used by the community.



View of the playground at northeast corner of the site. This playground would be removed and a new play area would be constructed to the left.

2. Environmental Setting

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3. Project Description

3.1 PROPOSED PROJECT

3.1.1 Building Improvements

Cardiff School would be modernized and reconstructed to facilitate a safe and secure campus and to better align with the current instructional program needs. The proposed project consists of demolition of five 1-story buildings, a portion of a sixth building, and eight relocatable classrooms; construction of ten 1-story wood-framed buildings and a 2-classroom addition to an existing building; and modernization of two existing buildings. A demolition plan showing the location of the facilities that would be demolished is included as Figure 5, *Demolition Plan,* and the proposed improvements are included in Figure 6, *Site Plan*. A breakdown of the proposed improvements based on facility use, including a comparison of existing and proposed square footage of facilities, is provided in Table 2, *Proposed Uses and Spaces*. As shown, the proposed improvements would increase the building area by 4,760 net square feet.

Table 2 Proposed Uses and Building Spaces

School Uses	Existing Space (NSF)	Proposed Space (NSF)	Change in Space (NSF)
District Administration Office (Building E)	1,375	1,375	0
School Administration Office (Building E)	3,190	3,190	0
Library/Media Center (Building E)	3,510	3,510	0
Kindergarten Instruction Areas (Buildings A and B)	7,200	6,500	-700
Classroom Instruction Areas (Buildings C-H, K, and M)	19,250	23,045	3,795
Multipurpose Building (Building L)	3,560	5,000	1,440
Food Service Building (Building J)	1,580	1,805	225
Brick Building (Building N)	800	800	0
Total (NSF)	**40,465**	**45,225**	**4,760**

NSF = net square feet

New Construction

- **Classroom Buildings:** All existing classroom buildings would be demolished. The reconstructed classroom buildings would remain in the eastern portion of the site and in the general area of the existing buildings. The project would include 20 classrooms in Buildings A to H (see Figure 6, *Site Plan*). Five kindergarten classrooms and two extended day rooms would be in Buildings A and B in the eastern corner of the campus.

3. Project Description

- **Special Program Buildings:** Specialty program classes would be in Buildings K and M, west of the classroom buildings and east of the grass playfields. Building K would include maker space/art lab, reading group room, and special education resource room. Building M would include a learning lab, science/STEAM lab, and restrooms.

- **Multipurpose Building:** A 5,000-square-foot multipurpose building would replace the existing smaller 3,560-square-foot multipurpose facility. The new building is proposed near the northwest portion of the site, between the grass playfield and main parking lot and loading area. In addition to replacing the existing auditorium with a larger multipurpose room sized to accommodate school programs, the multipurpose building would include a music classroom, stage, audio/visual storage, restrooms, and a storage room.

- **Food Service Building and Lunch Court:** A 1,805-square-foot food service building would replace the existing 1,580-square-foot food service building. The new food service building and lunch court would be constructed in the southeastern portion of the site, between the hardcourts and classroom buildings. The food service building would include a dry storage room, queuing area, restrooms, PE equipment storage, and maintenance and electric rooms. A lunch court would be north of the food service building.

Modernization

- **Library/Media Center:** An Information Technology (IT) Office/Workroom would be created within the existing facility by constructing a wall within the Library.

- **Science/Art Lab:** Minor casework modifications to convert the facility from its existing joint use to a dedicated science lab.

Other Improvements

- Fencing would be installed around the core campus buildings to limit public access to the classroom portions of the school grounds; field access would remain from the street.

- A new outdoor assembly seating area would be constructed near the multipurpose building.

- The brick building would be retrofitted to comply with current seismic standards.

- New flooring and paint would be provided for all facilities constructed in 2001.

- Night-time security lighting in the parking lots and within the interior of campus would be installed.

- Perimeter fencing would be installed to secure the campus, with access points that would accommodate entry from pedestrian walkways and reconfigured student loading areas.

3.1.2 Play Areas

Turf Fields

The existing baseball field would be removed, and two natural turf soccer fields would be installed along San Elijo Avenue. Existing access points would remain on Montgomery Avenue and Mozart Avenue. The access point along San Elijo Avenue would be relocated farther south, adjacent to the hardcourt area.

Hardcourt

A new hardcourt play area would be constructed near the existing hardcourt along Mozart Avenue. The hardcourt would be repaved and repainted and include markings for a full basketball court and various hardcourt games such as foursquare.

Play Structures

The existing play structure that bisects the two fields and restricts supervision of the fields would be relocated to the southern portion of the site, near the intersection of San Elijo Avenue and Mozart Avenue. The new playground would include a jungle gym and wall ball courts. Kindergarten play structures at the eastern corner of the site—near the intersection of Montgomery and Mozart Avenue—would be replaced with new facilities, constructed west of Buildings A and B (see Figure 6, *Site Plan*).

3.1.3 Parking and Circulation

The school's parking lot/onsite passenger loading area off Montgomery Avenue would be expanded. The existing ingress and egress driveways would be removed, and four new driveways would be constructed.

- The westernmost driveway would provide ingress-only to an approximately 250-foot, passenger loading area in the front of the school; the one-way, student-loading loop would allow vehicles to access a new parking lot or exit the loop via the easternmost driveway. The driveway would allow for the safe curbside pick-up and drop-off of students and accommodate required fire department truck access.

- A separate ingress-only driveway—directly across from Westminster Drive—would provide direct vehicular access into the one-way parking lot. Exit out of the parking lot would be via the fourth driveway, immediately east of the driveway with access into the passenger loading area. The onsite parking lot would include 40 parking stalls, an increase of 11 stalls from the existing conditions.

- The sidewalk on Montgomery Avenue, adjacent to the site, would follow the passenger loading zone. A raised-ADA walkway would bifurcate the parking lot and passenger loading area in order to provide ADA access from the lot and Montgomery Avenue to the school's main entrance.

The two passenger loading areas along Mozart Avenue would remain as they are and would remain available for street parking when not used by the school.

3.1.4 School Operation

The project would increase the number of classrooms from 19 to 20. Using the District's loading factor of 22 students per classroom, the enrollment capacity would increase accordingly by 22 seats, from 418 to 440 seats. Table 3, *Classrooms and Program Labs,* shows the existing and proposed number of classrooms and resource labs. Cardiff School's operational dates and hours would remain the same.

Table 3 Classrooms and Program Labs

	Room Type	Existing	Proposed
Classrooms	Kindergarten	6	5
	Grades 1 to 3	13	15
	Total	**19**	**20**
Special Program Labs and Other Instructional Areas	Learning Lab	1	1
	Science Lab	1	1
	STEAM Lab/Maker Space	--	1
	RAD Room (Reading Groups)	1	1
	Special Ed Resource Room	1	1
	Extended Day [1]	2	2
	Total	**6**	**7**
Total Classrooms and Special Program Rooms		**25**	**27**

[1] The two Extended Day rooms are not counted as school classrooms because they are only used for before- and after-school activities.

3.1.5 Project Construction

Project construction would be phased over an approximately 18-month period, commencing after the District receives required permits and approvals in the summer 2019 and ending in December 2020. Figure 7, *Construction Phasing,* illustrates the proposed schedule.

- **Phase 1A**, June 2019 to August 2019. Demolish existing parking lot and buildings in the eastern portion of the campus; construct new parking lot and loading area along Montgomery Avenue.

- **Phase 1B**, June 2019 to August 2020. Construct new classroom, multipurpose, and food service buildings and eastern playground improvements; retrofit brick building; improve some or all playfields, play structures, and hardcourt areas at the southwest corner of the site.

- **Phase 2**, June 2020 to December 2020. Demolish remaining buildings near the center of the campus; construct new replacement buildings; modernize existing buildings; improve remaining fields and play areas.

Kindergarten and first grade would remain at Cardiff School during construction activities. Second and third grades would be relocated to Ada Harris School. Second grade would return to Cardiff School in August 2020. Third grade would return to Cardiff School in August 2021. No interim portable classrooms would be installed during construction activities.

3. Project Description

Construction laydown/material staging would occur near the construction areas. Staging would occur at the baseball field for construction of the parking lot, multipurpose building, and brick building; access would be mainly via San Elijo Avenue, although Montgomery Avenue would be accessed during improvements to the new parking lot and multipurpose building. Staging for the remaining new building construction would be on the school's blacktop area with access from Mozart Avenue near San Elijo Avenue. Construction activities would include building and asphalt demolition and excavation, site preparation and rough grading, utility trenching, fine grading, building construction, architectural coating, asphalt paving, finishing, and landscaping.

A construction worksite traffic control plan would be prepared and implemented by the District. The plan would identify haul routes, hours of construction, protective devices, warning signs, and access. The active construction and staging areas would be on the campus and clearly marked with barriers to separate public access from the construction zone.

3. Project Description

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Figure 5 - Demolition Plan



Buildings to Be Demolished

0 150
Scale (Feet)

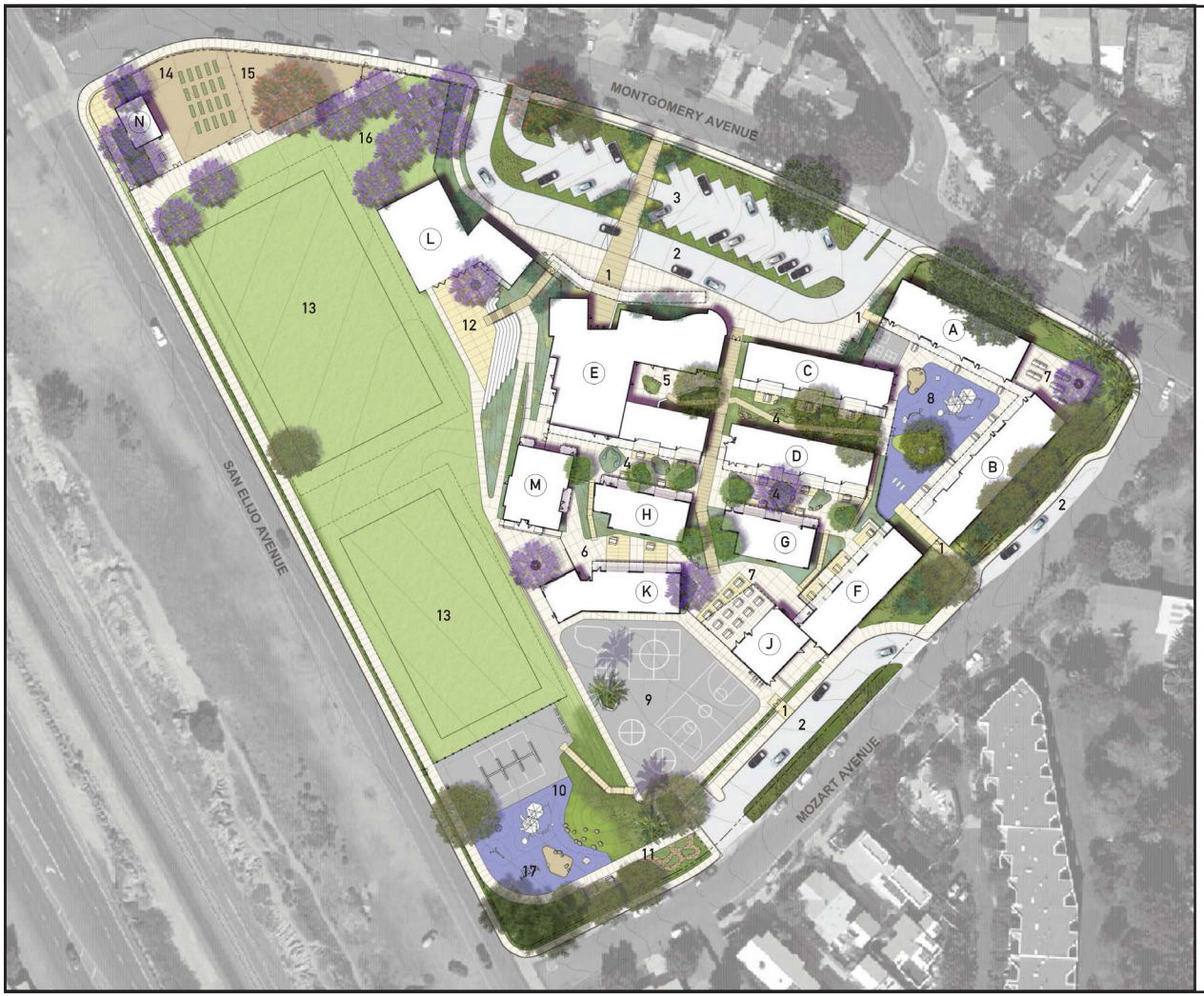
Source: Studio E Architects, March 8, 2018.

PlaceWorks

3. Project Description

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Figure 6 - Site Plan



1 Entry
2 Pick-Up / Drop-off
3 Parking
4 Learning Courtyards
5 Library Courtyard
6 Makerspace Courtyard
7 Lunch Courtyard
8 Kindergarten Playspace
9 Hardcourt Playspace
10 Play Equipment / Sport Court
11 Pollinator Garden
12 MPR Terrace
13 Sports Fields
14 Garden
15 Dog Run
16 Picnic Grove
17 Play Apparatus

A Kindergarten
B Kindergarten
C Classrooms
D Classrooms
E Administration / District Office / Classrooms
F Classrooms
G Classrooms
H Classrooms
J Food Service
K Maker Space / Specialty Classrooms
L Multipurpose / Music
M Labs
N Brick Building

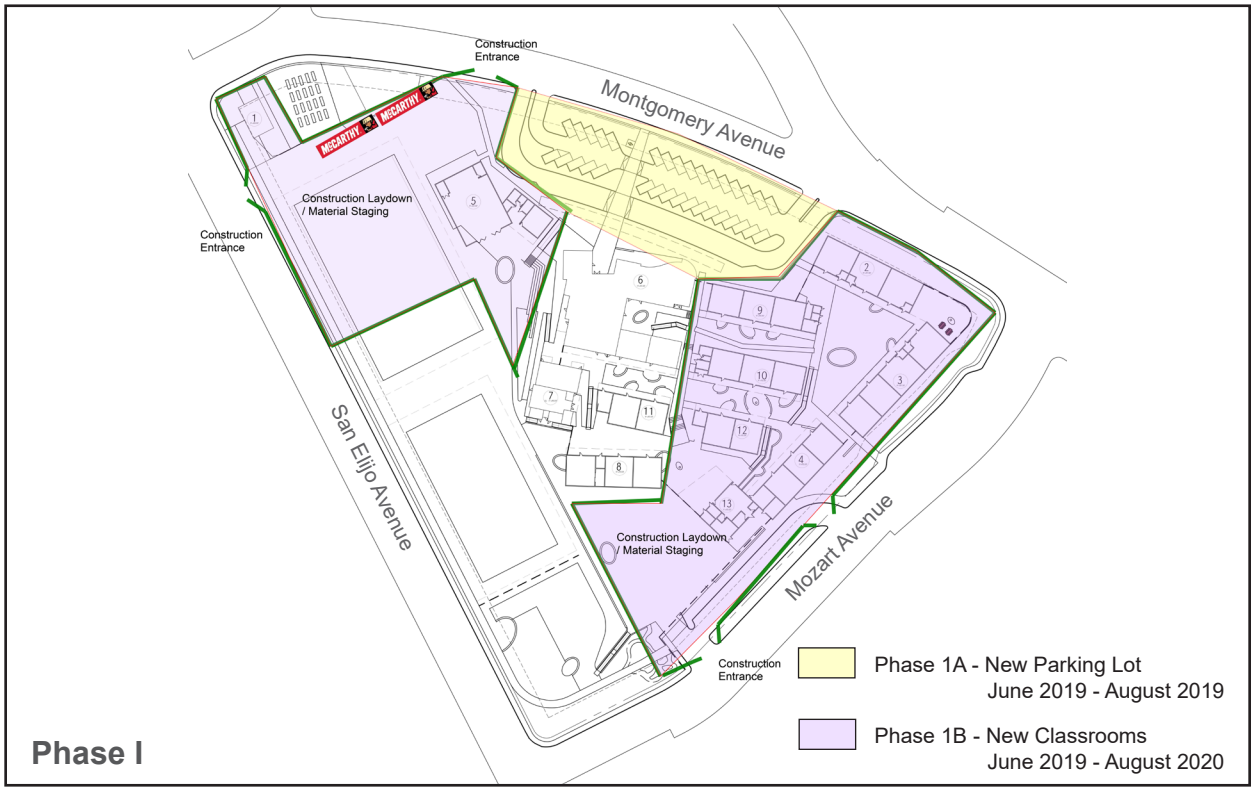
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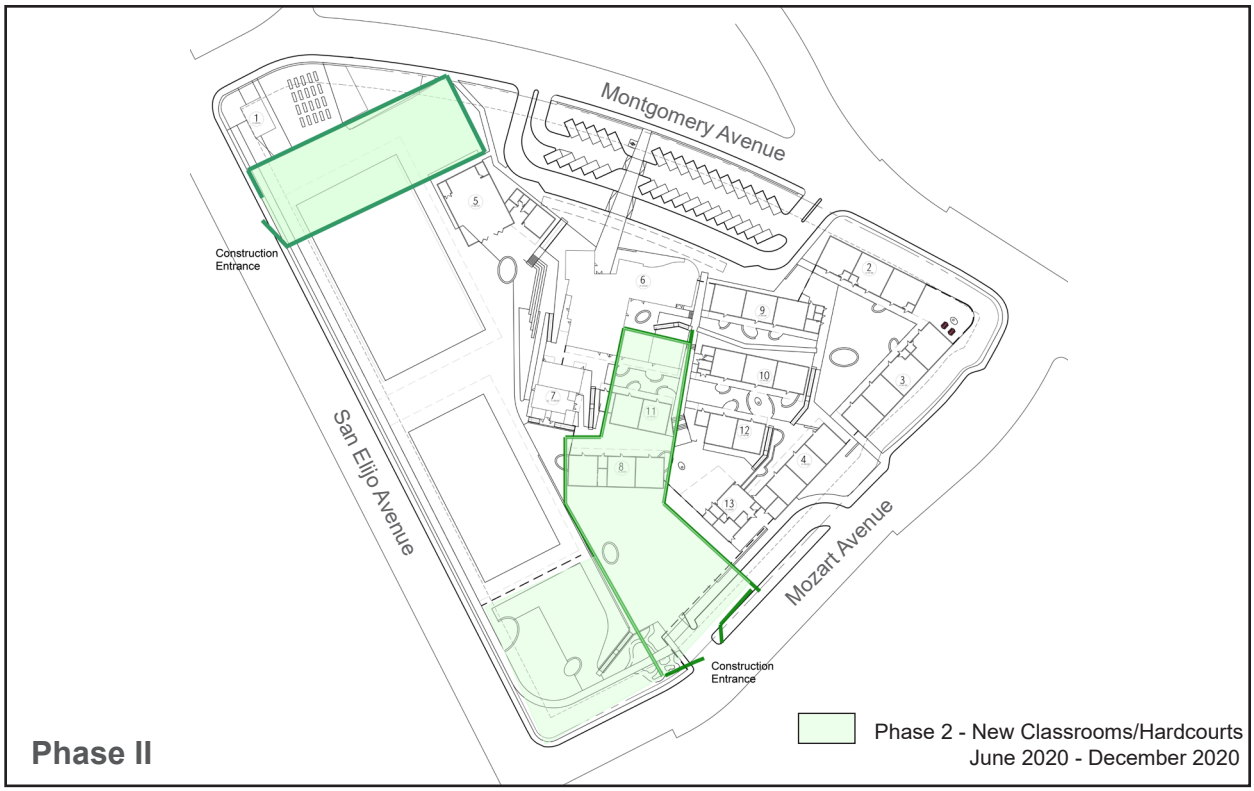
Source: Spurlock Landscape Architects; Studio E Architects, May 1, 2018.

3. Project Description

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Figure 7 - Construction Phasing





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Scale (Feet)

Source: Studio E Architects, 2018

PlaceWorks

3. Project Description

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4. Environmental Checklist

4.1 BACKGROUND

1. **Project Title:** Cardiff School Modernization and Reconstruction Project

2. **Lead Agency Name and Address:**
   Cardiff School District
   1888 Montgomery Avenue
   Cardiff-by-the-Sea, CA 92007

3. **Contact Person and Phone Number:**
   Randy Peterson, Bond Program Manager
   760.632.5890

4. **Project Location:**
   The project site is on the campus of Cardiff School, at 1888 Montgomery Avenue, in the community of Cardiff-by-the-Sea, in the City of Encinitas, California. (APNs 260-3400-100 and 260-3400-200).

5. **Project Sponsor's Name and Address:**
   Cardiff School District
   1888 Montgomery Avenue
   Cardiff-by-the-Sea, CA 92007

6. **General Plan Designation:** Public/Semi-Public

7. **Zoning:** P/SP- Public/Semi-Public

8. **Description of Project:**
   Cardiff School District proposes reconstruction and modernization of Cardiff School to facilitate a safe and secure campus that better aligns with the current instructional program. The proposed project consists of the demolition of five 1-story buildings, a portion of a sixth building, and eight relocatable classrooms; construction of ten 1-story wood-framed buildings and a 2-classroom addition to an existing building; and the modernization of two existing buildings on the Cardiff School campus. The project will also consist of improving the existing parking and drop-off areas on the Cardiff School campus.

9. **Surrounding Land Uses and Setting:**
   Cardiff School is surrounded by residential uses to the north, east, and south. The North County Transit District Rail easement and Coastal Rail Trail are west.

10. **Other Public Agencies Whose Approval Is Required:**
    City of Encinitas, Coastal Development Permit

4. Environmental Checklist

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

(Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.94 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.)

No tribes have requested formal notice of proposed projects from the Cardiff School District.

4.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture / Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology / Soils
☒ Greenhouse Gas Emissions	☐ Hazards / Hazardous Materials	☒ Hydrology / Water Quality
☒ Land Use / Planning	☐ Mineral Resources	☒ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☒ Transportation / Traffic	☒ Tribal Cultural Resources	☐ Utilities / Service Systems
☒ Mandatory Findings of Significance		

4.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	05/04/18 *Date*
Jill Vinson *Printed Name*	Cardiff School District *For*

4.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g. the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) **Earlier Analyses Used.** Identify and state where they are available for review.

   b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) **Mitigation Measures.** For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

      b) the mitigation measure identified, if any, to reduce the impact to less than significant.

4. Environmental Checklist

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5. Environmental Analysis

5.1 AESTHETICS

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	X			
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	X			
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Comments:

a) Have a substantial adverse effect on a scenic vista?

Potentially Significant Impact. Vistas provide visual access or panoramic views to a large geographic area. The City of Encinitas Design Guidelines state: "Projects should be designed to preserve significant public views. A significant public view is a view of a significant feature (ocean, lagoon or backcountry) as viewed from public parks and General Plan designated vista points and scenic view corridors" (Encinitas 2005a). The project site is approximately 500 feet from the Pacific Ocean, which is considered a scenic feature. Due to the proximity of the proposed improvements to the Pacific Ocean, the EIR will analyze the project's potential impacts on public views of the scenic feature.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The closest designated state scenic highway is State Route 75, Silver Strand Highway, and San Diego-Coronado Bridge, over 26 miles south of the project site (Caltrans 2011). The closest eligible state scenic highway is Interstate 5, which is approximately 0.40 mile east of the project site (Caltrans 2011). Due to the distance and intervening structures, project development would not result in impacts to scenic resources within a designated state scenic highway. Therefore, no impact would occur, and this topic will not be further analyzed in the EIR.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Potentially Significant Impact. The proposed project would change the visual appearance of the project site. The site configuration would change, and existing facilities would be reconstructed. The EIR will evaluate the proposed visual changes and their potential to impact the character and quality of the site and surrounding area.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The two major causes of light pollution are glare and spill light. Spill light is caused by misdirected light that illuminates areas outside the intended area to be lit. Glare occurs when a bright object is against a dark background, such as oncoming vehicle headlights or an unshielded light bulb. The project site currently generates light from its buildings (interior and exterior) and parking lot. Vehicle headlights, street lights, and exterior and interior building lights also exist in the surrounding area.

The proposed buildings would have exterior stucco/sand finishes, similar to existing buildings, that are not reflective. Lighting in the proposed buildings and parking lot would also be similar to existing. The proposed project does not include field lighting. Outdoor building security and path lighting installed during construction and for permanent use would be directed onto the intended area to be lit and would not spill off the campus. Light and glare levels caused by the proposed project would not be substantially greater than existing levels. Therefore, light and glare impacts would be less than significant, and this issue will not be further considered in the EIR.

5.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Comments:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The project site has no agricultural or farm use on it, nor is there agricultural or farm use in its immediate proximity. No project-related farmland conversion impact would occur. The vegetable and pollinator gardens would remain as they are. The project site is fully developed and is not mapped as important farmland by the Division of Land Resource Protection (DLRP 2014). No impact would occur; therefore, the topic will not be addressed further in the EIR.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The zoning designation for the project site is P/SP (Public/Semi-Public). The proposed project would not conflict with agricultural zoning or a Williamson Act contract as it is not zoned for agricultural use. Williamson Act contracts restrict the use of privately owned land to agriculture and compatible open-space uses under contract with local governments; in exchange, the land is taxed based on actual use rather than potential market value. There is no Williamson Act contract in effect onsite. No impact would occur; therefore, the issue will not be addressed further in the EIR.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. Project development would not conflict with existing zoning for forest land, timberland, or timberland production. Forest land is defined as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more

forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits" (California PRC § 12220[g]). Timberland is defined as "land…which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees" (California PRC § 4526). The project site is zoned as P/PS (Public/Semi-Public). No impact would occur; therefore, the topic will not be addressed further in the EIR.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Vegetation onsite is limited to scattered ornamental trees and shrubs. Project construction would not result in the loss or conversion of forest land. Project development would not cause a loss of forest land. No impact would occur; therefore, the topic will not be addressed further in the EIR.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. Maps from the division of Land Resource Protection indicate that there is no important farmland or forest land on the project site or within the surrounding vicinity. Project development would not indirectly cause conversion of such land to nonagricultural or non-forest use. No impact would occur; therefore, the topic will not be addressed further in the EIR.

5.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	X			
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	X			
d) Expose sensitive receptors to substantial pollutant concentrations?	X			
e) Create objectionable odors affecting a substantial number of people?			X	

Comments:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The project site is in the San Diego Air Basin (SDAB) and subject to the regional air quality strategy (RAQS) prepared by the San Diego Air Pollution Control District (SDAPCD). SDAPCD is directly responsible for reducing emissions from area, stationary, and mobile sources in the SDAB to achieve National and California ambient air quality standards (AAQS). A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the San Diego RAQS, which is the air quality management plan prepared for the region. The most current RAQS is the 2016 RAQS. SDAPCD compiles the regional emissions inventory for the RAQS using the San Diego Association of Governments' (SANDAG) regional population, housing, and employment projections. These demographic projections are based in part on cities' general plan land use designations. They are also incorporated into the regional transportation plan/sustainable communities strategy, which is compiled by SANDAG to determine priority transportation projects and vehicle miles traveled in the SANDAG region. Projects that are consistent with the local general plan are considered consistent with the air quality–related regional plan. Typically, only new or amended general plan elements, specific plans, and major projects that have the potential to affect the regional population and employment forecasts have the potential to substantially affect SANDAG's demographic projections and the assumptions in SDAPCD's RAQS.

The proposed project would modernize an existing school site and would not alter existing land uses. Per CEQA Guideline Section 15206, the proposed project would not be considered regionally significant because it would not have the potential to substantially affect housing, employment, or population projections within the San Diego region, which are the basis of the RAQS projections. Therefore, impacts would be less than significant, and this topic will not be discussed in the EIR.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Potentially Significant Impact. Construction and operation activities associated with the proposed project would have the potential to generate fugitive dust, area-source emissions, and mobile-source emissions. Air pollutant emissions would occur over the short term during site preparation and construction activities. In addition, emissions would result from the long-term operation of the completed project. An air quality analysis is underway for the proposed project to determine if the project's short- or long-term emissions would exceed SDAPCD's regional significance thresholds for criteria air pollutants. This topic will be further addressed in the EIR, and mitigation measures will be provided if required.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Potentially Significant Impact. The project site is in the SDAB, which is designated nonattainment for O_3 and particulate matter (PM_{10} and $PM_{2.5}$) under the California and/or National AAQS. Implementation of the proposed project may increase levels of criteria pollutants and contribute to their nonattainment status. As

noted above, site preparation and construction activities for the proposed project would generate short-term air pollutant emissions. Emissions from operation of the improved facilities are expected to be reduced; however, this will be further discussed in the EIR. An air quality analysis is underway to determine if the proposed project would result in a cumulatively considerable net increase of any criteria air pollutant. This topic will be addressed further in the EIR, and mitigation measures will be provided if required.

d) Expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact. An impact is potentially significant if emission levels exceed the state or federal AAQS and expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors are populations and/or locations where uses or activities result in increased exposure of persons more sensitive to the unhealthful effects of emissions (such as children and the elderly). The project site is surrounded by residences to the north, east, and south that would be considered sensitive receptors. The EIR will evaluate the potential for construction and operation activities of the proposed project to expose sensitive receptors to substantial pollutant concentrations in accordance with SDAPCD's guidance methodology. Mitigation measures will be provided if required.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Due to the nature of the proposed project, it is not anticipated to result in objectionable odors. The threshold for odor is if a project creates an odor nuisance pursuant to SDAPCD Rule 51, Nuisance, which states:

> A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations in the growing of crops or raising of fowls or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The uses proposed by the project do not fall within these land uses. Emissions from construction equipment may generate odors, such as diesel exhaust and volatile organic compounds from architectural coatings and paving activities. However, these odors would be low in concentration, temporary, and would not affect a substantial number of people. No significant impacts would occur, and this topic will not be discussed in the EIR.

5.4 BIOLOGICAL RESOURCES

Would the project:

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	X			
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Comments:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?

Potentially Significant Impact. Special status species include: those listed as endangered or threatened under the federal Endangered Species Act or California Endangered Species Act; species otherwise given certain designations by the California Department of Fish and Wildlife; and plant species listed as rare by the California Native Plant Society. The project site is fully developed with buildings, asphalt, landscaping, and concrete. Vegetation onsite is limited to ornamental trees, shrubs, and turf. There is no native habitat onsite. The proposed project would result in the removal of mature trees. An evaluation of the trees will be conducted, and its findings will be included in the EIR. The EIR will determine if any of the trees are designated special status species and also discuss potential effects on migratory birds that that may nest in these trees. Mitigation measures will be provided if required.

5. Environmental Analysis

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?

No Impact. Sensitive natural communities are those considered rare in the region by regulatory agencies, known to provide habitat for sensitive animal or plant species, or known to be important wildlife corridors. Riparian habitats occur along the banks of rivers and streams. The entire site is developed, and there is no sensitive natural community or riparian habitat onsite (USFWS 2018). No impact would occur; this topic will not be further analyzed in the EIR.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as swamps, marshes, and bogs. The project site is fully developed as a school campus; there are no wetlands onsite (USFW 2018). The nearest wetland on the US Fish and Wildlife Service's National Wetlands Mapper is approximately 0.2 mile east of the site. Project development would not impact wetlands, and this topic will not be further analyzed in the EIR.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact. The project site is on a developed school campus surrounded by urban uses. The site contains blacktop, classrooms, and grass playfields with ornamental trees. The site is heavily used throughout the week by the school and community and is not part of a native resident or migratory wildlife corridor. Project implementation would not impede movement of native wildlife. Potential impacts to migratory birds protected under the Migratory Bird Treaty Act of 1918 will be analyzed in the EIR under section 5.4(a), above. This checklist item will not be further analyzed in the EIR.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The City of Encinitas Tree Ordinance and Urban Forest Management Plan protect trees on public lands and in public rights-of-way. The project would remove trees on District-owned property, and no impact to City trees would result. Project implementation would not violate applicable local policies or ordinances protecting biological resources. No impact would occur; this topic will not be analyzed in the EIR.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project site is in an area designated Developed/Disturbed Land, within the plan area of the Northern County Multiple Habitat Conservation Program (MHCP), an ecosystem reserve system in seven

cities in northern San Diego County (SANDAG 2003). The site is not designated as habitat preserve. Therefore, the proposed school modernization and reconstruction project would not conflict with the MHCP, and no impact would occur. This topic will not be addressed further in the EIR.

5.5 CULTURAL RESOURCES

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	X			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	X			
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X			
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Comments:

a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Potentially Significant Impact. Section 15064.5 of the CEQA Guidelines defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered "historically significant" if it meets one of the following criteria:

i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

ii) Is associated with the lives of persons important in our past.

iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

iv) Has yielded, or may be likely to yield, information important in prehistory or history.

The project site contains Cardiff Elementary School, which was built in phases between the mid-1940s and 1960. A historical resources assessment is currently underway for the proposed project. The findings of the historical resources assessment will be included in the EIR. Mitigation measures will be provided if required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Potentially Significant Impact. The project site is fully developed with no visible native ground surface exposed. Project implementation would require grading and excavation, which has the potential to impact unknown archaeological resources onsite. This topic will be addressed in the EIR, and mitigation measures would be provided if required.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Impact. See response to section 5.5(b), above. Potential impacts to paleontological resources will be addressed in the EIR, and mitigation measures will be provided if required.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. There are no known human remains in the project area, and the project site is operating as an existing school. California Health and Safety Code Section 7050.5 requires that if human remains are discovered on a project site, disturbance of the site shall halt until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and has made recommendations concerning their treatment and disposition to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and has reason to believe they are Native American, he or she shall contact the NAHC by telephone within 24 hours. Impacts to human remains would be less than significant, and this topic will not be discussed in the EIR.

5.6 GEOLOGY AND SOILS

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?	X			
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	X			
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	X			
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

Comments:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. Based on a review of the Alquist-Priolo Earthquake Fault Zoning Map, the project site is not in an Alquist-Priolo Fault Zone (CGS 2015). There is no potential for ground rupture on the project site caused by a known earthquake fault. No impact would occur, and this topic will not be discussed further in the EIR.

ii) Strong seismic ground shaking?

Less Than Significant Impact. As with the rest of southern California, the project site is expected to experience strong seismic ground shaking. According to the California Department of Conservation's Geologic Map of the Oceanside Quadrangle, the site is approximately 2.5 miles east of the Rose Canyon Fault zone. Although seismic activity from this fault could potentially affect the project site, the subject site is at no greater risk than the surrounding development and infrastructure. Additionally, all structures built for the project would adhere to the 2016 California Building Code (CBC) (California Code of Regulations, Title 24, Part 2), which provides minimum standards to protect property and public welfare by regulating design and construction to mitigate the effects of seismic shaking and adverse soil conditions. Compliance with the standards of the CBC would reduce impacts from seismic ground shaking to a less than significant level. This topic will not be discussed further in the EIR.

5. Environmental Analysis

iii) Seismic-related ground failure, including liquefaction?

Potentially Significant Impact. Liquefaction refers to loose, saturated sand or gravel deposits that lose their load supporting capability when subjected to intense shaking. The City of Encinitas does not identify site-specific liquefaction potential for the project site. A geotechnical report is being prepared to assess the seismic-related ground failure potential of subsurface soils. Although structures built for the project would adhere to CBC standards, the findings of the geotechnical report will be addressed in the EIR. Mitigation measures will be recommended if required.

iv) Landslides?

Less Than Significant Impact. Susceptibility of slopes to landslides and other slope failures depend on several factors, which are usually present in combination—steep slopes, condition of rock and soil materials, presence of water, formational contacts, geologic shear zones, seismic activity, etc. The project site is in a "marginally susceptible" landslide zone, which is defined as gentle to moderate slopes that are underlain by material that is considered unlikely to remobilize under natural conditions (CDC 1986). The project site is relatively flat and entirely developed; it is unlikely that the site would be susceptible to landslide hazards. Therefore, impacts related to landslides are less than significant, and this topic will not be addressed in the EIR.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Erosion is a normal and inevitable geologic process whereby earthen materials are loosened, worn away, decomposed, or dissolved, and removed from one place and transported to another. The project site is entirely covered with school facilities and landscaping, and no soils are exposed that can be affected by erosion. Construction of the proposed improvements would temporarily leave soil exposed and subject to erosion. The project would implement structural and nonstructural best management practices (BMPs) before and during construction to control surface runoff and erosion and to retain sediment on the project site. Once the proposed improvements are constructed, soil erosion would be controlled with improvements installed on the project site. Similar to existing conditions, there would be limited if no soil exposed. Therefore, impacts related to soil erosion during construction and operation would be less than significant, and this issue will not be addressed in the EIR.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Potentially Significant Impact. Earthquakes can cause certain types of soils to lose strength and trigger liquefaction and landslides. A geotechnical report is being prepared to address potential geology and soil constraints, including unstable soils. The findings of the report and potential recommendations will be included in the EIR. Mitigation measures will be provided if required.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Potentially Significant Impact. Expansive soils swell when they become wet and shrink when they dry out, resulting in the potential for cracked building foundations. Expansive soil conditions will be addressed in the geotechnical report, the findings and recommendations of which will be included in the EIR.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. Development of the proposed project would not require the installation of a septic tank or alternative wastewater disposal system. The project site is already connected to the local sewer system and would remain so. Therefore, no impact would result from septic tanks or other onsite wastewater disposal systems. This topic will not be further considered in the EIR.

5.7 GREENHOUSE GAS EMISSIONS

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	X			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	X			

Comments:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact. Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas (GHG) emissions on its own to influence global climate change significantly; hence, climate change is, by definition, a cumulative environmental impact. The State of California, through its governor and legislature, has established a comprehensive framework for the substantial reduction of GHG emissions over the next 40-plus years. This will occur primarily through the implementation of Assembly Bill 32 (AB 32), Senate Bill 32 (SB 32), and SB 375, which address GHG emissions on a statewide and cumulative basis. The proposed project's construction activities, operation, and increase in vehicle traffic have the potential to generate GHG emissions that could significantly impact the environment. The EIR will evaluate the potential for the proposed project to generate a substantial increase in GHG emissions. Mitigation measures will be provided if required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. AB 32, the Global Warming Solution Act of 2006, requires the state to reduce GHG emissions to 1990 levels by 2020. The California Air Resources Board (CARB) adopted the 2008 Scoping Plan to identify state regulations and programs that would be adopted by state agencies to achieve the 1990 target of AB 32. The CARB Scoping Plan is applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning. On December 14, 2017, CARB adopted the 2017 Climate Change Scoping Plan Update, which includes regulations and programs to achieve the 2030 target established by SB 32. Also, SB 375, the Sustainable Communities and Climate Protection Act of 2008, was adopted by the legislature to reduce per capita vehicle miles traveled and associated GHG emissions from passenger vehicles. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy in their regional transportation plans to achieve the per capita GHG reduction targets. SANDAG adopted San Diego Forward: The Regional Plan, which is the region's SCS, on October 8, 2015.. The EIR will evaluate consistency of the proposed project with the overall GHG reduction goals of AB 32, SB 32, and SB 375. Mitigation measures will be provided if required.

5.8 HAZARDS AND HAZARDOUS MATERIALS

Would the project:

	Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Comments:

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less Than Significant Impact. Project construction would require small amounts of hazardous materials, including fuels, greases and other lubricants, and coatings such as paint. The handling, use, transport, and disposal of hazardous materials by the construction phase of the project would comply with existing regulations of several agencies, including the San Diego County Department of Environmental Health, Occupational Safety and Health Administration, Division of Occupational Safety and Health, and US Department of Transportation.

Project operation and maintenance would be similar to the existing school. Maintenance would require the use of cleaners, solvents, paints, and other custodial products that are potentially hazardous. These materials would be used in relatively small quantities, clearly labeled, and stored in compliance with state and federal requirements. With the exercise of normal safety practices, the project would not create substantial hazards to the public or the environment. Impacts would be less than significant, and no additional analysis of this topic is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. Due to the ages of the buildings proposed for demolition, it is possible that they contain lead and asbestos. Lead was used as an ingredient in paint (before 1978) and as a gasoline additive; it is regulated as a hazardous material. Cal/OSHA considers asbestos-containing building material a hazardous substance when a bulk sample contains more than 0.1 percent asbestos by weight. Activity that involves cutting, grinding, or drilling during building renovation or demolition, or relocation of underground utilities, could release friable asbestos fibers unless proper precautions are taken. Demolition of existing structures and improvements would comply with all applicable regulations and guidelines pertaining to the abatement of and protection from exposure to asbestos and lead. These include Construction Safety Orders 1529 (pertaining to asbestos) and 1532.1 (pertaining to lead-based paint) from Title 8 of the California Code of Regulations and Part 61, Subpart M, of the Code of Federal Regulation (pertaining to asbestos).

5. Environmental Analysis

Compliance with applicable laws and regulations would reduce potentially significant hazards related to lead and asbestos in existing structures and improvements to a less than significant level. This issue will not be further evaluated in the EIR.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. The proposed project is on an existing elementary school campus. There are no other schools within one-quarter mile of the project site. Operation of the proposed project would be similar to existing operations and would not result in the release of hazardous emissions. No significant amounts of hazardous materials, substances, or wastes would be transported, used, or disposed of in conjunction with the proposed project's operation. The onsite use of hazardous materials at the proposed facility would be restricted to cleaning solvents and paints already used by the school's janitorial and/or maintenance staff. These materials would be used in small quantities and stored in compliance with state and federal requirements. No significant impacts would affect the occupants at the project site. This topic will not be addressed further in the EIR.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. Based on a review of environmental records collected for the project site and surrounding area by Environmental Data Resources, the site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (DTSC 2017; SWRCB 2017; EDR 2017). Construction activities would occur within the existing campus boundaries and would not disturb offsite properties. Therefore, no impact would occur, and this topic will not be addressed further in the EIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not within an airport land use plan area or within two miles of a public use airport. The nearest public-use airport is McClellan-Palomar Airport, approximately seven miles north of the site (Caltrans 2016; Airnav 2017). No impact would occur; therefore, this topic will not be addressed further in the EIR.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. There is one private heliport approximately 1.8 miles northeast of the site (Airnav 2017). No impact would occur; therefore, this topic will not be addressed further in the EIR.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed project would not conflict with adopted emergency response or evacuation plans. The surrounding roadways would continue to provide emergency access to the project site and surrounding properties during construction and postconstruction. The proposed project would not result in inadequate emergency access, and impacts to adopted emergency response and evacuation plans are less than significant; this topic will not be addressed further in the EIR.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The project site is in a built-out portion of Encinitas and is not in a fire hazard zone designated by the California Department of Forestry and Fire Protection (CAL FIRE 2009). The proposed project would not pose wildfire-related hazards to people or structures. No impact would occur, and this topic will not be discussed in the EIR.

5.9 HYDROLOGY AND WATER QUALITY

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	X			
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	X			
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	X			
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	X			
f) Otherwise substantially degrade water quality?	X			

5. Environmental Analysis

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Expose people or structures to inundation by seiche, tsunami, or mudflow?			X	

Comments:

a) Violate any water quality standards or waste discharge requirements?

Potentially Significant Impact. Development of the proposed project would alter the amount of pervious and impervious surfaces on the project site. The primary water quality concern associated with long-term operation of the proposed project would be urban runoff from impervious surfaces. Pollutants such as oil, grease, and sediment from operation of the facilities could drain into the local storm drain system, resulting in adverse water quality impacts to receiving waters. During construction, surface runoff could degrade topsoil and other soil disturbed by grading and excavation activities. The storage and use of hazardous materials onsite, including treated wood, paints, solvents, fuels, etc., would be potential sources of pollutants during construction. Uncontrolled urban runoff from the project site could potentially result in conflicts with water quality standards established by the Regional Water Quality Control Board. The EIR will analyze the potential water quality impacts of the proposed project, and mitigation measures will be provided if required.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

No Impact. The project site is not above a groundwater basin or used as a source of groundwater extraction or recharge (DWR 2018). The San Dieguito Water District supplies water to the site and the surrounding community. The project does not propose groundwater wells that would extract groundwater from an aquifer. Construction and operation of the proposed facilities would not lower the groundwater table or deplete groundwater supplies. The site does not provide intentional groundwater recharge; therefore, the project would not interfere with groundwater recharge. There would be no impact to groundwater supplies; therefore, this topic will not be addressed further in the EIR.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?

Potentially Significant Impact. The project would alter the existing site drainage. Potential impacts related to erosion and siltation will be discussed in the EIR. Mitigation measures will be provided if required.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Potentially Significant Impact. The proposed project would change the drainage pattern of the site. Potential flooding impacts caused by the project will be addressed in the EIR. Mitigation measures will be provided if required.

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Potentially Significant Impact. The proposed improvements would change the amount of pervious and impervious surfaces at the site and affect the amount of runoff. Potential impacts to storm drainage systems from runoff will be addressed in the EIR. Mitigation measures will be provided if required.

f) Otherwise substantially degrade water quality?

Potentially Significant Impact. See section 5.9(a), above. Construction and operation of the proposed improvements could potentially impact water quality. This topic will be addressed further in the EIR, and mitigation measures will be provided if required.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The proposed project does not propose housing. No impact would occur; therefore, the topic will not be analyzed further in the EIR.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. The project site is outside a 100-year flood zone and in an area of low hazard of flooding. The site is in Zone X, which is defined as a 0.2 percent annual chance floodplain hazard zone (Flood Insurance Rate Map ID #06073C1045G) (FEMA 2012). No impact would occur, and the topic will not be analyzed further in the EIR.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. See section 5.9(h), above. The project site is not identified in a hazardous flood zone on FEMA flood maps (FEMA 2012). The proposed project would not increase flooding hazards on the project site or

expose people or structures to a significant risk of loss, injury, or death involving flooding. No impact would occur; therefore, this topic will not be discussed further in the EIR.

j) Expose people or structures to inundation by seiche, tsunami, or mudflow?

Less Than Significant Impact. A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water. The closest reservoir to the site, San Dieguito Reservoir, is approximately five miles east in the Rancho Santa Fe community. A potential seiche at the reservoir would not impact the project site.

A tsunami is earthquake-induced flooding that is created from a large displacement of the ocean floor. Although the site is approximately 500 feet east of the Pacific Ocean, based on the Tsunami Inundation Map for Emergency Planning for the Encinitas Quadrangle, the project site is not within a tsunami inundation area, which is identified west of Coast Highway 101 (CGS 2009). Therefore, the project site is not at risk for tsunami impacts.

A mudflow is a landslide event in which the debris, land mass, and soils are saturated during their displacement. Although the project site is close to coastal bluffs, project development would not increase risks associated with mudflow at the site or surrounding area. The proposed improvements would be engineered on land mass that is relatively flat, with no slopes that are capable of generating a mudflow. Impacts would be less than significant, and this topic will not be addressed further in the EIR.

5.10 LAND USE AND PLANNING

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	X			
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Comments:

a) Physically divide an established community?

No Impact. The campus consists of school facilities, and the surrounding area is developed with primarily residential land uses. The proposed improvements would be within the campus boundaries and would not divide an established community. No impact would occur, and this topic will not be addressed further in the EIR.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact. The project consists of modernization and reconstruction of an existing school on a site zoned P/SP (Public/Semi-Public). The proposed improvements would not change the existing land use and would be consistent with what is allowed under the P/SP zone. The project site, however, is in a coastal zone planning area, as identified by the Local Coastal Program adopted in the City of Encinitas General Plan (Encinitas 1995), and the proposed project would require a Coastal Development Permit. The project's consistency with the City's Local Coastal Plan will be evaluated in the EIR.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The project site is completely developed with school facilities and surrounded by urban development. As discussed in Section 5.4(f), the project site is in an area designated Developed/Disturbed Land, within the plan area of the Northern County MHCP, an ecosystem reserve system in seven cities in northern San Diego County (SANDAG 2003). The site is not designated as habitat preserve. No impact would occur, and this topic will not be addressed further in the EIR.

5.11 MINERAL RESOURCES

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Comments:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. The beach community of Cardiff-by-the-Sea has mapped its mineral resources designation pursuant to the California Surface Mining and Reclamation Act of 1975. Four mineral resource zones (MRZ) classify sand, gravel, and crushed rock resources:

- **MRZ-1.** Adequate information indicates that no significant mineral deposits are present or likely to be present.
- **MRZ-2.** Adequate information indicates that significant mineral deposits are present or there is a high likelihood for their presence, and development should be controlled.
- **MRZ-3.** The significance of mineral deposits cannot be determined from the available data.
- **MRZ-4.** There is insufficient data to assign any other MRZ designation.

The project site is in MRZ-3 (CDC 1983), where the significance of mineral deposits cannot be determined. This mineral resource designation is intended to prevent incompatible land use development on areas determined to have significant mineral resource deposits. The project site and its surrounding areas are not developed with mineral extractions. The proposed project would be consistent with the existing land use as a school, and no loss of known resources would result from project implementation. Therefore, no impact would occur, and the topic will not be further addressed in the EIR.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. No mining sites are identified in the City Encinitas General Plan (Encinitas 2013b). Therefore, development of the proposed project would not cause a loss of availability of a mining site. No impact would occur, and the topic will not be further addressed in the EIR.

5.12 NOISE

Would the project result in:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X			
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	X			

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Comments:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Impact. Demolition, construction, and operation activities associated with the proposed project have the potential to substantially increase ambient noise levels in the project vicinity. The EIR will evaluate the existing noise conditions onsite and predict the noise conditions in the future with and without the project. It is anticipated that heavy construction equipment would create excessive short-term noise levels. The proposed project would also generate additional vehicle trips from and to the project site. Applicable noise standards will be provided in the EIR, and mitigation measures will be provided if required.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Potentially Significant Impact. The proposed project involves excavation, grading, and construction activities that would use various heavy construction equipment that could generate excessive groundborne vibration. Therefore, short-term construction groundborne vibration impacts and applicable regulatory and environmental settings will be addressed in the EIR. Mitigation measures will be provided if required. However, the continued operation of the site as a school would not involve long-term groundborne vibration impacts, and operational vibration impacts will not be addressed in the EIR.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. See above Section 5.12(a).

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. See above Section 5.12(a).

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project site is not within an airport land use plan area or within two miles of a public use airport. The nearest public-use airport is McClellan-Palomar Airport, approximately seven miles north of the site (Caltrans 2016; Airnav 2017). Therefore, project implementation would not expose people to excessive noise levels from aircraft approaching or departing the airport. No impact is anticipated, and this issue will not be addressed in the EIR.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. There is one private heliport approximately 1.8 miles northeast of the project site (Airnav 2017). At that distance, aircraft noise would be negligible. No impact is anticipated, and this issue will not be addressed in the EIR.

5.13 POPULATION AND HOUSING

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Comments:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. The proposed project would increase the capacity of Cardiff School by one classroom or 22 seats. However, students that would fill the new classroom would be from the District, and

the project would not directly increase population growth in the area. No construction of homes or businesses is proposed, nor extensions of roads or other infrastructure. Project implementation would not induce population growth. Impacts would be less than significant, and the topic will not be addressed further in the EIR.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. Project construction would be restricted to the existing Cardiff School campus, and no housing would be displaced or replaced. No impact would occur. This topic will not be further addressed in the EIR.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. There are no residents or homes onsite. The project would not displace people or require the construction of replacement housing. No impact would occur, and the topic will not be addressed further in the EIR.

5.14 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X

Comments:

a) Fire protection?

Less Than Significant Impact. The Encinitas Fire Department provides fire protection and emergency medical services to the project site. The nearest fire stations are Station 2 at 618 Birmingham Drive, approximately 0.5 miles east of the project site, and Station 1 at 415 Second Street, approximately 1.7 miles north of the site. Although the project would increase Cardiff School's building space by 4,760 square feet and its enrollment capacity by 22 seats, the increases are not substantial, and the campus would continue to operate as an elementary school. Adequate fire access would be provided to the campus, and the project

would not negatively affect street access to the surrounding uses. Therefore, project implementation would not substantially affect the department's response times or require expansion of fire protection services such that new or physically altered fire stations would be required. Impacts would be less than significant, and this issue will not be further addressed in the EIR.

b) Police protection?

Less Than Significant Impact. Law enforcement and police protection services are provided by the County of San Diego Sheriff's Department North Coastal Station at 175 North El Camino Real, Encinitas, 2.25 miles northeast of the site. Although the proposed project would increase Cardiff School's enrollment capacity by 22 seats, the increase is not substantial and would not warrant additional law enforcement facilities. Impacts to police protection services would be less than significant; therefore, this topic will not be addressed further in the EIR.

c) Schools?

No Impact. School service needs are related to the size of a residential population, geographic area served, and community characteristics. The proposed project would improve aging Cardiff School facilities and would not cause a demand for new school facilities. Once constructed, the new school facilities would continue to serve the existing Cardiff School program and students in the District attendance area. No negative impact on school facilities or services would occur. This topic will not be analyzed further in the EIR.

d) Parks?

No Impact. The proposed project would not generate a demand for park space, which is typically caused by population and/or employment growth. The project would improve Cardiff School's recreational facilities that are available for community use via a joint use agreement with the City and Civic Center Act. As the proposed project would enhance recreational facilities used by the community, it would have an indirect beneficial effect on parks, and no negative impact would occur. This topic will not be evaluated in the EIR.

e) Other public facilities?

No Impact. The need for public services and facilities (e.g., libraries, hospitals, childcare, teen or senior centers) is typically caused by population growth. As the proposed project is the modernization and reconstruction of an existing school, it would not result in the need for new or expanded public facilities. No impact to public facilities would occur; this topic will not be evaluated in the EIR.

5.15 RECREATION

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Comments:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. Similar to existing conditions, operation of Cardiff School would not require students to use existing neighborhood or regional parks. The proposed project would improve the school's outdoor recreational spaces, which are recognized under the Land and Water Conservation Fund Act and are used by the school and community. The project would enhance not only the facilities' aesthetic qualities, but also their utility. The baseball field—which has been underutilized since the opening of Cardiff Sports Park—would be converted to a soccer/multiuse field; the playground apparatus that bifurcates the existing fields would be relocated to the southwest corner of the site to enhance security and supervision; the project also includes terraced seating west of the multipurpose building that would provide views of the sports fields and ocean; and restroom facilities with direct access from the fields would be constructed. The proposed project would have an overall beneficial effect on recreational facilities. Therefore, no negative impacts on offsite parks and recreational facilities would occur. This topic will not be further considered in the EIR.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less Than Significant Impact. As discussed in Section 5.15(a), the proposed project would not require construction of offsite recreational facilities. The proposed project includes reconstruction of recreational facilities at Cardiff School. The environmental effects related to the whole project, including the recreational facility improvements, are discussed throughout this Initial Study and the forthcoming EIR. Therefore, this topic will not be further reviewed in the EIR.

5.16 TRANSPORTATION/TRAFFIC

Would the project:

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	X			
b)	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	X			
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d)	Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	X			
e)	Result in inadequate emergency access?			X	
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	
g)	Result in inadequate parking capacity?	X			

Comments:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Potentially Significant Impact. The proposed project would generate new vehicle trips from parents, staff, and maintenance workers. Short-term, project-related construction activities would also temporarily increase vehicle trips on nearby roadways for the duration of the construction phase. A traffic impact analysis is being prepared for the proposed project, and the method, findings, and conclusions of the analysis will be carried through to the EIR. Mitigation measures will be provided if required.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Potentially Significant Impact. The traffic impact analysis will address whether the project conflicts with the congestion management program. This topic will be addressed in the EIR, and mitigation measures will be provided if required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The nearest airport is McClellan-Palomar Airport, approximately seven miles north of the project site (Caltrans 2016; Airnav 2017). Project development and operation would have no impact on air traffic patterns and would not increase air traffic levels. No impact would occur, and this topic will not be addressed further in the EIR.

d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

Potentially Significant Impact. With the proposed expansion of the school's onsite passenger loading area and parking lot, the project would alter onsite circulation. Traffic hazards related to the project's design and compatibility with the surrounding uses will be addressed in the EIR. Mitigation measures will be provided if required.

e) Result in inadequate emergency access?

Less Than Significant Impact. The proposed reconfigured campus would be designed to meet fire and life safety standards established in the CBC and as enforced by the Division of the State Architect and local fire marshal. The proposed project would not change street configurations near the project site that could affect emergency access. In fact, the proposed project would increase the number of onsite passenger loading spaces and onsite parking spaces, which would move vehicles off the street network and enhance traffic flow, consequently improving emergency access during the school's morning and afternoon bell periods. Therefore, impacts would be less than significant, and this issue will not be further evaluated in the EIR.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less Than Significant Impact. North County Transit District (NCTD) operates Bus Route 101 and the NCTD Coaster and Amtrak rail lines along Coast Highway 101; the bus route is approximately 350 feet and the rail lines are 300 feet west of the project site. SANDAG has approved the Coastal Rail Trail, which includes a pedestrian and bicycle path, on the east side of the NCTD right-of-way along San Elijo Avenue, and the City of Encinitas has a planned Class 2 bicycle lane on San Elijo Avenue (Encinitas 2005b).

The proposed project would not impact any of these existing and planned facilities or affect their performance. The proposed improvements would be constructed on the existing school campus and along

Montgomery Avenue and Mozart Avenue, away from these facilities. Consequently, permanent operation of the proposed project would not directly affect existing bus and rail operations or planned improvements along San Elijo Avenue. Any potential conflicts related to project construction vehicles accessing San Elijo Avenue and adjoining streets would be temporary and unlikely to coincide with improvements related to the planned Coastal Rail Trail or Class 2 bicycle lane on San Elijo Avenue. The proposed project would not conflict with adopted alternative transportation policies, plans, and programs, and impacts to alternative transportation facilities would be less than significant. This topic will not be further discussed in the EIR.

g) Result in inadequate parking capacity?

Potentially Significant Impact. The proposed project would expand Cardiff School's parking lot on Montgomery Avenue; the number of onsite parking stalls would increase by 11, from 29 stalls to 40 stalls. A parking analysis is underway to determine if the increased number of stalls is adequate for the project's demand. Additionally, construction activities would require parking and staging that could affect street parking. Therefore, construction and operational parking impacts will be further discussed in the EIR; mitigation measures will be provided if required.

5.17 TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	X			
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	X			

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Potentially Significant Impact. A historical resources assessment is being prepared for the proposed project. Although it is unlikely that existing improvements on the project site are related to tribal cultural

resources, the findings and recommendation of the historical resources assessment will be in disclosed in the EIR; mitigation measures will be provided if required.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Potentially Significant Impact. The Native American Heritage Commission's Sacred Lands File record search found no record of tribal resources on the project site. As part of its due diligence, the District has contacted Native American tribes identified by the NAHC that may be culturally affiliated with the project area to determine if local knowledge of tribal cultural resources is available about the project site and surrounding area. Information received will be disclosed in the EIR, as appropriate, and mitigation measures will be provided if required.

5.18 UTILITIES AND SERVICE SYSTEMS

Would the project:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?			X	
e) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

5. Environmental Analysis

Comments:

a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The State Water Resources Control Board adopted Statewide General Waste Discharge Requirements for Sewer Systems (Water Quality Order No. 2006-0003-DWQ) to regulate all collections systems throughout the state to reduce or eliminate sewer overflows, which pollute the environment. The proposed project would not change the existing school use of the project site; therefore, the types of wastewater generated at the site would not change from existing conditions, and the proposed project would not require special wastewater treatment. Therefore, impacts to wastewater treatment requirements would be less than significant, and this topic will not be further addressed in the EIR.

b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. The existing school facilities are connected to the municipal water distribution and wastewater collection systems. Upon implementation of the proposed project, the new and/or reconstructed facilities would also be connected to the existing water distribution and wastewater collection systems.

Wastewater Treatment

Wastewater collected at the project site is treated and disposed by the San Elijo Joint Powers Authority, which owns and operates the San Elijo Water Reclamation Facility (WRF). The San Elijo WRF has the capacity to treat 5.25 million gallons of wastewater per day (mgd); current flows are 3 mgd, with peak flows of up to 6 mgd (SEJPA 2015). The San Elijo WRF has an average remaining treatment capacity of approximately 2.25 mgd.

The proposed project would increase the enrollment capacity of Cardiff School by 22 students (1 classroom). Assuming a wastewater generation factor of 8 gallons of wastewater per day (gpd) per student, the project would increase wastewater production by 176 gpd[2] (Los Angeles 2006). This represents a 0.01 percent increase of San Elijo WRF's remaining treatment capacity. The increase in wastewater generation is negligible, and the San Elijo WRF would be able to accommodate the anticipated wastewater generation. Impacts to wastewater treatment facilities would be less than significant, and this topic will not be discussed in the EIR.

Water Treatment

Water treatment facilities filter and/or disinfect water before it is delivered to customers. The San Dieguito Water District (SDWD) supplies water to the project site and surrounding area. The water is treated at the R.E. Badger filtration plant, which is jointly owned and operated by the Santa Fe Irrigation District and the SDWD. The Badger plant has the capacity to treat up to 40 mgd of water and treats over 7 billion gallons of

[2] 8 gpd x 22 students = 176 gpd. 176 gpd / 2,250,000 gpd = 0.00008 = 0.01%

water annually; therefore, the R.E. Badger Filtration plant has a remaining daily treatment capacity of approximately 20,821,918[3] gpd.

According to consultation with the SDWD Engineering Department, based on a three-year average of actual water consumption, operation of the Cardiff Elementary School has an average water demand of 1,600 gpd per acre (Olson 2018). Based on the project site acreage of 7.4 acres and the existing seating capacity of 418 seats, one seat has a water demand of 28.3 gpd.[4] Therefore, the project's increase of 22 seats would result in an increased water demand of approximately 622.6 gpd—this is less than 0.003 percent[5] of the available water treatment capacity. The increase is negligible, and project impacts on water treatment facilities are less than significant. This issue will not be further addressed in the EIR.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. As discussed in Section 5.9(e), the proposed project would include a new storm drain system on the project site that would ensure that postconstruction runoff would be less than existing. Therefore, offsite stormwater drainage facilities would be minimally affected, if at all, and the project would not cause the need to expand offsite stormwater drainage facilities. Impacts would be less than significant, and the EIR will not evaluate offsite stormwater drainage facilities.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. Project implementation would increase the amount of water required to serve the project site. The project site is in the SDWD. According to the SDWD 2015 Urban Water Management Plan (UWMP), the SDWD obtains its water from Lake Hodges and imports treated and untreated water from San Diego County Water Authority (SDWD 2016). The 2015 SDWD UWMP states that the SDWD had a water supply of 6,352 acre-feet per year (afy) in 2015, which includes purchased and imported water, supply from storage, and recycled water. By 2035, the SDWD is projected to have a potable water supply of 7,838 afy. According to the UWMP, the SDWD would have sufficient water supplies to serve the SDWD service area demand of water during normal, single-dry, and multiple-dry year conditions through 2035 (SDWD 2016). Therefore, SDWD would continue to have water supplies available to serve the project's increase in water demand of 622.6 gpd. Therefore, this topic will not be addressed further in the EIR.

e) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. See Sections 5.18(a) and (b), above. The project would result in an increase in enrollment capacity of 22 seats and a negligible increase in wastewater generation. The existing wastewater

[3] 40,000,000 gpd x 365 days = 14,600,000,000 gallons per year (gpy). 14,600,000,000 gpy – 7,000,000,000 gpy = 7,600,000,000 gpy. 7,600,000,000 gpy / 365 days = 20,821,918 gpd.
[4] 1,600 gpd/acre x 7.4 acres = 11,840 gpd. 11,840 gpd / 418 seats = 28.3 gpd per seat.
[5] 28.3 gpd x 22 seats = 622.6 gpd. 622.6 gpd / 20,821,918 gpd = 0.00003 = 0.003%.

treatment provider would be able to accommodate the project increase. Therefore, impacts to wastewater facilities will not be addressed further in the EIR.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Waste from the project site is collected by EDCO Services and transported to Escondido Disposal, Inc., a waste processing and transfer facility at 1035 West Washington Avenue in Escondido. Waste is then transported to the Sycamore Landfill, which has a maximum daily intake capacity of 5,000 tons of waste per day (tpd); it receives approximately 4,000 tpd and thus would have a remaining daily intake capacity of 1,000 tpd. The landfill has a total remaining capacity of 113,972,637 cubic yards or 30,772,612 tons (CalRecycle 2018).

Most of the California Department of Resources Recycling and Recovery's (CalRecycle) sample solid waste generation rates for public venues and institutions reflect the volume of refuse generated per student, employee, or visitor (CalRecycle 2016). The proposed improvements would increase school capacity by 22 seats. Using a waste generation rate of 0.5 pound per student per day, project implementation would increase waste generation by approximately 11 pounds per day. This increase would be less than 0.001[6] percent of the landfill's remaining daily allowable intake and could be easily accommodated. Therefore, project impacts on landfill capacity would be less than significant, and the topic will not be addressed in the EIR.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. Solid waste would be generated during construction and operation of the proposed project. The District would comply with all county and state solid waste diversion, reduction, and recycling mandates, including the Countywide Integrated Waste Management Plan. To reduce the amount of waste going into local landfills from schools, the state passed the School Diversion and Environmental Education Law, SB 373, which required CalRecycle to develop school waste reduction tools for use by school districts. In compliance with this law, CalRecycle encourages school districts to establish and maintain a paper recycling program in all classrooms, administrative offices, and other areas owned and leased by the school district. Participation in this and other such programs would reduce solid waste generated from the proposed project.

The District and its construction contractor would comply with all applicable laws and regulations and make every reasonable effort to reuse and/or recycle the construction debris that would otherwise be taken to a landfill. They would dispose of hazardous wastes, including paint used during construction, only at facilities permitted to receive them and in accordance with local, state, and federal regulations. The proposed project would comply with all applicable federal, state, and local statues and regulations related to solid waste disposal. Impacts to federal, state, and local statutes concerning solid waste would be less than significant. This issue will not be further analyzed in the EIR.

[6] 1,000 tpd x 2,000 lbs = 2,000,000 lbs. 11 lbs / 2,000,000 lbs = 0.00001 = 0.001%.

5.19 MANDATORY FINDINGS OF SIGNIFICANCE

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
b) The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	X			
c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	X			
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X			

Comments:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. The project site contains structures that are eligible for consideration in the California Register of Historical Resources and may contain buried resources that are important to California history or prehistory. The site also contains vegetation that could be of special biological concern and provide nesting opportunities for avian wildlife. The EIR will address the project's potential impacts to biological, cultural, and tribal resources.

b) The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?

Potentially Significant Impact. The proposed Cardiff School Modernization and Reconstruction project would improve existing school facilities that would continue to accommodate elementary-aged students within the District attendance boundaries. Project implementation would comply with both short-term and long-term environmental goals established by state and local policies, laws, and regulations. The EIR will identify the residual environmental impacts that would occur after complying with the applicable systems and

will identify mitigation measures to ensure that short-term and long-term environmental impacts are feasibly mitigated, if required.

c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Potentially Significant Impact. The EIR will further consider the project's contribution to cumulative impacts in connection with known projects near the site and in the region.

d) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. All of the potentially significant impacts identified in this Initial Study could have direct or indirect substantial adverse impacts on human beings. These impacts will be addressed in the EIR, and mitigation measures will be provided if required.

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6. References

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7. List of Preparers

Cardiff School District

Randy Peterson, Bond Program Manager

PlaceWorks

Barbara Heyman, Associate Principal

Michael Paul, Project Planner

Alexis Whitaker, LEED AP, Environmental Scientist

Jasmine Osman, Environmental Assistant

7. List of Preparers

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Appendix 2-1 NOP and Public Scoping Comments

Appendices

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STATE OF CALIFORNIA Edmund G. Brown Jr., Governor
NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710

May 11, 2018

Randy Peterson
Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

Also sent via e-mail: csdbpm@gmail.com

RE: SCH# 2018051016, Cardiff School Modernization and Reconstruction Project, City of Encinitas, Community of Cardiff-by-the-Sea; San Diego County, California

Dear Mr. Peterson:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for Draft Environmental Impact Report for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd. (a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a **separate category of cultural resources**, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code § 21084.2). Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf. Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends **lead agencies consult with all California Native American tribes** that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws**.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
    - **a.** A brief description of the project.
    - **b.** The lead agency contact information.
    - **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
    - **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
    - **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
    - **a.** Alternatives to the project**.**
    - **b.** Recommended mitigation measures**.**
    - **c.** Significant effects**.** (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
    - **a.** Type of environmental review necessary.
    - **b.** Significance of the tribal cultural resources.
    - **c.** Significance of the project's impacts on tribal cultural resources.
    - **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
    - **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
    - **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
    a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.
        ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        i. Protecting the cultural character and integrity of the resource.
        ii. Protecting the traditional use of the resource.
        iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

    This process should be documented in the Cultural Resources section of your environmental document.

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires **local governments** to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have been already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
- **a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
- **b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
- **a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- **b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- **c.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Please contact me if you need any additional information at gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst
(916) 373-3714

cc: State Clearinghouse

Department of Toxic Substances Control

Barbara A. Lee, Director
5796 Corporate Avenue
Cypress, California 90630

Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

May 24, 2018

Mr. Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, California 92007
csdbpm@gmail.com

NOTICE OF PREPARATION (NOP) OF AN ENVIRONMENTAL IMPACT REPORT (EIR) FOR CARDIFF SCHOOL MODERNIZATION AND RECONSTRUCTION PROJECT, 1888 MONTGOMERY AVENUE, ENCINITAS, SAN DIEGO COUNTY (SCH# 2018051016)

Dear Mr. Peterson:

The Department of Toxic Substances Control (DTSC) has reviewed the subject NOP. The following project description is stated in the NOP: "Cardiff School would be modernized and reconstructed to facilitate a safe and secure campus and to better align with the current instructional program needs. The proposed project consists of demolition of five 1-story buildings, a portion of a sixth building, and eight relocatable classrooms; construction of ten 1-story wood-framed buildings and a 2-classroom addition to an existing building; and modernization of two existing buildings."

Based on the review of the submitted document DTSC has the following comments:

1. The EIR should identify and determine whether current or historic uses at the project site may have resulted in any release of hazardous wastes/substances. A Phase I Environmental Site Assessment may be necessary to identify any recognized environmental conditions. DTSC recommends environmental review under the DTSC school program oversight to ensure the school is safe for students and staff.

2. If there are any recognized environmental conditions in the project area, then proper investigation, sampling and remedial actions overseen by the appropriate regulatory agencies should be conducted prior to the new development or any construction.

Printed on Recycled Paper

If you have any questions regarding this letter, please contact me at (714) 484-5380 or email at Johnson.Abraham@dtsc.ca.gov.

Sincerely,

Johnson P. Abraham
Project Manager
Brownfields Restoration and School Evaluation Branch
Site Mitigation and Restoration Program - Cypress

kl/sh/ja

cc: Governor's Office of Planning and Research (via e-mail)
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
State.clearinghouse@opr.ca.gov

Mr. Dave Kereazis (via e-mail)
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

Mr. Shahir Haddad, Chief (via e-mail)
Schools Evaluation and Brownfields Cleanup
Brownfields and Environmental Restoration Program - Cypress
Shahir.Haddad@dtsc.ca.gov

CEQA# 2018051016

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Memorandum

Date: June 5, 2018

To: All Reviewing Agencies

From: Scott Morgan, Director

Re: SCH # **2018051016**

Cardiff School Modernization and Reconstruction Project

The State Clearinghouse is forwarding the attached material from the Lead Agency regarding **information** for the above-mentioned document. All other project information remains the same.

cc: Randy Peterson
Cardiff School District
1888 Montgomery Avenue
Encinitas, CA 92007

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
1-916-322-2318 FAX 1-916-558-3184 www.opr.ca.gov

CARDIFF SCHOOL DISTRICT

Governor's Office of Planning & Research

JUN 04 2018

STATE CLEARINGHOUSE

Jill Vinson, Superintendent

BOARD OF TRUSTEES
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Nancy Orr, Member
Dave Clark, Member
Mark Whitehouse, Member

Notice of a Public Information Meeting for Proposed Cardiff School Modernization and Reconstruction Project Case #18-120 CPP

Cardiff School District invites you to a public meeting for the proposed Cardiff School Modernization and Reconstruction project (proposed project).

DATE: Tuesday, June 12, 2018
TIME: 6PM–7PM
LOCATION: Cardiff School Auditorium (1888 Montgomery Avenue, Encinitas)

PROPOSED PROJECT. The project involves modernization and reconstruction of Cardiff Elementary School at 1888 Montgomery Avenue in Cardiff-by-the-Sea. The project site is zoned Public/Semi-Public (P/SP) and is within Special Study and Coastal overlay zones. The project entails demolition of five 1-story buildings, a portion of another building, and eight relocatable classrooms; construction of ten 1-story wood-framed buildings and a two-classroom addition to an existing building; and modernization of two existing buildings. The project would increase the school's building area by approximately 4,760 net square feet, including one new classroom and one specialty lab. The project would also enhance onsite passenger loading and expand onsite parking by six spaces. Construction would begin summer 2019 and be completed in approximately 18 months.

ENVIRONMENTAL IMPACT REPORT (EIR). In compliance with the California Environmental Quality Act (CEQA), the District—as the Lead Agency under CEQA—will prepare an EIR for the proposed project. The environmental review process for the project and the preliminary findings of the environmental effects will be presented at the meeting, which will be conducted pursuant to Public Resources Code Section 21083.9. Comments concerning the scope and content of the EIR will be accepted at the meeting. Questions about the proposed project and the public meeting should be directed to Randy Peterson, FAIA, Cardiff School District Bond Program Manager, at 760.632.5890 or csdbpm@gmail.com.

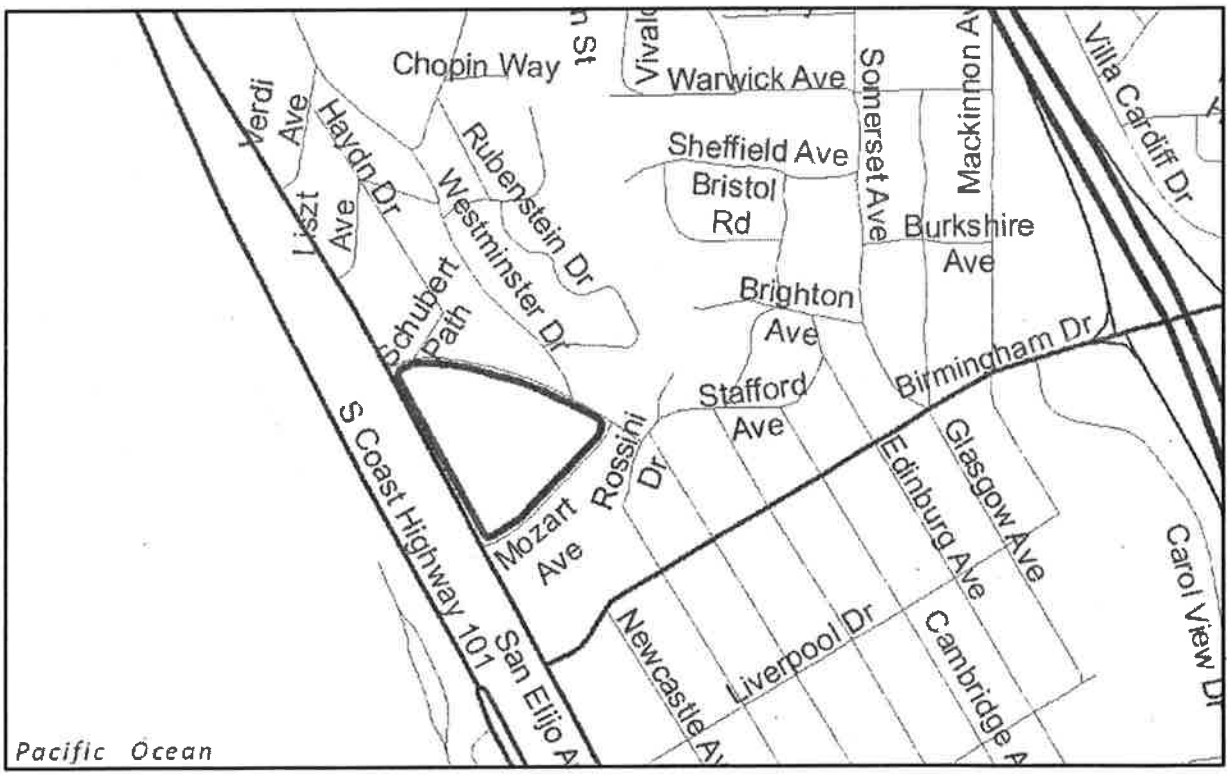
CITIZEN PARTICIPATION PROGRAM (CPP). The proposed project will require a Coastal Development Permit and possibly a Minor Use Permit from the City of Encinitas. The project will be required to comply with the City of Encinitas CPP (E.M.C. 23.06), including outreach to neighbors. The District will file an application for development of the proposed project with the City of

CARDIFF SCHOOL DISTRICT

Jill Vinson, Superintendent

BOARD OF TRUSTEES
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David Ross, Clerk
Nancy Orr, Member
Dave Clark, Member
Mark Whitehouse, Member

Encinitas Development Services Department. The CPP process is a tool for ensuring that the project applicant (i.e., Cardiff School District) and citizens have an opportunity in the planning process to discuss, understand, and try to resolve neighborhood issues related to potential impacts of the proposed project on the surrounding neighborhood. The CPP process is not meant to necessarily change or prevent the project as proposed. Please continue to monitor notices, as changes may be made to the project prior the City's consideration of the required permit(s). Questions regarding the CPP process should be directed to the City of Encinitas Development Services Department at 760.633.2710.



NOP Distribution List

OEJ

County: San Diego

SCH# 2018051016

Resources Agency

- [■] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Denise Peterson
- [▨] **California Coastal Commission**
  Allyson Hitt
- [ ] **Colorado River Board**
  Lisa Johansen
- [ ] **Dept. of Conservation**
  Crina Chan
- [ ] **Cal Fire**
  Dan Foster
- [ ] **Central Valley Flood Protection Board**
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- [▨] **Office of Historic Preservation**
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- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve Goldbeck
- [▨] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

2-1-18

Fish and Game

- [ ] **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Wildlife Region 1**
  Curt Babcock
- [ ] **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Wildlife Region 2**
  Jeff Drongesen
- [ ] **Fish & Wildlife Region 3**
  Craig Weightman
- [ ] **Fish & Wildlife Region 4**
  Julie Vance
- [▨] **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Wildlife M**
  William Paznokas
  Marine Region

Other Departments

- [▨] **California Department of Education**
  Lesley Taylor
- [ ] **OES (Office of Emergency Services)**
  Monique Wilber
- [ ] **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] **Dept. of General Services**
  Cathy Buck
  Environmental Services Section
- [ ] **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Erik Vink
- [ ] **Delta Stewardship Council**
  Anthony Navasero
- [ ] **California Energy Commission**
  Eric Knight
- [■] **Native American Heritage Comm.**
  Debbie Treadway
- [▨] **Public Utilities Commission**
  Supervisor
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [ ] **State Lands Commission**
  Jennifer Deleong
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- [ ] **Caltrans - Division of Aeronautics**
  Philip Crimmins
- [ ] **Caltrans – Planning HQ LD-IGR**
  Christian Bushong
- [▨] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Susan Zanchi - North
- [ ] **Caltrans, District 4**
  Patricia Maurice
- [ ] **Caltrans, District 5**
  Larry Newland
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, District 7**
  Dianna Watson
- [ ] **Caltrans, District 8**
  Mark Roberts
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [▨] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- [ ] **Airport & Freight**
  Jack Wursten
  - [ ] **Transportation Projects**
    Nesamani Kalandiyur
  - [ ] **Industrial/Energy Projects**
    Mike Tollstrup
- [▨] **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Cindy Forbes – Asst Deputy
  Division of Drinking Water
- [▨] **State Water Resources Control Board**
  Div. Drinking Water # 14
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- [▨] **Dept. of Toxic Substances Control Reg. #**_____
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [▨] **Other** DFG Marine Region
- [ ] _____
  Conservancy

Last Updated 2/01/18

VIEJAS
TRIBAL GOVERNMENT

P.O Box 908
Alpine, CA 91903
#1 Viejas Grade Road
Alpine, CA 91901

Phone: 6194453810
Fax: 6194455337
viejas.com

June 13, 2018

RECEIVED

JUN 22 2018

CARDIFF SCHOOL DISTRICT

Jill Vinson
Superintendent
Cardiff School District
1888 Montgomery Avenue
Cardiff-by-the-Sea, CA 92007

RE: Cardiff Elementary School Reconstruction

Dear Ms. Vinson,

In reviewing the above referenced project the Viejas Band of Kumeyaay Indians ("Viejas") would like to comment at this time.

The project area may contain many sacred sites to the Kumeyaay people. We request that these sacred sites be avoided with adequate buffer zones.

Additionally, Viejas is requesting, as appropriate, the following:

- All NEPA/CEQA/NAGPRA laws be followed
- Immediately contact Viejas on any changes or inadvertent discoveries.

Thank you for your collaboration and support in preserving our Tribal cultural resources. I look forward to hearing from you. Please call me at 619-659-2312 or Ernest Pingleton at 619-659-2314, or email, rteran@viejas-nsn.gov or epingleton@viejas-nsn.gov, for scheduling. Thank you.

Sincerely,

Ray Teran, Resource Management
VIEJAS BAND OF KUMEYAAY INDIANS

From: Linda Aiken [redacted]
Subject: Cardiff School Construction
Date: June 6, 2018 at 12:25:37 PM PDT
To: csdbpm@gmail.com
Reply-To: Linda Aiken [redacted]

Mr. Peterson;

I am writing you in regards to the proposed construction at Cardiff School. My husband and I have come to several meetings at the school to listen to the pros and cons of this development. I first would like to say that I feel the school board acts as if we are uniformed, uneducated and mean nothing to this community. That could be further from the truth.

My great uncle built the brick building on the corner of San Elijo Ave. and Montgomery. My aunt has been in this community for over 40 years and is a retired educator. My husband and I moved in6 years ago after downsizing and then renting in North County. I have been on numerous boards during my children's education including site council and community outreach boards. I have worked with the YMCA during their build in East County and the subsequent issues that arose during those processes. We listened to the community, the businesses, the homeowners and anyone who wanted to give us their opinion.

This is by far the worst interaction between community and school board (or any board I have been a part of) that I have ever witnessed. It seems you have chose to move ahead with a plan that could change the community in a negative way. You and the council have become a terrible neighbor. You and the council have ideas of grandeur for a school that holds about 300 K-3 graders. This isn't a school that houses K-5 or K-6 like the majority of schools in San Diego County. It doesn't hold 500 to 600 children. It's money being spent the wrong way, the greedy way. Is it really for the children? Or for the board??

Not only have you chosen to take away valuable open space, that is federally protected, you are changing everything about the school that makes it special. And for what?? A feather in your cap?

The impact this would have on all the homes around the school would be detrimental, not only for the traffic changes but for our home values. When we moved here, our agent (a very prominent one in Cardiff) told us we would never lose the open space, views and small town feel when we moved here. Well, we are losing it all.

In closing, I just want you to know that we didn't vote for Measure GG, because we knew this would happen. We are property owners, we are footing the bill on our property taxes. You and the Board need to remember this and you need to take a step back and think about what is best for everyone, not just for you.

Thank You,

Linda Aiken

From: J Barry [redacted]
Subject: Cardiff school construction
Date: June 4, 2018 at 6:56:57 PM PDT
To: "csdbpm@gmail.com" <csdbpm@gmail.com>

Please keep the school construction off the current open field areas. The current school footprint area is more than required to offer a quality education for our children. Read the research… movement improves the cognitive learning process. Don't build over the student and community movement areas!

Sent from Mail for Windows 10

From: Prem Bovie-Ware [redacted]
Subject: Comments on NOP Cardiff School
Date: June 6, 2018 at 6:12:57 PM PDT
To: <csdbpm@gmail.com>
Reply-To: Prem Bovie-Ware [redacted]

Dear Mr. Peterson,

My name is Premila Anklesaria Bovie-Ware. I moved to Cardiff in 1961 and lived on Rossini Drive, Santa Fe Drive and Montgomery Avenue. I still own the residence at [redacted]. I attended Cardiff Elementary from 3rd through 6th grade and George Berkich was my teacher.

The proposed demolition and reconstruction plan generated by the passage of Measure GG has been very problematic with numerous plan evolutions and sudden changes.
The Measure GG Bond stated provisions completely demolish the Cardiff School has been fairly disingenuous and fraught with less than transparent procedures, tactical maneuvering, manipulation of the public's understanding and right to know the District's true, as well as accurate, intentions. This had lead to skepticism, mistrust, and alienation of the segment of the community that is civiclly engaged. Activist residents have stepped up as citizens, taking the responsibility to hold the Board and various planning committee's accountable for the original stated intention of the bond as well as demanding that integrity be integral to the proceedings and process. Their efforts have not been well received.

Because of the previous history and ongoing maneuvering there is a good lack of trust on my part to believe there will not be more sudden changes to the plan and lack of robust notification about comment periods, changes and honoring the LWCF. In viewing the current plan dated May 10, 2018 on the website, I find that the architects have very much improved the plan from the one presented last fall. I applaud their efforts in taking the public input and suggestions and folding them into a much more secure and compact design. But are we to trust that the May 10, 2018 plan will be kept very closely to what is pictured and described in the document? OR will there suddenly be large revisions, additions or changes to elevations and boundaries as has happened before and then the public input will be negated by legal time limit deadlines? This is a huge concern to my husband and I going forward. We were both public school employees: me as an educator and he as a principal and district level administrator. So we have quite a background in understanding both sides of this issue and the need to try to work out equitable solutions.

Since our property sits directly across from the present school parking lot entrance, the location of the proposed multi-purpose room will directly impact
what we will be looking at and the daily ,as well as special event, traffic we will experience. From the rendering it is difficult to tell the height of the project from San Elijo to Montgomery Ave. An elevation drawing would have been helpful. It appears as though there might be a dropoff (lower elevation) on the outside of the multipurpose room where the outdoor seating area is located because there are stair/seats pictured. Looking at that feature there appear to be stair/seats of perhaps 10" ,each times seven (7) which would be about a tad more than 5 ½-6 ft. Could be greater if the seating is 12 inch in rise. However, without an elevation drawing it's hard to tell. It also, appears that the roof of the 25 foot multi-purpose room is even with the roof lines of the building at the street/parking lot level. Is that correct? Additionally where would the HVAC system be located: on

the roof of the multi-purpose room or adjacent to it. If it would be on the roof, how would it be concealed? Our lot goes from Montgomery up to Rubinstein. At the top level it would less than pleasurable to be looking down at a roof of huge HVAC condensers. You have to have had that experience from having a ruined view from a resort hotel window.

As to the apparent brushing aside of the LWCF "in perpetuity" clause, I have immense concerns and commentary regarding that. Publicly elected representatives have a duty of stewardship for the park and its continued presence in its entirety. That is evidenced by the foresight of the Board and other entities that entered into the LWCF agreement protecting "in perpetuity" the George Berkich park footprint. It was for the "benefit and enjoyment of the people". That does not just mean organized sports competitions, or pre-planned reserved access. It means that if a parent wants to take their child, or foster child, or a Big Brother mentor wants to take a kid to play catch or practice hitting, or fly a Frisbee, there is a large unencumbered open free space in which to do so. How many other places in the beachside Cardiff Community are there to do this? Glen Park is certainly not flat and open. Are the diamonds and fields at the new sports park open to anyone, anytime, or are they reserved and often locked unless they have been "properly" and "previously" been arranged to be used?

The ability to have unstructured, open areas leads to spontaneous opportunities for play. We used to play from dawn to dark on these fields. It allowed for inclusion of all the kids no matter ability and skill. It allowed for just playing a game. Now it seems you can only play a sport if you are on 'THE" team, when it should be you can all suddenly just play Nerf football, or croquet, or 3 fly's up. It should facilitate you can be on "any" team, especially spontaneous ones. Increasingly schools limit and even lock up areas that used to be open to the public. Clearly the proposed Cardiff School plan development will impact the availability to access the park all the time, (which is understood) but it should be considered that not every park space has to be in the form of a soccer field. Having the ability for a family to come to Berkich Park and use the old baseball backstop or just fly kites, taking advantage of the "dome of open space" should not be eliminated, negated or marginalized so the District can hold wedding receptions or other money generating events in the multi-purpose room.

That is an affront to those that entered into the LWCF with a strong dedication to preserving the George Berkich Parkland for the posterity and with a nod to accessibility and acknowledgment of the sanctity of expansive open spaces anywhere, much less the California coastline.
One can't be aware that once it is gone, it is gone forever.

It is too bad that in the last 20-40 years that none of the governing Cardiff boards of Education had the vision to anticipate, imagine or undertake some analysis of growth that perhaps acquiring more land for another school or facility might be a good idea, given the ongoing growth that all communities encounter. But that is not justification to nullify or simply disregard the LWCF "in perpetuity" stipulation. This appears to one of the tactics that is being employed, in this situation. We will go forward with the plan and deal with that pesky little detail of the LWCF down the road. We can use legal maneuvering, various ploys and wear down or eliminate any resistance. Right now up and down California's Coast that scenario is being exercised. And that is a travesty. Ignoring the

"in perpetuity" stipulation will hurt our little community park by the sea, but, moreover, it will give another legal precedent toe hold to the rampant assault by special interests, wealthy landowners and developers that the California coastline is currently experiencing (see links below). Please realize that your actions can have huge reverberating effect setting legal precedents. Your heart allows knows what is right. Do the right thing.

Sincerely,

Premila Anklesaria Bovie-Ware

Below are links to articles about the assault on the California coastline and access by the public to it.

LA Times
May 22/23 Soon you can visit this pristine California Beach--if you're a nearby landowner, on a guided tour or willing to paddle 2 miles
http://www.latimes.com/local/lanow/la-me-hollister-ranch-settlement-20180522-story.html

May 29 The Hollister Ranch settlement is a giveaway to wealthy landowners who want to block beach access.
http://www.latimes.com/opinion/readersreact/la-ol-le-hollister-ranch-coastal-commission-20180529-story.html

June 06, 2018
Who gets to enjoy California's natural treasures? The right answer should be "everyone"
http://www.latimes.com/opinion/op-ed/la-oe-sipchen-hollister-ranch-coastal-commission-20180606-story.html

This link to Steve Lopez's (a columnist for the LA Times) trip from the northern tip of the California coast to the southern most, might be of special interest. This directly relates to all the little stories and actions that may seen negligible but together have a cumulative impact on everybody's coast.

Steve Lopez Aug 6 2016
Jul 18-aug 25 2016
http://www.latimes.com/local/california/la-coastal-road-trip-steve-lopez-one-feather-a-colorful-hippy-1470537299-htmlstory.html

links to 72 posts (see inset sliding sidebar)

From: [redacted]
Subject: NOP response
Date: June 6, 2018 at 11:16:56 AM PDT
To: csdbpm@gmail.com

Attn: Randy Peterson, FAIA

June 5, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Re: Written Comments on Notice of Preparation of Draft EIR

Dear Mr. Peterson:
In order to avoid significantly delaying, or even imperiling, the proposed school renovation, it is essential that all mandatory environmental reviews be completed in a timely manner. As detailed below, the process cannot be piecemeal -- a responsible environmental review proposal complying with all of the District's requirements must be prepared at the outset.
The Cardiff School District ("District") proposal dated May 8, 2018 includes the introductory statement on page 1 that the project is required to undergo an environmental review pursuant to CEQA. While this is an accurate statement, it only partially expresses the District's obligations because the proposal fails to state or even acknowledge that the project must also undergo environmental review under the National Environmental Policy Act (42 United States Code 4321 et seq.)("NEPA"). As stated in National Park Service NPS Form 10-904, which the District is required to complete and submit to the California Office of Grants and Local Services (OGAL) for approval of the proposed conversion of LWCF protected park land, NEPA environmental review is mandatory for both the converted and replacement sites to analyze how the converted park land and recreational usefulness will be replaced. This submission must include environmental reviews for both sites in the same document.
While both are environmental reviews, CEQA and NEPA standards are different. One important difference between NEPA and CEQA is the determination of "significance." NEPA does not require a determination of significant effects in the environmental document as is customary in CEQA. NEPA regulations, on the other hand, require "evaluations of significance consider both an impact's context and intensity." (40 Code of Federal Regulations Part 1508.27). The "context" means the geographic, social, and environmental contexts within which the project may have effects. Intensity is the severity of the potential impact, considered in context. The proposed EIR addresses none of these issues and, importantly, makes no mention of any proposed replacement sites, completely ignoring the requirements for LWCF grant compliance.

There is no recognition within the EIR proposal of any legal obligation for NEPA review, nor is there any indication of intent to conduct such a review. On the reasonable assumption that the District wishes to avoid the delays and expense of conducting two independent environmental reviews, economic efficiency and responsible project administration demand that the proposed EIR must be part of a combined Environmental Impact Report/ Environmental Assessment (EIR/EA) prepared in accordance with both CEQA and NEPA.

Failure to complete all mandatory reviews in a timely manner could lead to significant delays in the proposed school project. A combined EIR/EA is essential to meeting the District's obligations under both CEQA and NEPA. The present EIR proposal fails to meet these standards and must be revised to ensure compliance.

Sincerely,

Audrey Bromstad

Cardiff by the Sea

From: [redacted]
Subject: Comments re: NOP
Date: June 6, 2018 at 8:29:15 AM PDT
To: csdbpm@gmail.com
Cc: [redacted]

Randy Peterson, FAIA
Bond Program Manager
csdbpm@gmail.com
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007
Additional addressees:
Cardiff Elementary School District
Ms Jill Vinson, Superintendent
Cardff School Board Members

Subject: Notice of Preparation
Dear Mr. Peterson,

June 6, 2018 / 8:30 AM

On the NOP "Notice of Preparation" the following items shouild require far more scrutiny: (Please note: page numbers may be different due to the Cardifff School computer program.)

Page 6/16 — Cardiff enrollment — presently 347 from a high of 395 in 2013.
Page 19/29 — Square footage of buildings would increase from 40,485 sq' to 45,225 sq'— multipurpose bldg adds the additional 5,000 sq'.
Page 21/31 — Play Areas i.e. Berkich Park — The total square footage of the park would be reduced by approximately 30%, there would only be space for two soccer fields.
Page 22/32 — There are presently 25 classrooms and special program rooms, the project adds only two additional rooms. (From 25 to 27 rooms.)
Page 29/39 — Construction phasing — there will be on-going heavy construction from June 2019 through December 2020, the beginning phase turns over 50% of the park into a construction equipment area.
Page 33/43— Environmental factors of aesthetics, land use and planning, transportation and traffic and noise are glossed over as not significantly impactful.
Page 56/66 — Land use and planning is noted as a potentially significant impact.
Page 57/67 — The land use provision overlooks the fact that Berkich park is dedicated in perpituity to the community of Cardiff by the Sea.
Page 58/68 to pages 59/69— The noise issue is noted as a potentially significant impact. This is especially important to the neighbors within blocks of the school.

Page 61/71 — Buried in a paragraph is the stated fact that the square footage of building space increases by only 4,760 sq', and the enrollment capacity is increased by only 22 seats. (22 additional seats for $22 million dollars.)

Page 63-73 — The recreation impact is in error, by reducing the park size the ability of young and older athletes to use park space is severly restricted, pushing them to other parks.

Pages 64&65/74&75 — The transportation and traffic category is noted as potentially significant Impactful and is not adequately addressed, other than mentioning that it will be carried through to the EIR. This ignores the traffic circulation and congestion during the two-year construction period.

Respectfully,
John Bromstad
Cardiff by the Sea

From: Ryan Campbell [redacted]
Subject: Cardiff School
Date: June 7, 2018 at 9:15:05 AM PDT
To: csdbpm@gmail.com

Please see attached

June 5, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Re: Written Comments on Notice of Preparation of Draft EIR

Dear Mr. Peterson:

In order to avoid significantly delaying, or even imperiling, the proposed school renovation, it is essential that *all* mandatory environmental reviews be completed in a timely manner. As detailed below, the process cannot be piecemeal -- a responsible environmental review proposal complying with *all* of the District's requirements must be prepared at the outset.

The Cardiff School District ("District") proposal dated May 8, 2018 includes the introductory statement on page 1 that the project is required to undergo an environmental review pursuant to CEQA. While this is an accurate statement, it only partially expresses the District's obligations because the proposal fails to state or even acknowledge that the project must also undergo environmental review under the National Environmental Policy Act (42 United States Code 4321 et seq.)("NEPA"). As stated in National Park Service NPS Form 10-904, which the District *is required* to complete and submit to the California Office of Grants and Local Services (OGAL) for approval of the proposed conversion of LWCF protected park land, NEPA environmental review is mandatory for both the converted and replacement sites to analyze how the converted park land and recreational usefulness will be replaced. This submission must include environmental reviews for *both* sites in the same document.

While both are environmental reviews, CEQA and NEPA standards are different. One important difference between NEPA and CEQA is the determination of "significance." NEPA does not require a determination of significant effects in the environmental document as is customary in CEQA. NEPA regulations, on the other hand, require "evaluations of significance consider both an impact's context and intensity." (40 Code of Federal Regulations Part 1508.27). The "context" means the geographic, social, and environmental contexts within which the project

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Ryan +

School Inbox x

Ryan Garrett
to me

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Failure to complete all mandatory reviews in a timely mar
the proposed school project. A combined EIR/EA is
obligations under both CEQA and NEPA. The preser
standards and must be revised to ensure compliance.

Sincerely,

Ryan Campbell

From: "Keith Courtney" [redacted]
Subject: Cardiff Elementary - Proposed EIR
Date: June 5, 2018 at 4:39:53 PM PDT
To: <csdbpm@gmail.com>
Cc: <jill.vinson@cardiffschools.com>

Randy, Thank you for your consideration of the attached letter.

Keith Courtney

June 5, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

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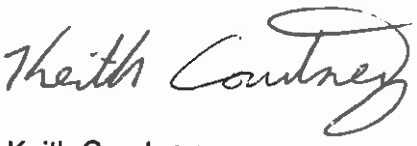
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Sincerely,



Keith Courtney

[redacted]

Cardiff, CA 92007

From: "Russell A. Davis" [redacted]
Subject: Cardiff School EIR
Date: June 6, 2018 at 9:32:43 AM PDT
To: csdbpm@gmail.com

Mr. Petersen,
Please accept the attached letter for inclusion in your comments pertaining to the Cardiff School EIR.

Russ
Russell Davis
SanDiegoBusinessLaw
[redacted]
Cardiff, CA 92007
[redacted]
www.sandiegobusinesslaw.com

June 5, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

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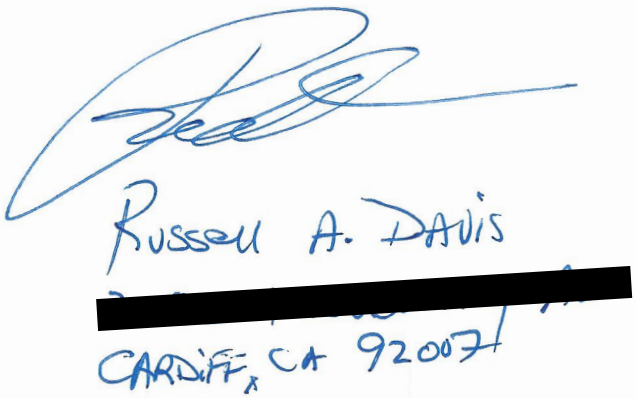
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Failure to complete all mandatory reviews in a timely manner could lead to significant delays in the proposed school project. A combined EIR/EA is essential to meeting the District's obligations under both CEQA and NEPA. The present EIR proposal fails to meet these standards and must be revised to ensure compliance.

Sincerely,



Russell A. Davis
[redacted]
Cardiff, CA 92007

From: Kevin Dugger [redacted]
Subject: Cardiff School
Date: June 6, 2018 at 7:22:57 AM PDT
To: csdbpm@gmail.com, Brett Farrow [redacted]

Hello Mr. Peterson,

I am writing from [redacted] (south side of Cardiff Elementary) where my family has lived for over 55 years. I wanted to address concerns we have with regards to the layout for the new plans to rebuild the school. It is my understanding along with many other residents that the Bond issue that was passed for the school was to upgrade and enhance existing structures, not redesign layout and in doing so encroach on more open park area.
Our foremost concern of the current plan (to encroach and build on existing open park / playground space) would create view impediment that will directly effect our quality of life and property value. We formerly oppose any expansion of buildings that exceed the existing footprint. Another major concern is the traffic and parking. Due to the lack and absence of any traffic supervision during the pick up and drop off periods, I have personally experienced being blocked from entering and exiting our own driveway due to the back up of numerous cars stopped in the middle of the road waiting in line for their children. This is a problem that is avoidable with proper supervision. Also people often park without concern of the current residence accessibility due to lack of sidewalks on our side of the street, and it is a serious safety concern for my family if an emergency were to occur, we are afraid that access to our home would impede ambulances or firetrucks.

Thank you for taking the time to hear our concerns. If you have any questions for my family or myself, please let me know.

Best regards,
Kevin

Kevin Dugger
[redacted]

From: Vinko Erceg [redacted]
Subject: Cardiff School Construction Project
Date: June 6, 2018 at 2:26:11 PM PDT
To: csdbpm@gmail.com

Dear Randy,

My name is Vinko Erceg, living at Mozart Creek complex across the Cardiff school, for the past 15 years. I was attending meetings regarding the school project and was quite happy with early proposals. I found that project leaders and architects were very considerate of children's needs, traffic and surrounding resident properties. However, most recent proposal that paves over significant portion of green areas does not serve justice and purpose to anyone, most importantly children. In my mind this is unacceptable and quite unexpected turn of events. I am hoping that something could be done to revert to one of earlier proposals (or create new proposal) that preserves park areas and are not extending buildings along Mozart Ave and make traffic more congested along MontGomery Ave. I truly hope that something can be done to correct this.

https://www.cardiffschools.com/cms/lib/CA01000801/Centricity/Domain/125/Cardiff_School_Mod_Reconstruction_IS_NOP.pdf

With Best Regards,

Vinko Erceg, PhD

From: Heidi Farrow [redacted]
Subject: Cardiff School Comment from Public
Date: June 5, 2018 at 11:55:36 AM PDT
To: csdbpm@gmail.com

Dear Randy,
While I love the Children, Teachers and the Administrators of the Cardiff School District, I do not love the current design of the new school and am opposed.
The district has put forth a narrow design that does not fulfill its stated objectives and can do better.
I am positive the Designers and Architects could work with neighbors to find the win-win.
Thank you,
Heidi Farrow

From: "Brett Farrow" [redacted]
Subject: Cardiff School-NOP Public Comments
Date: June 5, 2018 at 12:00:42 PM PDT
To: <csdbpm@gmail.com>

Mr. Peterson,

I wish to express my serious concerns regarding the impact of the proposed Cardiff School Modernization and Reconstruction Project.

Below are my concerns by sections;

2.2 Existing Conditions- The reference to George Berkich Public Park on the site seems to have been omitted and/or inadequately described and characterized. The school project does propose the taking of dedicated parkland and this should be further described in the this document and future EIR's.

5.1 Aesthetics- The proposed design would significantly impact scenic vistas from private properties, the public right-of-way and from on-site at George Berkich Park. The new structures, multi-purpose room and +/-12' tall by 45' long concrete wall to be built in the park will negatively impact scenic ocean vistas.

5.7 Greenhouse Gas Emissions- The demolition and re-building of the school will create an increase in greenhouse gases. Both in terms of material directed to land-fills and the fossil fuels necessary to generate and deliver construction materials. A more environmentally sensitive approach could have included greater repurposing of existing structures.

5.9 Hydrology and Water Quality- The increase in impervious areas will significantly impact water quality in a location that discharges to San Elijo Lagoon and the Pacific Ocean. The project additionally proposes paving existing grass playing fields in the park which will further burden existing inadequate drainage systems and needlessly require the construction of bio-retention basins and other structures in areas that could otherwise be used for more useful purposes. This is a significant concern for the community.

5.14 Public Services- As mentioned previously the loss of public park space, (5.14 d) will be the result of the proposed project. Significant community input and concern about this matter has been disregarded.

5.15 Recreation- Similar to above, there will be a loss of recreational facilities which will have an adverse physical effect on the environment and should be included in the EIR.

5.16 Transportation/Traffic- As the application states there will be significant impacts to transportation and traffic with the project. The proposed expansion for pick-up and drop-off will effectively be inviting more vehicular traffic into a residential area. This increased paved area along Montgomery Avenue is largely why the school design is taking public park land. The design should be modified to both reduce impervious areas and re-direct vehicular traffic to a new pick-up/drop-off spot along San
Elijo Avenue.

5.18 Utilities and Service Systems- As mentioned previously the increase in impervious areas and paving of the playing fields will definitely have significant impacts on storm water quality and potentially generate additional run-off. This item deserves additional consideration in the EIR.

5.19 Mandatory Findings of Significance- The application correctly states in this section that the project as proposed will have a significant impact in a broad number of categories.

Conclusion:

The proposed project was passed in a public vote for re-building the school. However, the public did not vote to reduce park land. The project has gone forward with multiple workshops and public outreach but the feedback from the community has been unfortunately ignored.

I have two daughters who attend the Cardiff School District and although I support modernizing Cardiff Elementary, I do not believe what has been proposed adequately addresses community concerns. The proposed design should be adjusted to both preserve the dedicated park land, and, be more mindful of the impact on the surrounding established residential areas.

Sincerely,

Brett Farrow
[redacted]
Cardiff, CA 92007

M E M O

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DATE: June 5, 2018

TO: Randy Peterson

PROJECT: Cardiff School Modernization & Reconstruction Project

RE: NOP/Draft EIR Comments

REMARKS:

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Sincerely,



Brett Farrow
[redacted]
Cardiff, CA 92007

From: Ryan Garrett [redacted]
Subject: Cardiff School Project
Date: June 7, 2018 at 9:15:37 AM PDT
To: csdbpm@gmail.com

Please see attached

June 5, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Re: Written Comments on Notice of Preparation of Draft EIR

Dear Mr. Peterson:

In order to avoid significantly delaying, or even imperiling, the proposed school renovation, it is essential that *all* mandatory environmental reviews be completed in a timely manner. As detailed below, the process cannot be piecemeal -- a responsible environmental review proposal complying with *all* of the District's requirements must be prepared at the outset.

The Cardiff School District ("District") proposal dated May 8, 2018 includes the introductory statement on page 1 that the project is required to undergo an environmental review pursuant to CEQA. While this is an accurate statement, it only partially expresses the District's obligations because the proposal fails to state or even acknowledge that the project must also undergo environmental review under the National Environmental Policy Act (42 United States Code 4321 et seq.)("NEPA"). As stated in National Park Service NPS Form 10-904, which the District *is required* to complete and submit to the California Office of Grants and Local Services (OGAL) for approval of the proposed conversion of LWCF protected park land, NEPA environmental review is mandatory for both the converted and replacement sites to analyze how the converted park land and recreational usefulness will be replaced. This submission must include environmental reviews for *both* sites in the same document.

While both are environmental reviews, CEQA and NEPA standards are different. One important difference between NEPA and CEQA is the determination of "significance." NEPA does not require a determination of significant effects in the environmental document as is customary in CEQA. NEPA regulations, on the other hand, require "evaluations of significance consider both an impact's context and intensity." (40 Code of Federal Regulations Part 1508.27). The "context" means the geographic, social, and environmental contexts within which the project

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standards and must be revised to ensure compliance.

Sincerely,

Kili Garrett

2-1-41

From: Kari Hamilton [redacted]
Subject: Oposition to Proposed Construction at Cardiff School
Date: June 6, 2018 at 10:12:19 AM PDT
To: csdbpm@gmail.com

Dear Randy Peterson,

I am writing to voice my concerns for the negative impacts of the proposed construction. I don't agree with the destruction of park land and the current open space. What makes Cardiff special is that it is not over built and I feel that the proposed construction is over sized and exceeds what is needed for the school. My child is in the Cardiff District and attended the Cardiff School. When I voted on the measure, it was to make improvements to the existing structures, not to add and increase the footprint. It's over building and unnecessary spending. I do not support the loss of open park space. This will ruin Cardiff. I oppose the Notice of Preparation and Initial Study and it's negative impacts on Cardiff.

Thank you,
Kari Hamilton
Cardiff Resident

From: Anne Hawkins [redacted]
Subject: Cardiff Elementary
Date: June 5, 2018 at 8:18:16 AM PDT
To: "csdbpm@gmail.com" <csdbpm@gmail.com>
Reply-To: Anne Hawkins [redacted]

Dear Mr. Peterson,

As a resident of Cardiff for the past 20+ years, I have enjoyed the greenery and open space of the Cardiff Elementary school grounds and surrounding fields. One of the things that most people I know enjoy about Cardiff is the small town feel we've been able to maintain. Please do all you can to preserve the existing park/open field concept that we all currently enjoy.

Sincerely,

Annie Hawkins

From: Tiana Hejduk [redacted]
Subject: Public comment against Measure GG
Date: June 5, 2018 at 10:55:35 PM PDT
To: csdbpm@gmail.com

Dear Mr. Peterson,

It has come to my attention that apparently there has been a Notice of Preparation (NOP) and an initial study concerning the rebuild at Cardiff Elementary which has been posted on the website since May 8th, 2018 and that the period for public comments ends June 6th, 2018.

My question to you is in what ways have you/ the school board/ Cardiff School District made this information available to the public and/or other community members that don't have a child attending Cardiff Elementary or Ada Harris? My point being is if I wasn't a parent who gets a weekly email from the school district how would I get this information? How would I be able to make a "public comment" in such short notice? I believe it is your job to inform ALL community members, not just parents of the school district. I think you should try to do a better job of this.

It should be noted that my general public comment concerning the entire rebuild of Cardiff Elementary is that I am completely OPPOSED to Measure GG, and that I think building on any part of George Berkich Park, which is preserved park land mind you, is a horrible idea that will significantly and negatively impact our community and it's history, not to mention the districts financial budget should this go into litigation.

I've said this many times in board meeting to you and the school board...Nowhere in Measure GG does it state that you would build on George Berkich Park. Not once has there ever been a proposal to NOT build on preserved park land. I leave you with this question, why not?

Hopefully you can get back to me concerning these issues.

Sincerely,

Tiana Hejduk

From: James Howell [redacted]
Subject: Proposed Project at Cardiff School
Date: June 6, 2018 at 12:13:33 PM PDT
To: csdbpm@gmail.com

To: Mr. Randy Peterson

Dear Mr. Peterson,

Hello, my name is James Howell. I'm writing in regards to the proposed construction at Cardiff School.

I strongly believe that construction of additional buildings in the park area of the school would destroy precious open space that is very valuable to the citizens of this great community.

I do not know if the Proposed Project at Cardiff School will affect my property value or the property value of other home owners in the neighborhood surrounding Cardiff School so I will not address that issue.

I believed that the bond measure that passed to provide funds for the construction at Cardiff School was for the remodeling, upgrading and improvements to the existing buildings at the school, not construction of new buildings that will take away from existing park land.

I strongly believe that any new buildings or any other type of construction not be allowed on the existing park land, grassy fields area at Cardiff School.

I received a Notice of Public Information Meeting in the mail from the Cardiff School District. The notice mentions the "Citizen Participation Program". I find it very interesting that the notice states that the project will be required to comply with the City of Encinitas CPP (E.M.C. 23.06), including outreach to neighbors.

On the back page of the notice it states that the Citizen Participation Program process is a tool for ensuring that the project applicant, Cardiff School District, and citizens have an opportunity in the planning process to resolve neighborhood issues related to potential impacts of the proposed project on the surrounding neighborhood.

There is a sentence on the back page of the notice that really concerns me. It states that "The CPP process is not meant to necessarily change or prevent the project as proposed".

If the Cardiff School District invites citizens/neighbors to a meeting for their input on the proposed project and that input is not meant to necessarily change or prevent the project as proposed, why are citizens/neighbors asked for their input?

I strongly believe the Citizen Participation Program process is flawed and until the citizen's/neighbor's input can be taken into serious consideration regarding possibly changing or preventing the Proposed Cardiff School Modernization and Reconstruction Project as proposed, it might be best to delay the Proposed Project either by court injunction or some other means until the citizens/neighbors of this community can be guaranteed that their concerns and input can and will make a difference in changing or preventing the
Proposed Project as proposed.

Sincerely,
James and Debbie Howell
[redacted]
Cardiff-by-the-Sea, Ca 92007

email: [redacted]

Sent from my iPhone

From: Chris Krueger [redacted]
Subject: Notice of Preparation and Initial Study - Cardiff School Modernization and Reconstruction Project
Date: June 6, 2018 at 3:24:24 PM PDT
To: csdbpm@gmail.com

Dear Randy,

I am writing to you as representative of the Cardiff School District for the proposed Cardiff School Modernization and Reconstruction Project.

In Section 3.1.2 (Play Areas) of the Notice of Preparation and Initial Study for this Project, the existing play structure that bisects the two fields and restricts supervision of the fields would be relocated to the southern portion of the site, near the intersection of San Elijo Avenue and Mozart Avenue. The new playground would include a jungle gym and wall ball courts.

The proposed design would pave open areas of the park and add walls in the current open space, thereby resulting in the loss of fields and open space at George Berkich Park.

As I am sure you are aware, there is a covenant (deed restriction) protecting open space in the park.

I strongly encourage you to relocate these play structures and preserve the open space in the park as I do not believe the proposed design is in the best interest of the school or the community.

Thank you for your time and consideration.

Sincerely,
Chris Krueger

From: Daniel Littrell [redacted]
Date: June 5, 2018 at 2:30:11 PM PDT
To: Randy Peterson <csdbpm@gmail.com>
Subject: Response to the Notice of Preparation

Please see attached response.

June 5, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Re: Written Comments on Notice of Preparation of Draft EIR

Dear Mr. Peterson:

In order to avoid significantly delaying, or even imperiling, the proposed school renovation, it is essential that *all* mandatory environmental reviews be completed in a timely manner. As detailed below, the process cannot be piecemeal -- a responsible environmental review proposal complying with *all* of the District's requirements must be prepared at the outset.

The Cardiff School District ("District") proposal dated May 8, 2018 includes the introductory statement on page 1 that the project is required to undergo an environmental review pursuant to CEQA. While this is an accurate statement, it only partially expresses the District's obligations because the proposal fails to state or even acknowledge that the project must *also* undergo environmental review under the National Environmental Policy Act (42 United States Code 4321 et seq.)("NEPA"). As stated in National Park Service NPS Form 10-904, which the District *is required* to complete and submit to the California Office of Grants and Local Services (OGAL) for approval of the proposed conversion of LWCF protected park land, NEPA environmental review is mandatory for both the converted and replacement sites to analyze how the converted park land and recreational usefulness will be replaced. This submission must include environmental reviews for *both* sites in the same document.

While both are environmental reviews, CEQA and NEPA standards are different. One important difference between NEPA and CEQA is the determination of "significance." NEPA does not require a determination of significant effects in the environmental document as is customary in CEQA. NEPA regulations, on the other hand, require "evaluations of significance consider both an impact's context and intensity." (40 Code of Federal Regulations Part 1508.27). The "context" means the geographic, social, and environmental contexts within which the project

may have effects. Intensity is the severity of the potential impact, considered in context. The proposed EIR addresses none of these issues and, importantly, makes no mention of any proposed replacement sites, completely ignoring the requirements for LWCF grant compliance.

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Sincerely,

Daniel Littrell

June 5, 2018

From: Kevin Mulhern [redacted]
Date: June 5, 2018 at 2:18:22 PM PDT
To: csdbpm@gmail.com
Subject: Cardiff elementary school construction questions

Dear Mr. Peterson,

There are unanswered questions regarding the proposed elementary school construction. Can you provide answers to the following please?

-Have studies been done on the effect on the neighborhood from a) the construction traffic and noise and b) the new traffic pattern that will result when the entrance to the school changes?

-Do you have a comment on the impact of air-quality on children due to relocating the classrooms near the busy street?

-Trees will have to be removed for this construction. Is there not a workaround? Torrey Pines are protected are they not?

-How are you addressing the LWCF agreement to preserve open space?

- How did the bond proposal change from updating plumbing and roofing to become an entirely new campus for just a few grades?

Kevin

From: eleanor musick [redacted]
Subject: Comments re Proposed EIR
Date: June 6, 2018 at 6:48:46 AM PDT
To: csdbpm@gmail.com

Dear Mr. Peterson,

Please see the attached letter regarding the EIR.

Cordially,
Eleanor Musick

June 5, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Re: Written Comments on Notice of Preparation of Draft EIR

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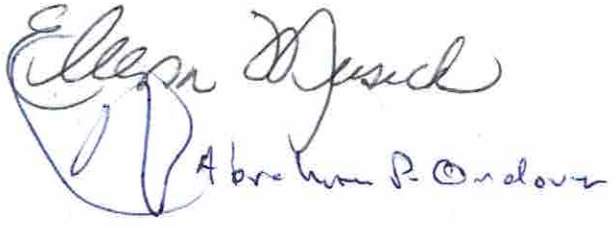
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Sincerely,



From: "Juli Risner, Grounded" <[redacted]
Subject: Cardiff Elementary Notice of Preparation (NOP) and Initial Study
Date: June 5, 2018 at 7:12:42 PM PDT
To: <csdbpm@gmail.com>
Cc: "Daniel Littrell" <[redacted]

Hi Randy,
I live at [redacted], in Cardiff and I'm writing to have my comments recorded in regards to the plan to rebuild / remodel Cardiff Elementary.
I was one of the many Cardiff residents who voted for Measure GG, thinking it was going to allow the school district to update the facilities and build new classrooms to replace the temporary ones, NOT tear down the majority of the school and build into the park area. Had the threat to George Berkich Park been clear, I would have voted against the measure.
George Berkich Park is a community asset that should not be destroyed. Cities like ours spend millions of dollars to acquire open space because they know that a growing body of research is telling us that healthy communities need face-to-face interaction. Land use policies that emphasize ways to bring the community together reduce loneliness and social depravation, something that electronic media cannot replace. Open space provides opportunities for healthy lifestyles through walking, playing ball with your kids or kicking around a soccer ball with friends. Social events such as the Ice Cream Socials allow neighbors to meet, get to know each other and support one another. And aren't these activities the very reason we all chose to live in Cardiff? Because of its very strong sense of community. That sense of community spirit is what we should be providing our children, not just buildings that look good.
In addition to the social and health benefits of the park, having homes located within walking distance of parks and open space has been shown to substantially increase property values, which increases the property tax revenue for the city and dollars for the future operation of the school. I would like to see the school plan:

1. Retain the open-space boundary of the George Berkich park as agreed upon with the City, the school district, the residents, and the LWCF.
2. Reconfigure the building locations to the east with a closer/tighter footprint so that land and open-space areas are preserved.
3. Save all the mature trees that exist onsite.

Thank you for recording my feedback as part of the community comments on the project.
Juliana Risner
[redacted]

From: Gary Schneiderman [redacted]
Subject: EIR for Cardiff School
Date: June 6, 2018 at 12:15:18 AM PDT
To: csdbpm@gmail.com

Dear Mr Peterson,
Please note attached document. It is signed electronically.
Thank you

--
Gary Schneiderman MD

From: Tricia Smith[redacted]
Subject: Notice of EIR--Public Comment
Date: June 6, 2018 at 2:33:02 PM PDT
To: "Randy Peterson (Cardiff School Consultant)" <csdbpm@gmail.com>

Dear Randy,

Attached is my letter regarding the EIR

Tricia Smith

June 5, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Re: Written Comments on Notice of Preparation of Draft EIR

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In order to avoid significantly delaying, or even imperiling, the proposed school renovation, it is essential that *all* mandatory environmental reviews be completed in a timely manner. As detailed below, the process cannot be piecemeal -- a responsible environmental review proposal complying with *all* of the District's requirements must be prepared at the outset.

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While both are environmental reviews, CEQA and NEPA standards are different. One important difference between NEPA and CEQA is the determination of "significance." NEPA does not require a determination of significant effects in the environmental document as is customary in CEQA. NEPA regulations, on the other hand, require "evaluations of significance consider both an impact's context and intensity." (40 Code of Federal Regulations Part 1508.27). The "context" means the geographic, social, and environmental contexts within which the project

may have effects. Intensity is the severity of the potential impact, considered in context. The proposed EIR addresses none of these issues and, importantly, makes no mention of any proposed replacement sites, completely ignoring the requirements for LWCF grant compliance.

There is no recognition within the EIR proposal of any legal obligation for NEPA review, nor is there any indication of intent to conduct such a review. On the reasonable assumption that the District wishes to avoid the delays and expense of conducting two independent environmental reviews, economic efficiency and responsible project administration demand that the proposed EIR must be part of a combined Environmental Impact Report/ Environmental Assessment (EIR/EA) prepared in accordance with *both* CEQA and NEPA.

Failure to complete all mandatory reviews in a timely manner could lead to significant delays in the proposed school project. A combined EIR/EA is essential to meeting the District's obligations under both CEQA and NEPA. The present EIR proposal fails to meet these standards and must be revised to ensure compliance.

Sincerely,

Tricia A. Smith

[redacted]
Cardiff CA 92007

From: Tricia Smith [redacted]
Subject: EIR Public comment
Date: June 6, 2018 at 3:12:08 PM PDT
To: "Randy Peterson (Cardiff School Consultant)" <csdbpm@gmail.com>

Dear Randy,

I have written another letter concerning serious omissions within the texts of the EIR, which violate the written agreement with the City and the LWCF. I have taken the liberty of correcting them. Please see the attached letter.

Thank you,
Tricia

June 6, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Re: Written Comments on Notice of Preparation of Draft EIR

Dear Mr. Peterson:

The undersigned submit the following comments and corrections to the Notice dated May 8, 2018 for accuracy:

Section 2.2, second paragraph (on page 5) currently reads:

> Outdoor recreational uses include baseball and soccer fields at the northwest and southwest portions of the campus, respectively, three areas with playground structures and swings, one between the two fields and two at the eastern portion of the site for the school's kindergarten program; and a blacktop play area east of the soccer field. The westernmost portion of the site is recognized as outdoor recreational space by the Land and Water Conservation Fund Act.

This statement is inaccurate and incomplete and should be revised as follows:

> Outdoor recreational uses include baseball and soccer fields at the northwest and southwest portions of the campus, respectively, three areas with playground structures and swings, one between the two fields and two at the eastern portion of the site for the school's kindergarten program; and a blacktop play area east of the soccer field. The ~~westernmost~~ portion of the site defined by the 6(f)(3) boundary map dated March 3, 1993 (Figure 3a), consisting of approximately four acres encompassing the baseball and soccer fields, the playground structure between the fields, and portions of the blacktop play area, is ~~recognized~~ designated as public outdoor recreation~~al space by~~ park land in accordance with the Land and Water Conservation Fund Act of 1965).

Section 5.15 Recreation (on page 63) currently states that there would be "no impact", in response to the question "Would the project increase the use of existing neighborhood and

regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur be accelerated?"

The current comments read as follows:

> **No Impact.** Similar to existing conditions, operation of Cardiff School would not require students to use existing neighborhood or regional parks. The proposed project would improve the school's outdoor recreational spaces, which are recognized under the Land and Water Conservation Fund Act and are used by the school and the community. The project would enhance not only the facilities' aesthetic qualities, but also their utility. The baseball field – which has been underutilized since the opening of Cardiff Sports Park – would be converted to a soccer/multiuse field; the playground apparatus that bifurcates the existing fields would be relocated to the southwest corner of the site to enhance security and supervision; the project also includes terraced seating west of the multipurpose building that would provide views of the sports filed and ocean; and restroom facilities with direct access from the fields would be constructed. The proposed project would have an overall beneficial effect on recreational facilities. Therefore, no negative impacts on offsite parks and recreational facilities would occur. This topic will not be further considered in the EIR.

The above statement is inaccurate and incomplete and should be revised as follows:

> ~~No~~ **Potentially Significant Impact.** ~~Similar to existing conditions,~~ Operation of Cardiff School ~~would not~~ is unlikely to require students to use existing neighborhood or regional parks during school hours, which correspond to a total of around 32 hours per week. However, Berkich Park is a public park during non-school hours – i.e., more than 50 hours per week. The nearly one-acre reduction in available park area that will result from construction on designated park land will have significant potential impact on community members who rely on the easy, pedestrian access to this neighborhood park. The proposed project encroaches into the total park area by as much as 25% and, and will result in community members increasing the demand on other regional parks. With the closest neighborhood parks more than a mile away by car, the decreased convenience and need to drive will adversely impact community enjoyment and environmental quality. ~~improve the school's~~ The park's outdoor recreational spaces~~, which are recognized~~ are federally protected under the Land and Water Conservation Fund Act, which guarantees their availability for outdoor public use in perpetuity ~~and are used by the school and the community. The project would enhance not only the facilities' aesthetic qualities, but also their utility. The baseball field – which has been underutilized since the opening of Cardiff Sports Park – would be converted to a soccer/multiuse field; the playground apparatus that bifurcates the existing fields would be relocated to the southwest corner of the site to enhance security and supervision; the project also includes~~

~~terraced seating west of the multipurpose building that would provide views of the sports filed and ocean; and restroom facilities with direct access from the fields would be constructed~~. The proposed project would have ~~an overall beneficial effect~~ potentially significant impact on recreational facilities~~.~~ ~~T~~~~herefore, no negative impact~~ along with potential increased demand on offsite parks and recreational facilities ~~would occur~~. ~~This topic will not be further considered in the EIR.~~

Additional consideration must be given to any environmental impact arising from the designation of replacement property as required under the conversion provisions of the Land and Water Conservation Fund, which, under 36 C.F.R. Section 59.3, must be reasonably equivalent in usefulness and location. As no such replacement property has yet been identified, the environmental impact is yet to be determined. This topic will require further consideration in the EIR.

Please change the EIR to correct its mistakes.

Sincerely,

Tricia Smith,

[redacted]

Cardiff, CA 92007

From: Suzanne Spector [redacted]
Subject: Cardiff School Construction Project
Date: June 5, 2018 at 11:24:42 AM PDT
To: csdbpm@gmail.com

I wish to strongly protest that aspect of the Cardiff school construction project that currently involves destruction of the Berkich Park adjoining the school property. I understand that a compromise proposal has been offered that would involve less construction on the park property.

While wanting the best for the children, green space and open views and respect for nature should be considered in the children's best interest as well as the best interest of the community in maintaining what little scenic view we have left.

Is it even legal to pave and build structures on parkland that was given to the city or the school district? And even if it's legal, it is a shame to do that and not really in anyones best interest.

I beg you to compromise and retain the park without paving or putting view- blocking structures on it.

Suzanne Spector
[redacted]
Cardiff

From: "Nick Stahl" [redacted]
Subject: Public Comment on the Notice of Preparation (NOP) and Initial Study on the Cardiff School
Date: June 5, 2018 at 9:46:25 AM PDT
To: <csdbpm@gmail.com>

Good Morning Mr. Peterson. I want to express my strong opposition to the proposed plan for the Cardiff School Modernization and Reconstructing Project. I have attended meetings at the school, followed this issue closely and read the NOP.

My wife and I have lived close by on Rubenstein Drive since 1999. We love the school, the children, and the sense of community. But we feel the proposed plan is not what we voted for two years ago. Park land is being compromised. New building "L" on the site plan near the dog run and garden is a particular problem as it is designed and placed in such a way that valuable park ground is lost to the students and other users of the park. In addition, the building is out of character with the neighborhood and will negatively impact property values.

Please find an alternative plan.
Thank you,
Nick and Ann Stahl

From: Lynn Morris [redacted]
Date: June 5, 2018 at 2:09:14 PM PDT
To: csdbpm@gmail.com
Subject: Public comment on Cardiff School

Randy,

As a resident of Cardiff, I am concerned about the impact of the proposed elementary school construction on the environment, community and children's health. The proposal differed from the bond that I voted on several years ago. I would like your reply to the following questions:

Have you studied the impact on children's health when locating kindergarten - or any classrooms - so close to a busy street? Both air quality and noise pollution.

Some of the trees that have to be removed for this construction or Torrey Pines. What is the legality and environmental impact of that?

Have traffic patterns been studied to evaluate the effect of the new entrance on the local community?

Aren't these spaces protected under the LWCF agreement?

Thank you.

Lynn Stonebridge

John Bromstad
Cardiff by the Sea

June 6, 2018

Ms Jill Vinson, Superintendent
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Additional addressees:
Cardff School Board Members
Randy Peterson, FAIA
Bond Program Manager

Subject: Notice of Preparation/Policies

Dear Ms Vinson,

The voters in Cardiff by the Sea soundly supported a $22 million dollar bond issue to reconstruct and repair the buildings of Cardiff Elementary school. The entire community was behind the issue and proud of the school and the dedicated George Berkich park which adjoined the actual school grounds.

That favorable community attitude abruptedly changed when the School Board announced that school buildings were to be demolished and new construction was going to take over a large portion of the parkland.

At an initial meeting a large group of local citizens voiced strong objections to the plans to encroach on the park, and place ingress and egress along San Elijo Avenue, among other plans.

The school board listened to all the objections, and at the end of the public outcry, the Board President, Mark Whitehouse, made the cavalier statement that the board should absolutely disregard the objections and proceed with the plans over the loud and infuriated objections by the Cardiff citizens in attendance.

The recent "Notice of Preparation" (NOP) was put up on the school website on May 8th. The notice is 88 pages long, with several blank pages. The time frame for a public response is June 6th, a time frame which is far too brief inasmuch as the public comment period had begun. Putting a link to the NOP at the bottom of on an otherwise unchanged webpage seems inadequate public notice.

Perhaps an email list could be created so that anyone subscribed would receive an email when an important document or meeting is updated?

This is yet another example of the school district providing little or no advance notice of meetings and proceedings. The public is generally not informed of meeting changes unless one follows the school website on a regular schedule. It appears that meetings and times are continually changing.

After attending numerous meetings of the Cardiff Elementary school board, I have been aware that the public is never able to hear explanations or discussions by the school board on important subjects, specifically the planned execution of the $22 million dollar bond measure for structural improvements and other economic issues such as spending and allocation of bond funds.

It appears that virtually every vote or action by the school board is done as follows, for example: (A) The 'board' is provided with an internal written or verbal proposal prior to the public meeting, (B) The details of such a proposal are not made public or discussed openly, (C) The board then approves the proposal without discussion. The public is not permitted to ask questions of the Board, and if questioned, the Board is not permitted or required to answer.

At a 'regular' Cardiff Elementary School Board meeting the President of the School Board (Ms Siena Randall) allows public comment on the following conditions: (A) The comment must be written on a form and given to Ms Randall in advance of the meeting, (B) The policy exists that neither School Board members, the District nor the Bond Implementation Team ever have to answer questions. The format of meetings is demeaning and unfair, even rude and unprofessional, because if the community makes statements or asks questions, those statements are ignored unless the school decides they want to comment. Difficult questions are never answered.

The present Cardiff school board members were recently reinstated and terms extended by the Superintendent because there were no other candidates — but without public notice citizens are unaware that an election could be held (there was no public notice or call for potential candidates.) Cardiff Elementary School Board members are: Ms. Randall (her term expires in Dec. 2018), Dave Clark (term expires in Dec. 2018), Mark Whitehouse (term expires in Dec. 2018). The terms of David Ross and Nancy Orr are continuing.

There is an independent "Citizens Oversight Committee" of ten members for Cardiff, appointed to monitor bond expenditures under Measure GG. To my knowledge no report has been issued for public consumption.

A recent internal memo sent to staff and teachers of Ada Harris school and Cardiff Elementary school indicates that all systems are 'go.' The memo states that plans are finalized and all construction documents are to be approved during the month of June, 2018 which happens to be NOW! It should be important to note that the public has not been presented with any official illustrations other that conceptural drawings, and the public has been stonewalled when the questions of costs are asked. There has not been an official financial program available to the public. There is some question that the program will exceed the $22 million dollar bond limit.

It is important to remember that in every aspect, whether it be financial, educational, esthetics, health, technology and personal citizenship, the entire burden of responsibility rests with the Cardiff School Board. Futhermore, it is necessary for parents to continually reevaluate the educational qualities of basic reading, writing, math, creativity and the social skills of our young students, separate from the technological regimen.

To this end we can all endeavor to renew a cordial relationship between the Cardiff by the Sea community and the educational community.

Respectfully,
John Bromstad
Cardiff by the Sea

June 6, 2018
I am appealing to the Encinitas City Council and City manager on behalf of Cardiff citizens regarding our concern about the destruction of parkland and violations to the LWCF Agreement. The City is a signatory on the agreement and therefore should be concerned if the Cardiff School District is going to ignore the agreement and forge ahead with plans to drastically reduce the park.

I am certain the City of Encinitas is already aware of the dedicated George Berkich Park situation and the existing Agreement. We consider the destruction of LWCF protected parkland unacceptable and we will fight to protect this incredibly unique and valuable community asset.

John Bromstad — Cardiff by the Sea

June 5, 2018

Randy Peterson, FAIA
Bond Program Manager
Cardiff School District
1888 Montgomery Ave.
Cardiff-by-the-Sea, CA 92007

Re: Written Comments on Notice of Preparation of Draft EIR

Dear Mr. Peterson:

In order to avoid significantly delaying, or even imperiling, the proposed school renovation, it is essential that *all* mandatory environmental reviews be completed in a timely manner. As detailed below, the process cannot be piecemeal -- a responsible environmental review proposal complying with *all* of the District's requirements must be prepared at the outset.

The Cardiff School District ("District") proposal dated May 8, 2018 includes the introductory statement on page 1 that the project is required to undergo an environmental review pursuant to CEQA. While this is an accurate statement, it only partially expresses the District's obligations because the proposal fails to state or even acknowledge that the project must *also* undergo environmental review under the National Environmental Policy Act (42 United States Code 4321 et seq.)("NEPA"). As stated in National Park Service NPS Form 10-904, which the District *is required* to complete and submit to the California Office of Grants and Local Services (OGAL) for approval of the proposed conversion of LWCF protected park land, NEPA environmental review is mandatory for both the converted and replacement sites to analyze how the converted park land and recreational usefulness will be replaced. This submission must include environmental reviews for *both* sites in the same document.

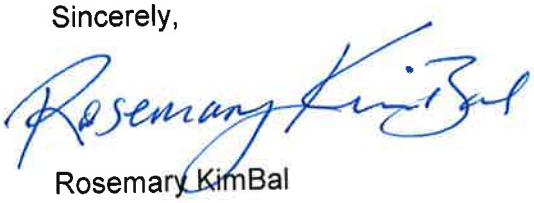
While both are environmental reviews, CEQA and NEPA standards are different. One important difference between NEPA and CEQA is the determination of "significance." NEPA does not require a determination of significant effects in the environmental document as is customary in CEQA. NEPA regulations, on the other hand, require "evaluations of significance consider both an impact's context and intensity." (40 Code of Federal Regulations Part 1508.27). The "context" means the geographic, social, and environmental contexts within which the project

may have effects. Intensity is the severity of the potential impact, considered in context. The proposed EIR addresses none of these issues and, importantly, makes no mention of any proposed replacement sites, completely ignoring the requirements for LWCF grant compliance.

There is no recognition within the EIR proposal of any legal obligation for NEPA review, nor is there any indication of intent to conduct such a review. On the reasonable assumption that the District wishes to avoid the delays and expense of conducting two independent environmental reviews, economic efficiency and responsible project administration demand that the proposed EIR must be part of a combined Environmental Impact Report/ Environmental Assessment (EIR/EA) prepared in accordance with *both* CEQA and NEPA.

Failure to complete all mandatory reviews in a timely manner could lead to significant delays in the proposed school project. A combined EIR/EA is essential to meeting the District's obligations under both CEQA and NEPA. The present EIR proposal fails to meet these standards and must be revised to ensure compliance.

Sincerely,



Rosemary KimBal

[redacted]

Cardiff CA 92007

Meeting Date June 12, 2018

Subject Summary of Comments on Public Information Meeting for the Proposed Cardiff School Modernization and Reconstruction Project

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Cardiff School District held a public information meeting for the proposed Cardiff School Modernization and Reconstruction project (proposed project) on June 12, 2018, 6:00 PM at the Cardiff School Auditorium (1888 Montgomery Avenue, Encinitas).

The meeting satisfied the requirements of the California Environmental Quality Act (CEQA), per Public Resources Code § 21083.9 and CEQA Guidelines § 15206(b)(4)(C), and the City of Encinitas Community Participation Program (CPP) per Encinitas Municipal Code § 23.06.030(B1).

The meeting notice was mailed to 315 recipients, including the State Clearinghouse who forwarded the notice to state agencies. There were approximately 20 attendees, although only 15 signed in.

Barbara Wu Heyman, Associate Principal of PlaceWorks, presented and moderated the public meeting. The presentation included an overview of CEQA, National Environmental Policy Act (NEPA), and CPP processes, and description of the proposed project and findings of the initial environmental evaluation. After the presentation, the meeting was open for public comments. The entire meeting was recorded.

There were 9 speakers and 5 written comment letters received at the meeting. Comments are summarized in Table 1, *Verbal Comments*, and Table 2, *Written Comments.*

Attachment 1 – Meeting Presentation Handout
Attachment 2 – Written Comment Cards
Attachment 3 – Meeting Sign-in Sheet
Attachment 4 – Speaker Sign-up Sheet

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Table 1 Verbal Comments

TOPIC AREA	COMMENT SUMMARY	COMMENT RESPONSE
Views	1. Views have been reduced over the years and the view corridor from residents' homes have diminished. Views from Montgomery Avenue have been addressed, but now buildings are moving down Mozart Avenue, which is affecting the view corridor. 2. In addition to new buildings, there seems to be new trees too. The farther you move trees along San Elijo Ave, the more likely views will be blocked. Is there any consideration as to what type of trees would be planted, such as height and whether you can see between the trees? For the residents on Mozart Avenue, the existing large ficus tree blocks views and it does not get trimmed. Can there be a consistent planting of trees so that views are not blocked, and so that the property/neighborhood is enhanced and there is consistency with the neighborhood? There is a haphazard selection of trees, currently.	1. Aesthetic impacts, including public views and visual changes of the project site will be discussed in the DEIR. 2. The District will review the selection of new trees for the proposed project.
Traffic	1. There are now three proposed drop-off areas. The school cannot even maintain one. People are parking in front of residents' homes, which is blocking access to driveways. No one is directing traffic during drop-off times. 2. Is there a third entry proposed on San Elijo? 3. Has the number of parking spaces, current and proposed, been addressed? Inviting more cars, through the increase in parking, on residential streets, should be addressed in the EIR.	1. The comment concerning existing drop-off/ pick-up activities is noted and will be considered by District staff. 2. There is an existing entry on San Elijo that will be moved to the southern end of San Elijo. 3. The District is working with the City of Encinitas to address parking requirements; parking and traffic issues will be discussed in the DEIR.
LWCF	1. The community's understanding is that the park is dedicated. The park's square footage will be greatly reduced, what is the square footage of the proposed reduction? The NOP provides square footages of the proposed buildings, why is the park's proposed square footage not determined? The City has been approached with a land conversion plan. 2. Biological resources are one of the environmental issues to be analyzed. The District has provided outdoor education for the students, it would be great if this were continued with the kinds of parks and plants. 3. The flowchart is helpful in terms of identifying where the process is currently. The site plan has to be in its final stage before it gets to the EIR. Before the final EIR, would all the work with NPS and OGALS have to be resolved? Does the situation with OGALS have to be resolved before the completion of the NEPA process? Is	1. The outdoor recreational space was improved in the 1990s with Land and Water Conservation Funds from the National Park Service (NPS), The State Parks' Office of Grants and Local Services (OGALS) administers the federal grant. Because the District is still working with OGALS to determine the most appropriate approach to address the project's encroachment and its effects, the NOP does not identify the area of change. 2. The comment is noted. 3. It is encouraged that a joint CEQA/NEPA document be prepared, but it is not required. As the District and OGALS has not determined the most appropriate approach of the project's encroachment on the affected outdoor recreational spaces, the

Table 1 Verbal Comments

TOPIC AREA	COMMENT SUMMARY	COMMENT RESPONSE
	the conversion of the LWCF plan part of the NEPA process? Are the EIR and the EIS of NEPA related? Where are the NEPA recommendations in the flow chart? 4. How large is the park, and what is the square footage of the impervious surfaces (existing vs. proposed)? 5. It is important to acknowledge the District for giving the public the opportunity to provide feedback. The District has done a good job in addressing the public's issues/concerns. The park is a resource to the community. The footprint of the school is limited. Everyone's desires cannot be satisfied. There can still be some fine-tuning with the project. Everyone should engage in compromise and dialogue. 6. The community's understanding of the agreement is that if the school is going to take away some of the land, then the school needs to give back some land too. Is the plan to try and get an exception for that, and override the agreement?	type of NEPA document cannot be determined at this time. The District is the CEQA lead agency, and NPS is the NEPA lead agency. NEPA has its own process, separate than the CEQA process. Therefore, it is not on the flowchart. 4. The EIR will identify the size of the existing outdoor recreational spaces and the proposes changes to this area. The EIR will also compare the existing and proposed impervious surfaces. 5. The comment is noted. 6. As mentioned, the District is working with OGALS on the most appropriate approach to address the project's encroachment on the affected outdoor recreational spaces.
Site Design	1. When the DEIR is published, will the final site plan be published in the DEIR or will the final site plan be produced as a result of the comments from the DEIR? 2. The multipurpose building is a two-story building. The community's understanding is that the multipurpose building will be open for public use. How are the facilities going to improve the students' education?	1. The layout of the proposed improvements will be in a more concrete state by the completion of the EIR process. The District is currently meeting with various public agencies to confirm if the project meets applicable state requirements. 2. The multipurpose building is one-story. The proposed project would not change the permanent operation of the school and facilities, including use of the school facilities by the community.

Table 2 Written Comments

TOPIC AREA	COMMENT SUMMARY	COMMENT RESPONSE
General Comments	1. Community is concerned that delay will cost tax-payers money and will decrease funds available for non-building expenses. 2. The materials and presentation presented at the joint environmental scoping and CPP meeting were concise and informative. A few residents are looking forward to a new and modernized school. 3. The EIR process is somewhat unclear – what are the other agencies; is the school approving its own EIR? Discussion of views was not presented which was in EIR document. 4. What is the impact of additional parking on Montgomery (more cars on residential streets)? 5. Is there a third entry on San Elijo Avenue? If not, why? 6. Will the Canary Palm to be set in pavement survive or be protected? And Torrey Pines? 7. The park should not be paved or built-on. There should be more green space and less concrete. How much green space is being lost? 8. Please clarify the number and type of new trees which will be planted in the park and school grounds, including maximum height, bulk, and mass. 9. What efforts will be taken to mitigate the loss of ocean views from adjacent neighbors caused by the planting of trees on park and school grounds?	1. The District is working as fast as it can to complete the planning process and start construction. 2. The comment is noted. 3. The District is the Lead Agency. Responsible agencies include the City of Encinitas for the issuance of a Coastal Development Permit, and San Diego Regional Water Quality Control Board for issuance of a NPDES permit, possible 401 Water Quality Certification, Notice of Intent (NOI) to Obtain Permit Coverage; issue General Permit for Discharges of Stormwater Associated with Construction, and Storm Water Pollution Prevention Plan (SWPP). 4. The District is currently working with the City of Encinitas on the parking assessment. Also, parking does not generate more vehicle trips; therefore, additional parking on Montgomery would not result in additional vehicles on adjoining residential streets. 5. There is an existing third Entry on San Elijo. 6. The District will evaluate its landscape plan. 7. The DEIR will address the changes to the outdoor recreational spaces. 8. The DEIR will include the landscape plan. 9. The District has been working with the community and neighbors on the proposed plans. Based on comments received, the District will reconsider the proposed tree palette. The DEIR will include the landscape plan.

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Attachment 1 – Meeting Presentation Handout

Cardiff School Modernization & Reconstruction Project

Joint Environmental Scoping &
Citizen Participation Program Meeting

June 12, 2018

CARDIFF SCHOOL DISTRICT
Inspiring a love of learning

Meeting Agenda

- California Environmental Quality Act
- National Environmental Policy Act
- City of Encinitas Citizen Participation Program
- Proposed Project
- Findings of Initial Environmental Review
- Public Comments

2

What is CEQA?

California Environmental Quality Act

Required for a "project" that may result in a direct or indirect physical change in the environment

(CEQA Guidelines §15378)

3

What is CEQA (cont.)

- Informs decision makers and public on the proposed project and its impacts on the physical environment
- Provides an opportunity for the public and local/state agencies to comment on the environmental impacts
- Identifies feasible ways to avoid or reduce potentially significant environmental damage
- Discloses significant and unavoidable impacts

4

What is NEPA?

National Environmental Policy Act

NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions:

- Permit applications,
- Federal land management actions, and/or
- Construction of highways and other publicly-owned facilities.

5

Citizen Participation Program

- Encinitas Municipal Code Section 23.06
- Required for every development or construction application in the City
- Designed to encourage participation and communication

6

Community Outreach: 08/30/17



BUILDING LEGEND

A. Admin. & District Office (existing)
B. Library (existing)
C. Multi-Media & Small Group Rm.
D. Conference Room
E. Kindergarten Classrooms
F. General Classrooms
G. Specialty Classrooms
H. Extended Day
I. Multi-Purpose & Music Room
J. Food Service w/ Covered Eating
K. Brick Building (Existing)

OPEN SPACE LEGEND

1. Parking and Drop Off
2. Parking
3. Drop Off (existing, extended)
4. Drop Off (existing)
5. Garden (Existing)
6. Dog Park (Existing)
7. Kindergarten Court
8. Terrace
9. Entry Plaza
10. Central Court
11. Exploration / Outdoor Projects
12. Classroom Court
13. Covered Dining
14. Hardcourts
15. Play Fields
16. Play Apparatus
17. Pollinator Garden (Existing)

Community Outreach: 11/16/17



BUILDING LEGEND

A. Admin. & District Office (existing)
B. Library (existing)
C. (not used)
D. Conference Room
E. Kindergarten Classrooms
F. General Classrooms
G. Specialty Classrooms
H. Extended Day
I. Multi-Purpose & Music Room
J. Food Service w/ Covered Eating
K. Brick Building (Existing)

OPEN SPACE LEGEND

1. Parking and Drop Off
2. (not used)
3. Drop Off (existing, extended)
4. Drop Off (existing)
5. Garden (Existing)
6. Dog Park (Existing)
7. Kindergarten Court
8. Terrace / Amphitheatre
9. Entry Plaza
10. (not used)
11. Exploration / Outdoor Projects
12. Classroom Court
13. Covered Dining
14. Hardcourts
15. Play Fields
16. Play Apparatus
17. Pollinator Garden (Existing)

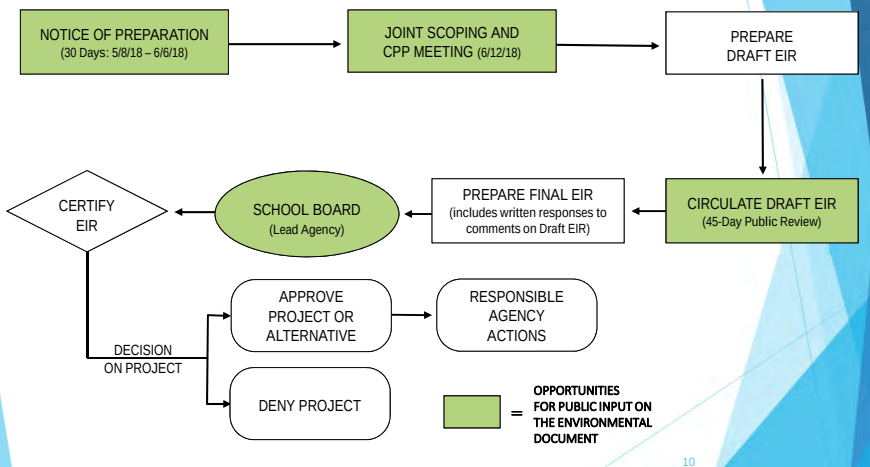
Community Outreach: 2/1/18



OPEN SPACE LEGEND

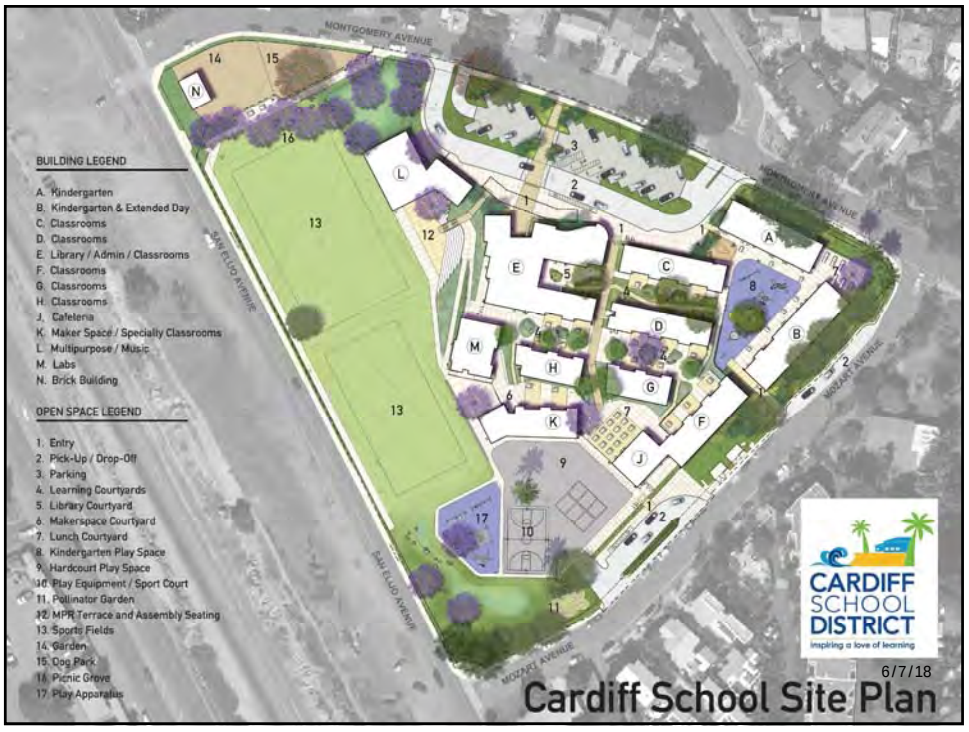
A. Entry
B. Drop-Off
C. Parking
D. Learning Courtyards
E. Library Courtyard
F. Makers Space
G. Lunch Courtyard / Flex Space
H. Kindergarten Play space
I. Hardcourt Play space
J. Play Equipment / Sport Court
K. Pollinator Garden
L. MPR Terrace and Amphitheater
M. Sports Fields
N. Community Garden
O. Dog Run
P. Picnic Grove
Q. Playground Grove

CEQA: EIR Process



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Residential
Schubert Path
Residential
Rubenstein Drive
San Elijo Avenue
Westminster Drive
Montgomery Avenue
Stafford Avenue
South Coast Hwy 101
Rossini Drive
Montgomery Avenue
Mozart Avenue
Residential
North County Transit District Rail
Birmingham Drive


BUILDING LEGEND
A. Kindergarten
B. Kindergarten & Extended Day
C. Classrooms
D. Classrooms
E. Library / Admin / Classrooms
F. Classrooms
G. Classrooms
H. Classrooms
J. Cafeteria
K. Maker Space / Specialty Classrooms
L. Multipurpose / Music
M. Labs
N. Brick Building
OPEN SPACE LEGEND
1. Entry
2. Pick-Up / Drop-Off
3. Parking
4. Learning Courtyards
5. Library Courtyard
6. Makerspace Courtyard
7. Lunch Courtyard
8. Kindergarten Play Space
9. Hardcourt Play Space
10. Play Equipment / Sport Court
11. Pollinator Garden
12. MPR Terrace and Assembly Seating
13. Sports Fields
14. Garden
15. Dog Park
16. Picnic Grove
17. Play Apparatus
MONTGOMERY AVENUE
SAN ELIJO AVENUE
MOZART AVENUE
CARDIFF SCHOOL DISTRICT
inspiring a love of learning
6/7/18
Cardiff School Site Plan

Environmental Issues Considered in Initial Study

- Aesthetics
- Agriculture / Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology / Soils
- Greenhouse Gas Emissions
- Hazards / Haz. Materials
- Hydrology / Water Quality
- Land Use / Planning
- Mineral Resources
- Noise
- Population / Housing
- Public Services
- Recreation
- Transportation / Traffic
- Tribal Cultural Resources
- Utilities / Service Systems

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Types of Impacts

- **No Impact**

  No environmental impact found; not to be studied further in the EIR.

- **Less Than Significant Impact**

  Impact that does not exceed the CEQA defined thresholds of significance; not to be studied further in the EIR.

- **Potentially Significant Impact**

  Impact that may exceed the CEQA established thresholds of significance; to be studied further in the EIR.

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Environmental Issues Considered in Initial Study

- Aesthetics
- Agriculture / Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology / Soils
- Greenhouse Gas Emissions
- Hazards / Haz. Materials
- Hydrology / Water Quality
- Land Use / Planning
- Mineral Resources
- Noise
- Population / Housing
- Public Services
- Recreation
- Transportation / Traffic
- Tribal Cultural Resources
- Utilities / Service Systems

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Questions and Comments



Thank you for coming!

Randy Peterson, FAIA
Bond Program Manager
csdbpm@gmail.com (760) 632-5890

CARDIFF SCHOOL DISTRICT
Inspiring a love of learning

Attachment 2 – Written Comment Cards

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CARDIFF SCHOOL DISTRICT

Comment Card

Joint Environmental Scoping &
Citizen Participation Program Meeting
Cardiff School Modernization & Reconstruction Project
Case # 18-120 CPP
June 12, 2018

Name (please print): Trish d'Entremont

Organization/Affiliation: Self

Address: [redacted]

1. Do the documents and presentation clearly identify the scope of the project? (Y)/N ___
   If no, please describe areas requiring clarification.

2. Do you have any other issues or concerns requiring further review. Y/N ___
   If yes, please explain.

I hope that the District will be able to move forward quickly with the process.

As a taxpayer/homeowner I am concerned that delay cost money which will decrease funds available for non-building expenses (ex. furniture)

CARDIFF SCHOOL DISTRICT
Comment Card
Joint Environmental Scoping & Citizen Participation Program Meeting
Cardiff School Modernization & Reconstruction Project
Case # 18-120 CPP
June 12, 2018

Name (please print): BOOKIE HELLMANN

Organization/Affiliation: CARDIFF RESIDENT / [redacted] MEMBER B.I.T.

Address: [redacted]

1. Do the documents and presentation clearly identify the scope of the project? Y/N YES
   If no, please describe areas requiring clarification.

2. Do you have any other issues or concerns requiring further review. Y/N NO
   If yes, please explain.

CARDIFF SCHOOL DISTRICT

Comment Card

Joint Environmental Scoping &
Citizen Participation Program Meeting
Cardiff School Modernization & Reconstruction Project
Case # 18-120 CPP
June 12, 2018

Name (please print): Kristy + Lindsay Brehm

Organization/Affiliation: NA

Address: [redacted]

1. Do the documents and presentation clearly identify the scope of the project? Y/N Yes
   If no, please describe areas requiring clarification.

The materials and presentation were concise and informative. We appreciate all of the district's willingness to listen to the community

2. Do you have any other issues or concerns requiring further review. Y/N No
   If yes, please explain.

We are excited to have a new & modern school in our community.

CARDIFF SCHOOL DISTRICT
Comment Card
Joint Environmental Scoping & Citizen Participation Program Meeting
Cardiff School Modernization & Reconstruction Project
Case # 18-120 CPP
June 12, 2018

Name (please print): BRETT FARROW

Organization/Affiliation: RESIDENT / NEIGHBOR / PARENT

Address: [redacted]

1. Do the documents and presentation clearly identify the scope of the project? (Y)/N
   If no, please describe areas requiring clarification.
   THE EIR PROCESS IS SOMEWHAT UNCLEAR. "OTHER" AGENCIES AND IS SCHOOL APPROVING ITS OWN EIR? DISCUSSION OF VIEWS WAS NOT PRESENTED WHICH WAS IN EIR DOC.

2. Do you have any other issues or concerns requiring further review (Y)/N
   If yes, please explain.
   1.) IMPACT OF ADDITIONAL PARKING ON MONTGOMERY, (MORE CARS ON RESIDENTIAL STREETS).

   2.) WHY IS THERE NOT A 3RD ENTRY ON SAN ELIJO? IS THERE? IF NOT, WHY?

   3.) WILL THE CANARY PALM TO BE SET IN PAVEMENT SURVIVE OR BE PROTECTED? AND TORREY PINES?

   4.) THE PARK SHOULD NOT BE PAVED OR BUILT-ON. PLEASE ROLL BACK THE BUILDINGS & PAVEMENT. MORE GREEN, LESS CONCRETE/ASPHALT. HOW MUCH IS BEING LOST?

CARDIFF SCHOOL DISTRICT

Comment Card

Joint Environmental Scoping &
Citizen Participation Program Meeting
Cardiff School Modernization & Reconstruction Project
Case # 18-120 CPP
June 12, 2018

Name (please print): CHRISTOPHER W KRUEGER

Organization/Affiliation: NEIGHBOR

Address: [redacted]

1. Do the documents and presentation clearly identify the scope of the project? Y/N N
   If no, please describe areas requiring clarification.

PLEASE CLARIFY THE NUMBER AND TYPE OF NEW TREES WHICH WILL BE PLANTED IN THE PARK AND SCHOOL GROUNDS, INCLUDING MAXIMUM HEIGHT, BULK AND MASS.

2. Do you have any other issues or concerns requiring further review. Y/N Y
   If yes, please explain.

A SIGNIFICANT NUMBER (~8-10) OF NEW TREES WILL BE PLANTED ON THE PARK AND SCHOOL GROUNDS. WHAT EFFORTS WILL BE TAKEN TO MITIGATE THE LOSS OF OCEAN VIEWS FROM ADJACENT NEIGHBORS?

IN PARTICULAR, HAS THE SCHOOL CONSIDERED REMOVING THE EXISTING FICUS TREE ON MOZART WHICH COMPLETELY BLOCKS THE VIEWS OF HOMES ON MOZART?

THANK YOU FOR YOUR CONSIDERATION.

Attachment 3 – Meeting Sign-in Sheet

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CARDIFF SCHOOL DISTRICT
Sign-in Sheet
Joint Environmental Scoping & Citizen Participation Program Meeting
Cardiff School Modernization & Reconstruction Project
Case # 18-120 CPP

Location: Cardiff School Auditorium (1888 Montgomery Avenue, Cardiff-by-the-Sea, CA 92007) Date: June 12, 2018

	Name (please print)	Address	Signature	I received letter in mail	I did NOT receive letter
1.	John Bromstad			☐	☒
2.	Audrey Bromstad			☐	☒
3.	KEVIN DUGGER			☒	☐
4.	Gerald Sodomka			☒	☐
5.	Rhea Stewart			☐	☒
6.	CHRIS KRUEGER			☒	☐
7.				☐	☐
8.				☐	☐
9.				☐	☐
10.				☐	☐

CARDIFF SCHOOL DISTRICT
Sign-in Sheet
Joint Environmental Scoping & Citizen Participation Program Meeting
Cardiff School Modernization & Reconstruction Project
Case # 18-120 CPP

Location: Cardiff School Auditorium (1888 Montgomery Avenue, Cardiff-by-the-Sea, CA 92007) Date: June 12, 2018

Name (please print)	Address	Signature	I received letter in mail	I did NOT receive letter
1. Kristy & LindsayBrehm		KBrew	☑	☐
2. BOONE HELLMANN			☐	☒
3. DOUG BUCKNER			☐	☑
4. BETSY ANN BUCKNER			☐	☑
5. Trish d'Entremont			☐	☑
6. Keith Courtney			☑	☐
7.			☐	☐
8.			☐	☐
9.			☐	☐
10.			☐	☐

CARDIFF SCHOOL DISTRICT
Sign-in Sheet
Joint Environmental Scoping & Citizen Participation Program Meeting
Cardiff School Modernization & Reconstruction Project
Case # 18-120 CPP

Location: Cardiff School Auditorium (1888 Montgomery Avenue, Cardiff-by-the-Sea, CA 92007) Date: June 12, 2018

Name (please print)	Address	Signature	I received letter in mail	I did NOT receive letter
1. JANE WEISS			☑	☐
2. D Littrell			☑	☐
3. BRETT FARROW			☑	☐
4.			☐	☐
5.			☐	☐
6.			☐	☐
7.			☐	☐
8.			☐	☐
9.			☐	☐
10.			☐	☐

Attachment 4 – Speaker Sign-up Sheet

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Speakers:

Name	Address
KEVIN DUGGER	
John Bromstad	
Tomer Cutman	
Trish d'Entremont	
Daniel Litrell	
BRETT FARROW	
BOONE HELLMANN	
CHRISTOPHER KRIEGER	
Keith Courtney	

Appendix 5.1-1 Photographic Survey

Appendices

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Intersection at San Elijo Avenue and Mozart Avenue



1 (Top) **2 (Bottom)**





3 (Top) **4 (Bottom)**





Mozart Avenue



5 (Top) **6 (Bottom)**





7 (Top) **8 (Bottom)**





Mozart Avenue



9 (Top) **10 (Bottom)**





11 (Top)



12 (Bottom)



Mozart Avenue



13 (Top) **14 (Bottom)**





15 (Top) **16 (Bottom)**





Mozart Avenue



17 (Top) **18 (Bottom)**





19 (Top) **20 (Bottom)**





Mozart Avenue



21 (Top) **22 (Bottom)**





23 (Top) **24 (Bottom)**





Intersection at Mozart Avenue and Montgomery Avenue



25 (Top) **26 (Bottom)**





27 (Top) **28 (Bottom)**





Montgomery Avenue



29 (Top) **30 (Bottom)**





31 (Top) **32 (Bottom)**





Montgomery Avenue



33 (Top) **34 (Bottom)**





35 (Top) **36 (Bottom)**





Montgomery Avenue



37 (Top) **38 (Bottom)**





39 (Top) **40 (Bottom)**





Montgomery Avenue



41 (Top) **42 (Bottom)**





43 (Top) **44 (Bottom)**





Montgomery Avenue



45 (Top) **46 (Bottom)**





47 (Top) **48 (Bottom)**





Montgomery Avenue



49 (Top) **50 (Bottom)**





51 (Top) **52 (Bottom)**





Intersection at Montgomery Avenue and San Elijo Avenue



53 (Top) **54 (Bottom)**





55 (Top) **56 (Bottom)**





San Elijo Avenue



57 (Top) **58 (Bottom)**





59 (Top) **60 (Bottom)**



Appendix 5.2-1 Air Quality Modeling

Appendices

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METHODOLOGY

This air quality and GHG evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with implementation of the proposed project. The analysis in the air quality and GHG analysis is based on buildout of the proposed project as modeled primarily using CalEEMod, version 2016.3.2.25, for the following sectors:

- **Transportation:** Average trip generation data provided by IBI Group, and the CalEEMod default vehicle mix was used for mobile source emissions. Annual mobile-source emissions are based on approximately 587 average daily weekday trips (ADT) for the existing conditions and approximately 704 weekday ADTs for the proposed project. Mobile-source emissions for the proposed project utilizes year 2018 emission factors for existing conditions and 2020 emissions factors for project buildout conditions based on the CalEEMod default fleet mix for the County of San Diego.

- **Area Sources:** Area and stationary sources are based on the CalEEMod defaults for emissions generated from use of consumer products and cleaning supplies.

- **Energy Use.** Electricity use is based on the rates identified in CalEEMod version 2016.3.25 and the carbon intensity for San Diego Gas & Electric (SDG&E) electricity.

- **Water/Wastewater.** GHG emissions from this sector are associated with the embodied energy used to supply water, treat water, distribute water, and then treat wastewater and fugitive GHG emissions from wastewater treatment. Indirect GHG emissions from water use and wastewater generation are based on the generation rates identified in Section 5.18, *Utilities and Service Systems* in the Initial Study for the Cardiff School Modernization and Reconstruction Project.

- **Solid Waste Disposal.** Indirect GHG emissions from waste generation are based on the CalEEMod default solid waste generation rate for elementary schools.

- **Area Sources.** GHG emissions from this sector are from use of landscaping equipment used for property maintenance and consumer products (e.g., cleaning supplies, etc.).

- **Construction.** For purposes of this analysis, it is assumed that development of the proposed project for would occur over 2 development phases. Phase 1 will begin in June of 2019 and continue until August of 2020, while phase 2 would begin in June 2020 and continue through December of 2020. The total calculated construction emissions are generally based on the anticipated construction activities for each phase. Construction assumptions are generally based on CalEEMod defaults such as construction equipment mix and worker, vendor, and haul trips. Haul trips are based on the anticipated roadway demolition debris and import and export earthwork amounts. For purposes of this analysis, total emissions are amortized over a 20-year period and included as part of the overall inventory. The table below, *Construction Activities, Phasing, and Equipment*, shows the assumed construction activities and the start and end dates and equipment mix for each of the activities.

Construction Activities, Phasing and Equipment

Activities[1]	Start/End Dates[1]	Equipment[1]
Phase 1A		
Demolition + Demo Haul	6/19/2019 – 7/20/2019	1 concrete/industrial saw; 3 excavators; 2 rubber tired dozers; 1 water truck
Site Preparation	6/26/2019 – 7/2/2019	3 rubber tired dozers; 4 tractors/loaders/backhoes; 1 water truck
Grading	7/2/2019 – 7/7/2019	1 excavator; 1 grader; 1 rubber tired dozer, 3 tractors/loaders/backhoes; 1 water truck
Utility Trenching	7/8/2019 - 7/11/2019	1 tractor/loader/backhoe, 1 skid steer loader, 1 water truck
Concrete Curb & Gutter	7/12/2019 – 7/22/2019	2 cement and mortar mixers, 1 paver, 2 paving equipment, 2 rollers, 1 tractor/loader/backhoe
Canopy Installation	7/23/2019 – 7/28/2019	3 forklifts; 1 tractor/loader/backhoe
Concrete Sidewalks	7/29/2019 – 8/10/2019	2 cement and mortar mixers, 1 paver, 2 paving equipment, 2 rollers, 1 tractor/loader/backhoe
Landscape Planting	8/11/2019 – 8/19/2019	1 air compressor
Phase 1B		
Site Preparation	7/21/2019 – 8/10/2019	3 rubber tired dozers; 4 tractors/loaders/backhoes; 1 water truck
Rough Grading + Haul	8/11/2019 – 8/30/2019	1 excavator; 1 grader; 1 rubber tired dozer, 3 tractors/loaders/backhoes; 1 water truck
Utility Trenching	8/15/2019 – 9/4/2019	1 tractor/loader/backhoe, 1 skid steer loader, 1 water truck
Building Construction	9/5/2019 – 8/20/2020	1 crane; 3 forklifts; 1 generator set; 3 tractors/loaders/backhoes; 1 welder
Asphalt Paving	8/1/2020 – 8/20/2020	2 cement and mortar mixers, 1 paver, 2 paving equipment, 2 rollers, 1 tractor/loader/backhoe
Architectural Coating	8/1/2020 – 8/24/2020	1 air compressor
Phase 2		
Demolition + Haul	6/17/2020 – 6/26/2020	1 concrete industrial saw, 1 rubber tired dozer, 3 tractor/loader/backhoes, 1 water truck
Site Preparation	6/27/2020 – 7/1/2020	1 grader, 1 scraper, 1 tractor/loader/backhoe
Grading	7/2/2020 – 7/5/2020	1 grader, 1 rubber tired dozer, 2 tractor/loader/backhoes, 1 water truck
Trenching	7/6/2020 – 7/8/2020	1 tractor/loader/backhoe, 1 skid steer loader, 1 water truck
Building Construction	7/9/2020 – 12/3/2020	1 crane; 2 forklifts; 1 generator set; 1 tractor/loader/backhoe; 3 welders
Paving	11/5/2020 – 11/15/2020	1 cement and mortar mixer, 1 paver, 1 paving equipment, 2 rollers, 1 tractor/loader/backhoe
Architectural Coating	11/15/2020 – 12/3/2020	1 air compressor

Notes: n/a = not applicable

[1] Based on information provided by the District and CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects. The construction schedule and equipment mix is based on preliminary engineering and is subject to changes during final design and as dictated by field conditions.

CalEEMod Project Characteristics Inputs

Project Address:	1888 Montgomery Avenue, Encinitas
Project Location:	San Diego
Climate Zone:	13
Land Use Setting:	Urban
Operational Year:	2018
Utility Company:	San Diego Gas & Electric
Air Basin:	San Diego Air Basin
Air District:	SDAPCD

Total Project Site Acreage:	7.40	acres
Acreage Distrubed (Phase 1):	4.80	acres
Acreage Disturbed (Phase 2)	2.40	

	Existing	Proposed	Capacity
Students	367	389	440

Components*	Existing Square Footage	Proposed Sqft	Difference in Square Footage	Construction Phasing	New/ Modernized	Phase
District Office	1,375	1,375	N/A	N/A	No Change	NA
Administration	3,190	3,190	0	1B	Modernized	P1
Library/Media Center	3,510	3,510	0	2	Modernized	P2
Kindergarten Instruction Areas	7,200	6,748	-452	1B	New	P1
Classroom Instruction Areas	19,250	22,713	3,463	1B	New	P1
Multi-Purpose Building	3,560	5,528	1,968	1B	New	P1
Kitchen/Lunch Court	1,580	2,029	449	2	New	P2
Brick Building	800	800	N/A	N/A	No Change	N/A

**This table represents a conservative estimate based on input from the Applicant*

	Exitsting Square Footage*	Phase 1 New Construction	Phase 2 New Construction	Net Sqft
Parking	18,311	12,713	0	-5,598
Non-Parking Asphalt	31,715	0	17,000	-14,715
Hardscape	23,500	53,493	18,456	48,449
Playfields	103,700	0	65,683	-38,017
Landscaping	100,000	61,128	26,197	-12,675

**Based on aerial photograph*

CalEEMod Land Use Inputs - Phase 1

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Square Feet
School Facilities	Educational	Elementary School	34.99	1000 sqft	3.28	34,989
Parking	Parking	Parking Lot	12.71	1000 sqft	0.29	12,713
Hardscape	Parking	Non-Asphalt	53.49	1000 sqft	1.23	53,493
					4.80	acre

CalEEMod Land Use Inputs - Phase 2

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Square Feet
School Facilities	Educational	Elementary School	2.03	1000 sqft	1.59	2,029
Non-Parking Asphalt	Parking	Non-Parking Asphalt	17.00	1000 sqft	0.39	17,000
Hardscape	Parking	Non-Asphalt Hardscape	18.46	1000 sqft	0.42	18,456
					2.40	acre

Demolition Haul

Component	Amount to be Demolished (SQFT)*	Amount to be Demolished (Tons)	Haul Truck Capacity (tons)**	Haul Distance (miles)**	Total Trip Ends
Phase 1 Asphalt		564	20	20	58
Phase 1 Buildings	26,000	1,196	20	20	95
	Totals	**1,760**			**153**
Phase 2 Asphalt		250	20	20	26
Phase 2 Buildings	12,000	552	20	20	44
	Totals	**1,880**			**187**

Soil Haul

Phase	Total Export Volume (CY)*	Haul Truck Capacity (CY)**	Total Trip Ends	Total Days	Trip Ends/Day
Phase 1B Grading Export	896	16	**112**	15	7
Phase 2 Grading Export	224	16	**28**	2	14

**Provided by the Applicant*

***CalEEMod Default*

Architectural Coating

SDAPCD Rule 67.0.1

Percentage of Buildings' Interior Painted:	100%	
Percentage of Buildings' Exterior Painted:	100%	
Interior Paint VOC content:	100	grams per liter
Exterior Paint VOC content:	100	grams per liter

Nonresidential Structures	Land Use Square Feet	CalEEMod Paintable Surface Factor	Total Paintable Surface Area[2]	Paintable Interior Area[1]	Paintable Exterior Area[1]
Phase 1 School Facilities	38,339	2	76,678	57,509	19,170
Phase 2 School Facilities	5,539	2	11,078	8,309	2,770
Phase 1 Striping	12,713	0.06	763		763

[1] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

Construction - Unmitigated Run

SDAPCD Rule 55

Replace Ground Cover	PM10:	5	% Reduction
	PM25:	5	% Reduction
Water Exposed Area	Frequency:	2	per day
	PM10:	55	% Reduction
	PM25:	55	% Reduction
Unpaved Roads	Vehicle Speed:	15	mph
Clean Paved Road	9	% PM Reduction	

CalEEMod Construction Phase Inputs*

5-Day Work Week/8 hours per day

Phase Name	Phase Type	Start Date	End Date	CalEEMod Total Days	Total Days
Phase 1A					
Demoliton	Demolition	6/19/2019	7/20/2019	23	31
Demo Haul	*Demo Haul*	*6/19/2019*	*7/20/2019*	*23*	*31*
Site Preparation	Site Preparation	6/26/2019	7/2/2019	5	6
Grading	Rough Grading	7/3/2019	7/7/2019	3	4
Utility Trenching	Trenching	7/8/2019	7/11/2019	4	3
Concrete Curb & Gutter	Concrete Curb & Gutter	7/12/2019	7/22/2019	7	10
Canopy Installation	Canopy Installation	7/23/2019	7/28/2019	4	5
Concrete Sidewalks + Asphalt Paving	Asphalt Paving	7/29/2019	8/10/2019	10	12
Landscape Planting	Landscape Planting	8/11/2019	8/19/2019	6	8
Phase 1B					
Site Preparation	Site Preparation	7/21/2019	8/10/2019	15	20
Grading	Rough Grading	8/11/2019	8/30/2019	15	19
Grading Haul	*Grading Haul*	*8/11/2019*	*8/30/2019*	*15*	*19*
Utility Trenching	Utility Trenching	8/15/2019	9/4/2019	15	20
Building Construction	Building Constrction	9/5/2019	8/20/2020	251	350
Asphalt Paving	Asphalt Paving	8/1/2020	8/20/2020	14	19
Architectural Coating	Architectural Coating	8/1/2020	8/24/2020	16	23

Phase Name	Phase Type	Start Date	End Date	CalEEMod Total Days	Total Days
Phase 2					
Demoliton	Demolition	6/17/2020	6/26/2020	8	9
Demo Haul	*Demo Haul*	*6/17/2020*	*6/26/2020*	*8*	*9*
Site Preparation	Site Preparation	6/27/2020	7/1/2020	3	4
Grading	Rough Grading	7/2/2020	7/5/2020	2	3
Grading Haul	*Grading Haul*	*7/2/2020*	*7/5/2020*	*3*	*4*
Utility Trenching	Trenching	7/6/2020	7/8/2020	3	2
Building Construction	Building Construction	7/9/2020	12/3/2020	106	147
Asphalt Paving	Asphalt Paving	11/5/2020	11/15/2020	7	10
Architectural Coating	Architectural Coating	11/16/2020	12/3/2020	14	17

**Provided by the District.*

CalEEMod Construction Off-Road Equipment Inputs Phase 1*

Equipment Type	CalEEMod Equipment Type	Unit Amount	Hours/Day	HP	LF	Worker Trips**	Vendor Trips
1A Demolition						15	
Concrete/Industrial Saws	Concrete/Industrial Saws	1	8	81	0.73		
Excavators	Excavators	3	8	158	0.38		
Rubber Tired Dozers	Rubber Tired Dozers	2	8	247	0.4		
Water Truck							4
1A Site Preparation						18	
Rubber Tired Dozers	Rubber Tired Dozers	3	8	247	0.4		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	4	8	97	0.37		
Water Truck	Water Truck	1					4
1A Grading						15	
Excavators	Excavators	1	8	158	0.38		
Graders	Graders	1	8	187	0.41		
Rubber Tired Dozers	Rubber Tired Dozers	1	8	247	0.4		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	3	8	97	0.37		
Water Truck	Water Truck	1					4
1A Utility Trenching						5	
Backhoe	Tractor/Loader/Backhoe	1	8	0.73	0.37		
Skid Steer	Skid Steer Loader	1	8	0.38	0.3685		
Water Truck*				0.4			4
1A Canopy Installation						5	
Forklifts	Forklifts	3	8	89	0.2		
Tractor/Loader/Backhoe	Tractor/Loader/Backhoe	1	8	0.73	0.37		
1A Concrete Curb & Gutter						20	
Cement and Mortar Mixers	Cement and Mortar Mixers	2	6	9	0.56		
Pavers	Pavers	1	8	130	0.42		
Paving Equipment	Paving Equipment	2	6	132	0.36		
Rollers	Rollers	2	6	80	0.38		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	8	97	0.37		
1A Landscaping						9	
N/A	N/A	N/A					
1A Concrete Sidewalks						20	
Cement and Mortar Mixers	Cement and Mortar Mixers	2	6	9	0.56		
Pavers	Pavers	1	8	130	0.42		
Paving Equipment	Paving Equipment	2	6	132	0.36		
Rollers	Rollers	2	6	80	0.38		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	8	97	0.37		
1B Site Preparation						18	
Rubber Tired Dozers	Rubber Tired Dozers	3	8	247	0.4		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	4	8	97	0.37		
Water Truck	Water Truck	1					4
1B Rough Grading						15	
Excavators	Excavators	1	8	158	0.38		
Graders	Graders	1	8	187	0.41		
Rubber Tired Dozers	Rubber Tired Dozers	1	8	247	0.4		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	3	8	97	0.37		
Water Trucks							4
1B Utility Trenching						5	
Backhoe	Tractor/Loader/Backhoe	1	8	0.73	0.37		
Skid Steer	Skid Steer Loader	1	8	0.38	0.3685		
Water Truck*				0.4			4
1B Building Construction						43	17
Cranes	Cranes	1	7	231	0.29		
Forklifts	Forklifts	3	8	89	0.2		
Generator Sets	Generator Sets	1	8	84	0.74		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	3	7	97	0.37		
Welders	Welders	1	8	46	0.45		
1B Asphalt Paving						20	
Cement and Mortar Mixers	Cement and Mortar Mixers	2	6	9	0.56		
Pavers	Pavers	1	8	130	0.42		
Paving Equipment	Paving Equipment	2	6	132	0.36		
Rollers	Rollers	2	6	80	0.38		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	8	97	0.37		
1B Architectural Coating						9	
Air Compressors	Air Compressors	1	6	78	0.48		

*Based on CalEEMod defaults

CalEEMod Construction Off-Road Equipment Inputs Phase 2*

Equipment Type	CalEEMod Equipment Type	Unit Amount	Hours/Day	HP	LF	Worker Trips	Vendor Trips
2 Demolition						13	
Concrete/Industrial Saws	Concrete/Industrial Saws	1	8	81	0.73		
Excavators	Rubber Tired Dozers	1	8	247	0.4		
Rubber Tired Dozers	Tractors/Loaders/Backhoes	3	8	97	0.37		
Water Truck							4
2 Site Preparation						13	
Graders	Graders	1	8	187	0.41		
Scrapers	Scrapers	1	8	367	0.48		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	7	97	0.37		
Water Truck							4
2 Grading						10	
Graders	Graders	1	8	187	0.41		
Rubber Tired Dozers	Rubber Tired Dozers	1	8	247	0.4		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	2	7	97	0.37		
Water Truck	Water Truck	1					4
2 Utility Trenching						5	
Tractor/Loader/Backhoe	Tractor/Loader/Backhoe	1	8	0.73	0.37		
Skid Steer Loader	Skid Steer Loader	1	8	0.38	0.3685		
Water Truck*				0.4			4
2 Building Construction						16	6
Cranes	Cranes	1	8	231	0.29		
Forklifts	Forklifts	2	7	89	0.2		
Generator Sets	Generator Sets	1	8	84	0.74		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	6	97	0.37		
Welders	Welders	3	8	46	0.45		
2 Asphalt Paving						15	
Cement and Mortar Mixers	Cement and Mortar Mixers	1	8	9	0.56		
Pavers	Pavers	1	8	130	0.42		
Paving Equipment	Paving Equipment	1	8	132	0.36		
Rollers	Rollers	2	8	80	0.38		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	8	97	0.37		
2 Architectural Coating						3	
Air Compressors	Air Compressors	1	6	78	0.48		

*Based on CalEEMod defaults

Demo Haul Trip Calculation

*Conversion factors**

0.046	ton/SF
1.2641662	tons/cy
20	tons
15.8207046	CY
0.79103523	CY/ton

Building Demoltion Haul Trips (BSF and Haul Truck (CY) given)

Phase	BSF Demo	Tons/SF	Tons	Haul Truck (CY)	Haul Truck (Ton)	Round Trips	Total Trip Ends
1	26,000	0.046	1196	20	25.28	47	95
2	12,000	0.046	552	20	25.28	22	44

*CalEEMod User's Guide, Appendix A

CalEEMod Project Characteristics Inputs

Project Address:	1888 Montgomery Avenue, Encinitas
Project Location:	San Diego
Climate Zone:	13
Land Use Setting:	Urban
Operational Year:	2018; 2020
Utility Company:	San Diego Gas & Electric
Air Basin:	San Diego Air Basin
Air District:	SDAPCD

				Existing	Proposed	Capacity
Total Project Site Acreage:	7.40	acres	Students	367	389	440

CalEEMod Land Use Inputs

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Square Feet
School Facilities	Educational	Elementary School	40.47	1000 sqft	5.71	40,465
Parking Lot	Parking	Other Asphalt Surfaces	18.31	1000 sqft	0.42	18,311
Non-Parking Asphalt	Parking	Non-Parking Asphalt	31.72	1000 sqft	0.73	31,715
Hardscape	Parking	Non-Asphalt	23.50	1000 sqft	0.54	23,500
					7.40	acre

Trip Generation*

	Weekday Trip Rate	Sat Trip Rate	Sun Trip Rate	
Trip Rate Per Student	1.6	0	0	Trips/student
Trip Rate Per 1000sqft	14.51	0	0	Trips/1000 sqft
Average Daily Trips	587	0	0	ADT

**IBI Group. Cardiff Elementary School Modernization Traffic Impact Study. May 23, 2018.*

Energy Use

CalEEMod defaults used with historical data enabled

Solid Waste

Pounds Per Student Per Day	TPY
0.5	16.515

**Based on California Department of Resources Recycling and Recovery's sample solid waste generation rates (CalRecycle 2016)*

Water Use

	Water Demand (GPD)	CalEEMod Input (GPY)
Indoor Water Use*	28.30	1,869,498.00
Outdoor Water Use**	N/A	3,017,584.90

Septic Tank	0%
Aerobic	100%
Facultative Lagoons	0%

**Based on a three-year average of actual water consumption for Cardiff Elementary School; Source: SDWD Engineering Department (Olson 2018)*
***CalEEMod Default water generation rate.*

Architectural Coating

SDAPCD Rule 67.0.1

Percentage of Buildings' Interior Painted:	100%	
Percentage of Buildings' Exterior Painted:	100%	
Interior Paint VOC content:	100	grams per liter
Exterior Paint VOC content:	100	grams per liter

Nonresidential Structures	Land Use Square Feet	CalEEMod Paintable Surface Factor	Total Paintable Surface Area[2]	Paintable Interior Area[1]	Paintable Exterior Area[1]
School Facilities	40,465	2	80,930	60,698	20,233
Striping	18,311	0.06	1,099		1,099

[1] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

Changes to the CalEEMod Defaults - Fleet Mix 2018

Trips 587

Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix (Model Default)	0.5741	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452	100%
Trips	337	27	111	68	11	3	9	13	1	1	4	0	1	587
Percent	82%			12%	7%									100%
without buses/MH*	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0	0	0.006385	0.0007390	0	99%
Percent	82%			12%	6%									99%
Adjusted without buses/MH	0.574135	0.045525	0.189369	0.116519	0.020977	0.006142	0.016136	0.024012	0.000000	0.000000	0.006946	0.000804	0.000000	
Percent check	82%			12%	7%									100%
Assumed Mix	97.0%			2.00%	1.00%									100%
adjusted with Assumed	0.682510	0.054118	0.225115	0.020000	0.003082	0.000902	0.002370	0.003528	0.000000	0.000000	0.008257	0.000118	0.000000	100%
Trips	401	32	132	12	2	1	1	2	0	0	5	0	0	587
Check	*570*			*12*	*6*									

**School buses were left in for school use*

CalEEMod Project Characteristics Inputs

Project Address:	1888 Montgomery Avenue, Encinitas
Project Location:	San Diego
Climate Zone:	13
Land Use Setting:	Urban
Operational Year:	2018
Utility Company:	San Diego Gas & Electric
Air Basin:	San Diego Air Basin
Air District:	SDAPCD

				Existing	Proposed	Capacity
Total Project Site Acreage:	7.30	acres	Students	367	587	440

CalEEMod Land Use Inputs

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Square Feet
School Facilities	Educational	Elementary School	42.23	1000 sqft	4.97	42,225
Parking Lot	Parking	Other Asphalt Surfaces	12.71	1000 sqft	0.29	12,713
Non-Parking Asphalt	Parking	Non-Parking Asphalt	17.00	1000 sqft	0.39	17,000
Hardscape	Parking	Non-Asphalt	71.95	1000 sqft	1.65	71,949
					7.30	acre

Trip Generation*

	Weekday Trip Rate	Sat Trip Rate	Sun Trip Rate	
Trip Rate Per Student	1.6	0	0	Trips/student
Trip Rate Per 1000sqft	16.67	0	0	Trips/1000 sqft
Average Daily Trips	704	0	0	ADT

Net Increase in Trip Generation		
Existing	Capacity	Net
587	704	**117**

**IBI Group. Cardiff Elementary School Modernization Traffic Impact Study. May 23, 2018.*

Energy Use

CalEEMod defaults used

Solid Waste

Pounds Per Student Per Day	TPY
0.5	19.8

**Based on California Department of Resources Recycling and Recovery's sample solid waste generation rates (CalRecycle 2016)*

Water Use

	Water Demand (GPD)	CalEEMod Input (GPY)		
Indoor Water Use*	28.30	2,241,360.00	Septic Tank	0%
Outdoor Water Use**	N/A	3,148,816.66	Aerobic	100%
			Facultative Lagoons	0%

**Based on a three-year average of actual water consumption for Cardiff Elementary School; Source: SDWD Engineering Department (Olson 2018)*

***CalEEMod Default water generation rate.*

Architectural Coating

SDAPCD Rule 67.0.1

Percentage of Buildings' Interior Painted:	100%	
Percentage of Buildings' Exterior Painted:	100%	
Interior Paint VOC content:	100	grams per liter
Exterior Paint VOC content:	100	grams per liter

Nonresidential Structures	Land Use Square Feet	CalEEMod Paintable Surface Factor	Total Paintable Surface Area[2]	Paintable Interior Area[1]	Paintable Exterior Area[1]
School Facilities	42,225	2	84,450	63,338	21,113
Striping	29,713	0.06	1,783		1,783

[1] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

Water Mitigation

Install Low Flow Bathroom Faucet	32	% Reduction in flow
Install Low Flow Kitchen Faucet	18	% Reduction in flow
Install Low Flow Toilet	20	% Reduction in flow
Install Low Flow Shower	20	% Reduction in flow
Use Water Efficiency Irrigation System	6.1	% Reduction in flow

Percent reduction in indoor water use for toilets from CalEEMod Appendix A: Calculation Details for CalEEMod

Changes to the CalEEMod Defaults - Fleet Mix 2020

Trips 704

Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix (Model Default)	0.5883	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271	100%
Trips	414	30	130	78	12	4	11	16	1	1	4	1	1	704
Percent	82%			11%	7%									100%
without buses/MH*	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0	0	0.006181	0.0007450	0	99%
Percent	82%			11%	6%									99%
Adjusted without buses/MH	0.588316	0.042913	0.184449	0.110793	0.018740	0.006023	0.016833	0.024946	0.000000	0.000000	0.006698	0.000807	0.000000	
Percent check	82%			11%	7%									100%
Assumed Mix	97.0%			2.00%	1.00%									100%
adjusted with Assumed	0.693924	0.050616	0.217559	0.020000	0.002783	0.000894	0.002499	0.003704	0.000000	0.000000	0.007900	0.000120	0.000000	100%
Trips	489	36	153	14	2	1	2	3	0	0	6	0	0	704
Check	*683*			*14*	*7*									

**School buses were left in for school use*

Regional Construction Emissions Worksheet

*CalEEMod, Version 2016.3.2.25

1A Demolition								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Off-Road		3.51	35.78	22.06	0.04	1.79	1.67
	Total		3.51	35.78	22.06	0.04	1.79	1.67
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.13	0.00	0.03	0.01
	Worker		0.06	0.04	0.46	0.00	0.11	0.03
	Total		0.08	0.54	0.59	0.00	0.14	0.04
TOTAL			*3.59*	*36.32*	*22.65*	*0.04*	*1.94*	*1.71*
Onsite		2019	Winter					
	Off-Road		3.51	35.78	22.06	0.04	1.79	1.67
	Total		3.51	35.78	22.06	0.04	1.79	1.67
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.07	0.05	0.44	0.00	0.11	0.03
	Total		0.09	0.54	0.58	0.00	0.14	0.04
TOTAL			*3.60*	*36.33*	*22.64*	*0.04*	*1.94*	*1.71*
Onsite		2019						
	Off-Road		3.51	35.78	22.06	0.04	1.79	1.67
	Total		3.51	35.78	22.06	0.04	1.79	1.67
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.07	0.05	0.46	0.00	0.11	0.03
	Total		0.09	0.54	0.59	0.00	0.14	0.04
TOTAL			*3.60*	*36.33*	*22.65*	*0.04*	*1.94*	*1.71*

1A Demolition Haul								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2018	Summer					
	Fugitive Dust						0.48	0.07
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.48	0.07
Offsite								
	Hauling		0.06	2.00	0.43	0.01	0.12	0.04
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.06	2.00	0.43	0.01	0.12	0.04
TOTAL			*0.06*	*2.00*	*0.43*	*0.01*	*0.60*	*0.11*
Onsite		2018	Winter					
	Fugitive Dust						0.48	0.07
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.48	0.07
Offsite								
	Hauling		0.06	2.02	0.46	0.01	0.12	0.04
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.06	2.02	0.46	0.01	0.12	0.04
TOTAL			*0.06*	*2.02*	*0.46*	*0.01*	*0.60*	*0.11*
Onsite		2018						
	Fugitive Dust		0.00	0.00	0.00	0.00	0.48	0.07
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.48	0.07
Offsite								
	Hauling		0.06	2.02	0.46	0.01	0.12	0.04
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.06	2.02	0.46	0.01	0.12	0.04
TOTAL			*0.06*	*2.02*	*0.46*	*0.01*	*0.60*	*0.11*
	Demolition + Demo Haul		*3.66*	*38.34*	*23.11*	*0.05*	*2.54*	*1.82*

1A Site Preparation								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust						7.72	4.25
	Off-Road		4.34	45.57	22.06	0.04	2.39	2.20
	Total		4.34	45.57	22.06	0.04	10.11	6.44
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.13	0.00	0.03	0.01
	Worker		0.07	0.05	0.56	0.00	0.14	0.04
	Total		0.09	0.55	0.69	0.00	0.17	0.05
TOTAL			*4.42*	*46.12*	*22.75*	*0.04*	*10.28*	*6.49*
Onsite		2019	Winter					
	Fugitive Dust						7.72	4.25
	Off-Road		4.34	45.57	22.06	0.04	2.39	2.20
	Total		4.34	45.57	22.06	0.04	10.11	6.44
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.08	0.06	0.53	0.00	0.14	0.04
	Total		0.10	0.55	0.67	0.00	0.17	0.05
TOTAL			*4.43*	*46.12*	*22.73*	*0.04*	*10.28*	*6.49*
Onsite		2019						
	Fugitive Dust		0.00	0.00	0.00	0.00	7.72	4.25
	Off-Road		4.34	45.57	22.06	0.04	2.39	2.20
	Total		4.34	45.57	22.06	0.04	10.11	6.44
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.08	0.06	0.56	0.00	0.14	0.04
	Total		0.10	0.55	0.69	0.00	0.17	0.05
TOTAL			*4.43*	*46.12*	*22.75*	*0.04*	*10.28*	*6.49*
Demolition + Demo Haul + Site Prep			*8.09*	*84.47*	*45.86*	*0.09*	*12.82*	*8.31*

1A Grading								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust						2.57	1.42
	Off-Road		2.58	28.35	16.29	0.03	1.40	1.29
	Total		2.58	28.35	16.29	0.03	3.97	2.70
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.13	0.00	0.03	0.01
	Worker		0.06	0.04	0.46	0.00	0.11	0.03
	Total		0.08	0.54	0.59	0.00	0.14	0.04
TOTAL			*2.66*	*28.89*	*16.89*	*0.03*	*4.12*	*2.74*
Onsite		2019	Winter					
	Fugitive Dust						2.57	1.42
	Off-Road		2.58	28.35	16.29	0.03	1.40	1.29
	Total		2.58	28.35	16.29	0.03	3.97	2.70
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.07	0.05	0.44	0.00	0.11	0.03
	Total		0.09	0.54	0.58	0.00	0.14	0.04
TOTAL			*2.67*	*28.89*	*16.87*	*0.03*	*4.12*	*2.74*
Onsite		2019						
	Fugitive Dust		0.00	0.00	0.00	0.00	2.57	1.42
	Off-Road		2.58	28.35	16.29	0.03	1.40	1.29
	Total		2.58	28.35	16.29	0.03	3.97	2.70
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.07	0.05	0.46	0.00	0.11	0.03
	Total		0.09	0.54	0.59	0.00	0.14	0.04
TOTAL			*2.67*	*28.89*	*16.89*	*0.03*	*4.12*	*2.74*
	Demo + Demo Haul + Grading		*6.32*	*67.23*	*40.00*	*0.08*	*6.65*	*4.56*

1A Trenching								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Off-Road		0.32	3.46	3.69	0.01	0.21	0.19
	Total		0.32	3.46	3.69	0.01	0.21	0.19
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.13	0.00	0.03	0.01
	Worker		0.02	0.01	0.15	0.00	0.04	0.01
	Total		0.04	0.51	0.28	0.00	0.07	0.02
TOTAL			*0.36*	*3.97*	*3.98*	*0.01*	*0.27*	*0.21*
Onsite		2019	Winter					
	Off-Road		0.32	3.46	3.69	0.01	0.21	0.19
	Total		0.32	3.46	3.69	0.01	0.21	0.19
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.02	0.02	0.15	0.00	0.04	0.01
	Total		0.04	0.51	0.29	0.00	0.07	0.02
TOTAL			*0.36*	*3.98*	*3.98*	*0.01*	*0.27*	*0.21*
Onsite		2019						
	Off-Road		0.32	3.46	3.69	0.01	0.21	0.19
	Total		0.32	3.46	3.69	0.01	0.21	0.19
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.02	0.02	0.15	0.00	0.04	0.01
	Total		0.04	0.51	0.29	0.00	0.07	0.02
TOTAL			*0.36*	*3.98*	*3.98*	*0.01*	*0.27*	*0.21*
Demo + Demo Haul + Trenching			*4.02*	*42.32*	*27.10*	*0.05*	*2.81*	*2.03*

1A Concrete Curb and Gutter								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust		1.27	12.76	12.31	0.02	0.72	0.66
	Off-Road		0.11				0.00	0.00
	Total		1.38	12.76	12.31	0.02	0.72	0.66
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.08	0.05	0.62	0.00	0.15	0.04
	Total		0.08	0.05	0.62	0.00	0.15	0.04
TOTAL			*1.45*	*12.82*	*12.93*	*0.02*	*0.87*	*0.71*
Onsite		2019	Winter					
	Fugitive Dust		1.27	12.76	12.31	0.02	0.72	0.66
	Off-Road		0.11				0.00	0.00
	Total		1.38	12.76	12.31	0.02	0.72	0.66
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.09	0.06	0.58	0.00	0.15	0.04
	Total		0.09	0.06	0.58	0.00	0.15	0.04
TOTAL			*1.47*	*12.82*	*12.90*	*0.02*	*0.87*	*0.71*
Onsite		2019						
	Fugitive Dust		1.27	12.76	12.31	0.02	0.72	0.66
	Off-Road		0.11	0.00	0.00	0.00	0.00	0.00
	Total		1.38	12.76	12.31	0.02	0.72	0.66
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.09	0.06	0.62	0.00	0.15	0.04
	Total		0.09	0.06	0.62	0.00	0.15	0.04
TOTAL			*1.47*	*12.82*	*12.93*	*0.02*	*0.87*	*0.71*
Demo + Demo Haul + Curb/Gutter			*5.12*	*51.17*	*36.05*	*0.07*	*3.41*	*2.53*
1B Site Prep + Curb/Gutter			*5.90*	*58.95*	*35.68*	*0.06*	*11.15*	*7.20*

1B Site Preparation								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust						7.72	4.25
	Off-Road		4.34	45.57	22.06	0.04	2.39	2.20
	Total		4.34	45.57	22.06	0.04	10.11	6.44
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.13	0.00	0.03	0.01
	Worker		0.07	0.05	0.56	0.00	0.14	0.04
	Total		0.09	0.55	0.69	0.00	0.17	0.05
TOTAL			*4.42*	*46.12*	*22.75*	*0.04*	*10.28*	*6.49*
Onsite		2019	Winter					
	Fugitive Dust						7.72	4.25
	Off-Road		4.34	45.57	22.06	0.04	2.39	2.20
	Total		4.34	45.57	22.06	0.04	10.11	6.44
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.08	0.06	0.53	0.00	0.14	0.04
	Total		0.10	0.55	0.67	0.00	0.17	0.05
TOTAL			*4.43*	*46.12*	*22.73*	*0.04*	*10.28*	*6.49*
Onsite		2019						
	Fugitive Dust		0.00	0.00	0.00	0.00	7.72	4.25
	Off-Road		4.34	45.57	22.06	0.04	2.39	2.20
	Total		4.34	45.57	22.06	0.04	10.11	6.44
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.08	0.06	0.56	0.00	0.14	0.04
	Total		0.10	0.55	0.69	0.00	0.17	0.05
TOTAL			*4.43*	*46.12*	*22.75*	*0.04*	*10.28*	*6.49*

1A Canopy Installation								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Off-Road		0.68	6.33	5.60	0.01	0.47	0.43
	Total		0.68	6.33	5.60	0.01	0.47	0.43
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.02	0.01	0.15	0.00	0.04	0.01
	Total		0.02	0.01	0.15	0.00	0.04	0.01
TOTAL			*0.70*	*6.34*	*5.75*	*0.01*	*0.51*	*0.44*
Onsite		2019	Winter					
	Off-Road		0.68	6.33	5.60	0.01	0.47	0.43
	Total		0.68	6.33	5.60	0.01	0.47	0.43
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.02	0.02	0.15	0.00	0.04	0.01
	Total		0.02	0.02	0.15	0.00	0.04	0.01
TOTAL			*0.71*	*6.35*	*5.74*	*0.01*	*0.51*	*0.44*
Onsite		2019						
	Off-Road		0.68	6.33	5.60	0.01	0.47	0.43
	Total		0.68	6.33	5.60	0.01	0.47	0.43
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.02	0.02	0.15	0.00	0.04	0.01
	Total		0.02	0.02	0.15	0.00	0.04	0.01
TOTAL			*0.71*	*6.35*	*5.75*	*0.01*	*0.51*	*0.44*
Canopy Installation + 1B Site Prep			*5.14*	*52.47*	*28.50*	*0.05*	*10.79*	*6.93*

1A Concrete Sidewalks/ Paving								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust		1.27	12.76	12.31	0.02	0.72	0.66
	Off-Road		0.08				0.00	0.00
	Total		1.34	12.76	12.31	0.02	0.72	0.66
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.08	0.05	0.62	0.00	0.15	0.04
	Total		0.08	0.05	0.62	0.00	0.15	0.04
TOTAL			*1.42*	*12.82*	*12.93*	*0.02*	*0.87*	*0.71*
Onsite		2019	Winter					
	Fugitive Dust		1.27	12.76	12.31	0.02	0.72	0.66
	Off-Road		0.08				0.00	0.00
	Total		1.34	12.76	12.31	0.02	0.72	0.66
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.09	0.06	0.58	0.00	0.15	0.04
	Total		0.09	0.06	0.58	0.00	0.15	0.04
TOTAL			*1.43*	*12.82*	*12.90*	*0.02*	*0.87*	*0.71*
Onsite		2019						
	Fugitive Dust		1.27	12.76	12.31	0.02	0.72	0.66
	Off-Road		0.08	0.00	0.00	0.00	0.00	0.00
	Total		1.34	12.76	12.31	0.02	0.72	0.66
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.09	0.06	0.62	0.00	0.15	0.04
	Total		0.09	0.06	0.62	0.00	0.15	0.04
TOTAL			*1.43*	*12.82*	*12.93*	*0.02*	*0.87*	*0.71*
Congrete Sidewalks/Paving + 1B Site Prep			*5.87*	*58.95*	*35.68*	*0.06*	*11.15*	*7.20*

1B Rough Grading								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugtive Dust						2.57	1.42
	Off-Road		2.58	28.35	16.29	0.03	1.40	1.29
	Total		2.58	28.35	16.29	0.03	3.97	2.70
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.13	0.00	0.03	0.01
	Worker		0.06	0.04	0.46	0.00	0.11	0.03
	Total		0.08	0.54	0.59	0.00	0.14	0.04
TOTAL			*2.66*	*28.89*	*16.89*	*0.03*	*4.12*	*2.74*
Onsite		2019	Winter					
	Fugtive Dust						2.57	1.42
	Off-Road		2.58	28.35	16.29	0.03	1.40	1.29
	Total		2.58	28.35	16.29	0.03	3.97	2.70
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.07	0.05	0.44	0.00	0.11	0.03
	Total		0.09	0.54	0.58	0.00	0.14	0.04
TOTAL			*2.67*	*28.89*	*16.87*	*0.03*	*4.12*	*2.74*
Onsite		2019						
	Fugtive Dust		0.00	0.00	0.00	0.00	2.57	1.42
	Off-Road		2.58	28.35	16.29	0.03	1.40	1.29
	Total		2.58	28.35	16.29	0.03	3.97	2.70
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.07	0.05	0.46	0.00	0.11	0.03
	Total		0.09	0.54	0.59	0.00	0.14	0.04
TOTAL			*2.67*	*28.89*	*16.89*	*0.03*	*4.12*	*2.74*
ough Grading + Grading Haul + 1A Landscaping			*5.35*	*59.53*	*33.98*	*0.07*	*8.43*	*5.52*

1B Grading Haul								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust						2.72	1.43
	Off-Road		2.58	28.35	16.29	0.03	1.40	1.29
	Total		2.58	28.35	16.29	0.03	4.12	2.72
Offsite								
	Hauling		0.06	2.24	0.48	0.01	0.13	0.04
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.06	2.24	0.48	0.01	0.13	0.04
TOTAL			*2.65*	*30.59*	*16.78*	*0.04*	*4.25*	*2.76*
Onsite		2019	Winter					
	Fugitive Dust						2.72	1.43
	Off-Road		2.58	28.35	16.29	0.03	1.40	1.29
	Total		2.58	28.35	16.29	0.03	4.12	2.72
Offsite								
	Hauling		0.07	2.27	0.52	0.01	0.13	0.04
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.07	2.27	0.52	0.01	0.13	0.04
TOTAL			*2.65*	*30.61*	*16.81*	*0.04*	*4.25*	*2.76*
Onsite		2019						
	Fugitive Dust		0.00	0.00	0.00	0.00	2.72	1.43
	Off-Road		2.58	28.35	16.29	0.03	1.40	1.29
	Total		2.58	28.35	16.29	0.03	4.12	2.72
Offsite								
	Hauling		0.07	2.27	0.52	0.01	0.13	0.04
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.07	2.27	0.52	0.01	0.13	0.04
TOTAL			*2.65*	*30.61*	*16.81*	*0.04*	*4.25*	*2.76*
Rough Grading + Grading Haul			*5.31*	*59.50*	*33.70*	*0.07*	*8.37*	*5.50*

1A Landscaping								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Arch. Coating		0.00				0.00	0.00
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.00	0.00
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.02	0.28	0.00	0.07	0.02
	Total		0.04	0.02	0.28	0.00	0.07	0.02
TOTAL			*0.04*	*0.02*	*0.28*	*0.00*	*0.07*	*0.02*
Onsite		2019	Winter					
	Arch. Coating		0.00				0.00	0.00
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.00	0.00
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.26	0.00	0.07	0.02
	Total		0.04	0.03	0.26	0.00	0.07	0.02
TOTAL			*0.04*	*0.03*	*0.26*	*0.00*	*0.07*	*0.02*
Onsite		2019						
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.00	0.00
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.28	0.00	0.07	0.02
	Total		0.04	0.03	0.28	0.00	0.07	0.02
TOTAL			*0.04*	*0.03*	*0.28*	*0.00*	*0.07*	*0.02*

1B Trenching								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Off-Road		0.32	3.46	3.69	0.01	0.21	0.19
	Total		0.32	3.46	3.69	0.01	0.21	0.19
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.13	0.00	0.03	0.01
	Worker		0.02	0.01	0.15	0.00	0.04	0.01
	Total		0.04	0.51	0.28	0.00	0.07	0.02
TOTAL			*0.36*	*3.97*	*3.98*	*0.01*	*0.27*	*0.21*
Onsite		2019	Winter					
	Off-Road		0.32	3.46	3.69	0.01	0.21	0.19
	Total		0.32	3.46	3.69	0.01	0.21	0.19
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.02	0.02	0.15	0.00	0.04	0.01
	Total		0.04	0.51	0.29	0.00	0.07	0.02
TOTAL			*0.36*	*3.98*	*3.98*	*0.01*	*0.27*	*0.21*
Onsite		2019						
	Off-Road		0.32	3.46	3.69	0.01	0.21	0.19
	Total		0.32	3.46	3.69	0.01	0.21	0.19
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.50	0.14	0.00	0.03	0.01
	Worker		0.02	0.02	0.15	0.00	0.04	0.01
	Total		0.04	0.51	0.29	0.00	0.07	0.02
TOTAL			*0.36*	*3.98*	*3.98*	*0.01*	*0.27*	*0.21*

1B Building Construction								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Off-Road		2.36	21.08	17.16	0.03	1.29	1.21
	Total		2.36	21.08	17.16	0.03	1.29	1.21
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.08	2.11	0.54	0.00	0.12	0.05
	Worker		0.17	0.12	1.33	0.00	0.33	0.09
	Total		0.25	2.23	1.87	0.01	0.45	0.13
TOTAL			*2.61*	*23.30*	*19.04*	*0.04*	*1.74*	*1.35*
Onsite		2019	Winter					
	Off-Road		2.36	21.08	17.16	0.03	1.29	1.21
	Total		2.36	21.08	17.16	0.03	1.29	1.21
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.08	2.11	0.60	0.00	0.12	0.05
	Worker		0.19	0.13	1.26	0.00	0.33	0.09
	Total		0.27	2.24	1.86	0.01	0.45	0.13
TOTAL			*2.63*	*23.32*	*19.02*	*0.04*	*1.74*	*1.35*
Onsite		2019						
	Off-Road		2.36	21.08	17.16	0.03	1.29	1.21
	Total		2.36	21.08	17.16	0.03	1.29	1.21
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.08	2.11	0.60	0.00	0.12	0.05
	Worker		0.19	0.13	1.33	0.00	0.33	0.09
	Total		0.27	2.24	1.87	0.01	0.45	0.13
TOTAL			*2.63*	*23.32*	*19.04*	*0.04*	*1.74*	*1.35*

1B Building Construction								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2020	Summer					
	Off-Road		2.12	19.19	16.85	0.03	1.12	1.05
	Total		2.12	19.19	16.85	0.03	1.12	1.05
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.06	1.92	0.49	0.00	0.12	0.04
	Worker		0.16	0.11	1.22	0.00	0.33	0.09
	Total		0.22	2.02	1.71	0.01	0.45	0.13
TOTAL			*2.34*	*21.21*	*18.56*	*0.04*	*1.56*	*1.18*
Onsite		2020	Winter					
	Off-Road		2.12	19.19	16.85	0.03	1.12	1.05
	Total		2.12	19.19	16.85	0.03	1.12	1.05
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.07	1.92	0.54	0.00	0.12	0.04
	Worker		0.18	0.12	1.15	0.00	0.33	0.09
	Total		0.25	2.03	1.69	0.01	0.45	0.13
TOTAL			*2.37*	*21.22*	*18.54*	*0.03*	*1.56*	*1.18*
Onsite		2020						
	Off-Road		2.12	19.19	16.85	0.03	1.12	1.05
	Total		2.12	19.19	16.85	0.03	1.12	1.05
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.07	1.92	0.54	0.00	0.12	0.04
	Worker		0.18	0.12	1.22	0.00	0.33	0.09
	Total		0.25	2.03	1.71	0.01	0.45	0.13
TOTAL			*2.37*	*21.22*	*18.56*	*0.04*	*1.56*	*1.18*
1B Construction + 1B Paving + 1B Painting			*26.73*	*34.79*	*33.49*	*0.06*	*2.55*	*1.95*

1B Asphalt Paving								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2020	Summer					
	Off-Road		1.18	11.80	12.28	0.02	0.65	0.60
	Paving		0.05				0.00	0.00
	Total		1.24	11.80	12.28	0.02	0.65	0.60
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.07	0.05	0.57	0.00	0.15	0.04
	Total		0.07	0.05	0.57	0.00	0.15	0.04
TOTAL			*1.31*	*11.85*	*12.85*	*0.02*	*0.80*	*0.64*
Onsite		2020	Winter					
	Off-Road		1.18	11.80	12.28	0.02	0.65	0.60
	Paving		0.05				0.00	0.00
	Total		1.24	11.80	12.28	0.02	0.65	0.60
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.08	0.06	0.53	0.00	0.15	0.04
	Total		0.08	0.06	0.53	0.00	0.15	0.04
TOTAL			*1.32*	*11.86*	*12.82*	*0.02*	*0.80*	*0.64*
Onsite		2020						
	Off-Road		1.18	11.80	12.28	0.02	0.65	0.60
	Paving		0.05	0.00	0.00	0.00	0.00	0.00
	Total		1.24	11.80	12.28	0.02	0.65	0.60
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.08	0.06	0.57	0.00	0.15	0.04
	Total		0.08	0.06	0.57	0.00	0.15	0.04
TOTAL			*1.32*	*11.86*	*12.85*	*0.02*	*0.80*	*0.64*
1B Construction + 1B Paving			*3.69*	*33.08*	*31.40*	*0.06*	*2.37*	*1.82*

1B Architectural Coating								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2020	Summer					
	Fugitive Dust		22.77				0.00	0.00
	Off-Road		0.24	1.68	1.83	0.00	0.11	0.11
	Total		23.01	1.68	1.83	0.00	0.11	0.11
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.03	0.02	0.26	0.00	0.07	0.02
	Total		0.03	0.02	0.26	0.00	0.07	0.02
TOTAL			*23.04*	*1.71*	*2.09*	*0.00*	*0.18*	*0.13*
Onsite		2020	Winter					
	Archit. Coating		22.77				0.00	0.00
	Off-Road		0.24	1.68	1.83	0.00	0.11	0.11
	Total		23.01	1.68	1.83	0.00	0.11	0.11
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.24	0.00	0.07	0.02
	Total		0.04	0.03	0.24	0.00	0.07	0.02
TOTAL			*23.05*	*1.71*	*2.07*	*0.00*	*0.18*	*0.13*
Onsite		2020						
	Fugitive Dust		22.77	0.00	0.00	0.00	0.00	0.00
	Off-Road		0.24	1.68	1.83	0.00	0.11	0.11
	Total		23.01	1.68	1.83	0.00	0.11	0.11
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.26	0.00	0.07	0.02
	Total		0.04	0.03	0.26	0.00	0.07	0.02
TOTAL			*23.05*	*1.71*	*2.09*	*0.00*	*0.18*	*0.13*

2 Demolition								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2020	Summer					
	Off-Road		2.13	20.95	14.66	0.02	1.15	1.08
	Total		2.13	20.95	14.66	0.02	1.15	1.08
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.11	0.00	0.03	0.01
	Worker		0.05	0.03	0.37	0.00	0.10	0.03
	Total		0.06	0.48	0.48	0.00	0.13	0.04
TOTAL			*2.19*	*21.43*	*15.14*	*0.03*	*1.28*	*1.11*
Onsite		2020	Winter					
	Off-Road		2.13	20.95	14.66	0.02	1.15	1.08
	Total		2.13	20.95	14.66	0.02	1.15	1.08
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.13	0.00	0.03	0.01
	Worker		0.05	0.04	0.35	0.00	0.10	0.03
	Total		0.07	0.49	0.47	0.00	0.13	0.04
TOTAL			*2.20*	*21.43*	*15.13*	*0.03*	*1.28*	*1.11*
Onsite		2020						
	Off-Road		2.13	20.95	14.66	0.02	1.15	1.08
	Total		2.13	20.95	14.66	0.02	1.15	1.08
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.13	0.00	0.03	0.01
	Worker		0.05	0.04	0.37	0.00	0.10	0.03
	Total		0.07	0.49	0.48	0.00	0.13	0.04
TOTAL			*2.20*	*21.43*	*15.14*	*0.03*	*1.28*	*1.11*
2 Demolition + Demo Haul + 1B Construction			*4.75*	*49.24*	*35.27*	*0.08*	*3.88*	*2.51*

2 Demolition Haul								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust						0.64	0.10
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.64	0.10
Offsite								
	Hauling		0.18	6.52	1.48	0.02	0.40	0.13
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.18	6.52	1.48	0.02	0.40	0.13
TOTAL			*0.18*	*6.52*	*1.48*	*0.02*	*1.04*	*0.22*
Onsite		2019	Winter					
	Fugitive Dust						0.64	0.10
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.64	0.10
Offsite								
	Hauling		0.19	6.58	1.58	0.02	0.40	0.13
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.19	6.58	1.58	0.02	0.40	0.13
TOTAL			*0.19*	*6.58*	*1.58*	*0.02*	*1.04*	*0.22*
Onsite		2019						
	Fugitive Dust		0.00	0.00	0.00	0.00	0.64	0.10
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.64	0.10
Offsite								
	Hauling		0.19	6.58	1.58	0.02	0.40	0.13
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.19	6.58	1.58	0.02	0.40	0.13
TOTAL			*0.19*	*6.58*	*1.58*	*0.02*	*1.04*	*0.22*

2 Site Preparation								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust						0.68	0.07
	Off-Road		1.65	19.92	11.27	0.02	0.78	0.71
	Total		1.65	19.92	11.27	0.02	1.46	0.79
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.11	0.00	0.03	0.01
	Worker		0.03	0.02	0.23	0.00	0.06	0.02
	Total		0.04	0.47	0.34	0.00	0.09	0.03
TOTAL			*1.70*	*20.39*	*11.61*	*0.03*	*1.55*	*0.81*
Onsite		2019	Winter					
	Fugitive Dust						0.68	0.07
	Off-Road		1.65	19.92	11.27	0.02	0.78	0.71
	Total		1.65	19.92	11.27	0.02	1.46	0.79
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.13	0.00	0.03	0.01
	Worker		0.03	0.02	0.21	0.00	0.06	0.02
	Total		0.05	0.47	0.34	0.00	0.09	0.03
TOTAL			*1.70*	*20.39*	*11.61*	*0.03*	*1.55*	*0.81*
Onsite		2019						
Fugitive Dust								
	Off-Road		1.65	19.92	11.27	0.02	0.78	0.71
	Total		1.65	19.92	11.27	0.02	1.46	0.79
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.13	0.00	0.03	0.01
	Worker		0.03	0.02	0.23	0.00	0.06	0.02
	Total		0.05	0.47	0.34	0.00	0.09	0.03
TOTAL			*1.70*	*20.39*	*11.61*	*0.03*	*1.55*	*0.81*
2 Site Prep + 1B Building Construction			*4.07*	*41.61*	*30.17*	*0.06*	*3.11*	*1.99*

2 Grading								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust						2.80	1.44
	Off-Road		1.92	21.34	9.94	0.02	0.99	0.91
	Total		1.92	21.34	9.94	0.02	3.79	2.35
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.11	0.00	0.03	0.01
	Worker		0.04	0.02	0.28	0.00	0.08	0.02
	Total		0.05	0.48	0.40	0.00	0.10	0.03
TOTAL			*1.97*	*21.82*	*10.33*	*0.02*	*3.90*	*2.38*
Onsite		2019	Winter					
	Fugitive Dust						2.80	1.44
	Off-Road		1.92	21.34	9.94	0.02	0.99	0.91
	Total		1.92	21.34	9.94	0.02	3.79	2.35
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.13	0.00	0.03	0.01
	Worker		0.04	0.03	0.27	0.00	0.08	0.02
	Total		0.06	0.48	0.39	0.00	0.10	0.03
TOTAL			*1.98*	*21.82*	*10.33*	*0.02*	*3.90*	*2.38*
Onsite		2019						
	Fugitive Dust						2.80	1.44
	Off-Road		1.92	21.34	9.94	0.02	0.99	0.91
	Total		1.92	21.34	9.94	0.02	3.79	2.35
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.13	0.00	0.03	0.01
	Worker		0.04	0.03	0.28	0.00	0.08	0.02
	Total		0.06	0.48	0.40	0.00	0.10	0.03
TOTAL			*1.98*	*21.82*	*10.33*	*0.02*	*3.90*	*2.38*
2 Grading + Haul + 1B Building Construction			*4.46*	*46.98*	*29.83*	*0.07*	*6.25*	*3.70*

2 Grading Haul								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2019	Summer					
	Fugitive Dust						0.55	0.06
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.55	0.06
Offsite								
	Hauling		0.11	3.91	0.89	0.01	0.24	0.07
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.11	3.91	0.89	0.01	0.24	0.07
TOTAL			*0.11*	*3.91*	*0.89*	*0.01*	*0.79*	*0.13*
Onsite		2019	Winter					
	Fugitive Dust						0.55	0.06
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.55	0.06
Offsite								
	Hauling		0.11	3.94	0.95	0.01	0.24	0.08
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.11	3.94	0.95	0.01	0.24	0.08
TOTAL			*0.11*	*3.94*	*0.95*	*0.01*	*0.79*	*0.13*
Onsite		2019						
	Fugitive Dust						0.55	0.06
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.00	0.00	0.00	0.00	0.55	0.06
Offsite								
	Hauling		0.11	3.94	0.95	0.01	0.24	0.08
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.11	3.94	0.95	0.01	0.24	0.08
TOTAL			*0.11*	*3.94*	*0.95*	*0.01*	*0.79*	*0.13*

2 Trenching								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2020	Summer					
	Off-Road		0.29	3.17	3.67	0.01	0.18	0.16
	Total		0.29	3.17	3.67	0.01	0.18	0.16
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.11	0.00	0.03	0.01
	Worker		0.02	0.01	0.14	0.00	0.04	0.01
	Total		0.03	0.46	0.26	0.00	0.07	0.02
TOTAL			*0.32*	*3.63*	*3.93*	*0.01*	*0.24*	*0.18*
Onsite		2020	Winter					
	Off-Road		0.29	3.17	3.67	0.01	0.18	0.16
	Total		0.29	3.17	3.67	0.01	0.18	0.16
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.13	0.00	0.03	0.01
	Worker		0.02	0.01	0.13	0.00	0.04	0.01
	Total		0.04	0.46	0.26	0.00	0.07	0.02
TOTAL			*0.33*	*3.63*	*3.93*	*0.01*	*0.24*	*0.18*
Onsite		2020						
	Off-Road		0.29	3.17	3.67	0.01	0.18	0.16
	Total		0.29	3.17	3.67	0.01	0.18	0.16
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.45	0.13	0.00	0.03	0.01
	Worker		0.02	0.01	0.14	0.00	0.04	0.01
	Total		0.04	0.46	0.26	0.00	0.07	0.02
TOTAL			*0.33*	*3.63*	*3.93*	*0.01*	*0.24*	*0.18*
2 Trenching + P2 Bldg. Const.			*2.69*	*24.85*	*22.49*	*0.04*	*1.81*	*1.36*

2 Building Construction								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2020	Summer					
	Off-Road		2.29	17.43	14.90	0.03	0.95	0.91
	Total		2.29	17.43	14.90	0.03	0.95	0.91
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.68	0.17	0.00	0.04	0.01
	Worker		0.06	0.04	0.45	0.00	0.12	0.03
	Total		0.08	0.72	0.63	0.00	0.16	0.05
TOTAL			*2.37*	*18.15*	*15.52*	*0.03*	*1.11*	*0.96*
Onsite		2020	Winter					
	Off-Road		2.29	17.43	14.90	0.03	0.95	0.91
	Total		2.29	17.43	14.90	0.03	0.95	0.91
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.68	0.19	0.00	0.04	0.01
	Worker		0.07	0.04	0.43	0.00	0.12	0.03
	Total		0.09	0.72	0.62	0.00	0.16	0.05
TOTAL			*2.38*	*18.15*	*15.52*	*0.03*	*1.11*	*0.96*
Onsite		2020						
	Off-Road		2.29	17.43	14.90	0.03	0.95	0.91
	Total		2.29	17.43	14.90	0.03	0.95	0.91
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.68	0.19	0.00	0.04	0.01
	Worker		0.07	0.04	0.45	0.00	0.12	0.03
	Total		0.09	0.72	0.63	0.00	0.16	0.05
TOTAL			*2.38*	*18.15*	*15.52*	*0.03*	*1.11*	*0.96*
1B Bldg. Const. + 2 Bldg. Const.			*4.74*	*39.37*	*34.08*	*0.06*	*2.67*	*2.14*
onst. + 2 Bldg. Const. + 1B Painting + 1B Paving			*29.11*	*52.94*	*49.01*	*0.09*	*3.66*	*2.91*

2 Paving								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2020	Summer					
	Fugitive Dust		1.15	11.59	11.81	0.02	0.66	0.61
	Off-Road		0.15				0.00	0.00
	Total		1.30	11.59	11.81	0.02	0.66	0.61
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.06	0.04	0.43	0.00	0.11	0.03
	Total		0.06	0.04	0.43	0.00	0.11	0.03
TOTAL			*1.36*	*11.62*	*12.23*	*0.02*	*0.77*	*0.64*
Onsite		2020	Winter					
	Fugitive Dust		1.15	11.59	11.81	0.02	0.66	0.61
	Off-Road		0.15				0.00	0.00
	Total		1.30	11.59	11.81	0.02	0.66	0.61
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.06	0.04	0.40	0.00	0.11	0.03
	Total		0.06	0.04	0.40	0.00	0.11	0.03
TOTAL			*1.36*	*11.63*	*12.21*	*0.02*	*0.77*	*0.64*
Onsite		2020						
	Fugitive Dust		1.15	11.59	11.81	0.02	0.66	0.61
	Off-Road		0.15	0.00	0.00	0.00	0.00	0.00
	Total		1.30	11.59	11.81	0.02	0.66	0.61
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.06	0.04	0.43	0.00	0.11	0.03
	Total		0.06	0.04	0.43	0.00	0.11	0.03
TOTAL			*1.36*	*11.63*	*12.23*	*0.02*	*0.77*	*0.64*
2 Paving + 2 Building Construction			*3.74*	*29.78*	*27.76*	*0.05*	*1.88*	*1.59*

2 Architectural Coating								
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		2020	Summer					
	Arch. Coating		3.67				0.00	0.00
	Off-Road		0.24	1.68	1.83	0.00	0.11	0.11
	Total		3.91	1.68	1.83	0.00	0.11	0.11
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.01	0.01	0.09	0.00	0.02	0.01
	Total		0.01	0.01	0.09	0.00	0.02	0.01
TOTAL			*3.92*	*1.69*	*1.92*	*0.00*	*0.13*	*0.12*
Onsite		2020	Winter					
	Arch. Coating		3.67				0.00	0.00
	Off-Road		0.24	1.68	1.83	0.00	0.11	0.11
	Total		3.91	1.68	1.83	0.00	0.11	0.11
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.01	0.01	0.08	0.00	0.02	0.01
	Total		0.01	0.01	0.08	0.00	0.02	0.01
TOTAL			*3.92*	*1.69*	*1.91*	*0.00*	*0.13*	*0.12*
Onsite		2020						
	Arch. Coating		3.67	0.00	0.00	0.00	0.00	0.00
	Off-Road		0.24	1.68	1.83	0.00	0.11	0.11
	Total		3.91	1.68	1.83	0.00	0.11	0.11
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.01	0.01	0.09	0.00	0.02	0.01
	Total		0.01	0.01	0.09	0.00	0.02	0.01
TOTAL			*3.92*	*1.69*	*1.92*	*0.00*	*0.13*	*0.12*
2 Painting + 2 Building Construction			*6.30*	*19.85*	*17.44*	*0.03*	*1.25*	*1.07*
2 Painting + 2 Building Construction + 2 Paving			*7.66*	*31.48*	*29.67*	*0.05*	*2.02*	*1.71*

	MAX DAILY	29.11	84.47	49.01	0.09	12.82	8.31
	Year 2019	8.09	84.47	45.86	0.09	12.82	8.31
	Year 2020	29.11	52.94	49.01	0.09	6.25	3.70
Regional Thresholds		75.00	100.00	550.00	150.00	150.00	55.00
Exceeds Thresholds?		No	No	No	No	No	No

Regional Operation Emissions Worksheet*

*CalEEMod, Version 2016.3.2

Existing Project - 2018 Annual Emissions

Tons Per Year

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.18	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.01	0.01	0.00	0.00	0.00
Mobile	0.14	0.21	1.52	0.00	0.35	0.09
Total	0.32	0.22	1.53	0.00	0.35	0.09

Regional Operation Emissions Worksheet*

*CalEEMod, Version 2016.3.2.25

Existing Project - 2020

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	1.00	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.07	0.06	0.00	0.01	0.01
Mobile	0.95	1.27	10.06	0.03	2.73	0.74
Total	1.96	1.34	10.13	0.03	2.73	0.74

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	1.00	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.07	0.06	0.00	0.01	0.01
Mobile	0.92	1.36	9.99	0.03	2.73	0.74
Total	1.92	1.44	10.07	0.03	2.73	0.74

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	1.00	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.07	0.06	0.00	0.01	0.01
Mobile	0.95	1.36	10.06	0.03	2.73	0.74
Total	1.96	1.44	10.13	0.03	2.73	0.74

Proposed Project - 2020

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	1.05	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.07	0.06	0.00	0.01	0.01
Mobile	1.12	1.53	11.94	0.03	3.27	0.88
Total	2.18	1.60	12.01	0.03	3.27	0.89

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	1.05	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.07	0.06	0.00	0.01	0.01
Mobile	1.08	1.65	11.86	0.03	3.27	0.88
Total	2.14	1.71	11.93	0.03	3.27	0.89

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	1.05	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.07	0.06	0.00	0.01	0.01
Mobile	1.12	1.65	11.94	0.03	3.27	0.88
Total	2.18	1.71	12.01	0.03	3.27	0.89

Net Emissions

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.05	0.00	0.00	0.00	0.00	0.00
Energy	0.00	-0.01	-0.01	0.00	0.00	0.00
Mobile	0.17	0.26	1.88	0.01	0.54	0.15
Total	0.23	0.25	1.88	0.01	0.54	0.15

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.05	0.00	0.00	0.00	0.00	0.00
Energy	0.00	-0.01	-0.01	0.00	0.00	0.00
Mobile	0.17	0.28	1.86	0.01	0.54	0.15
Total	0.22	0.27	1.86	0.01	0.54	0.15

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.05	0.00	0.00	0.00	0.00	0.00
Energy	0.00	-0.01	-0.01	0.00	0.00	0.00
Mobile	0.17	0.28	1.88	0.01	0.54	0.15
Total	0.23	0.27	1.88	0.01	0.54	0.15

Regional Thresholds	55	55	550	150	150	550
Exceeds Thresholds?	No	No	No	No	No	No

GHG Emissions Inventory

Construction

	$MTCO_2e$ Total*
2019 - P1	291
2020 - P1	273
2020 - P2	157
Total Construction	721

*CalEEMod, Version 2016.3.2.25

Operation*

	$MTCO_2e$/Year**				
Proposed Project	Existing Emissions - 2018	Percent of Total	Proposed Emissions - 2020	Percent of Total	Net Emissions
Area	0.002	0.0005%	0.003	0.0005%	0.06%
Energy	104	22%	87	17%	-17
Mobile	332	71%	372	71%	40
Solid Waste	8	2%	10	2%	2
Water	20	4%	20	4%	-1
Amortized Construction Emissions***	N/A	N/A	36	7%	36
Total	465		525		60
County of San Diego Interim Threshold					900
Exceed Threshold?					No

*CalEEMod, Version 2016.3.2.25

** $MTCO_2e$=metric tons of carbon dioxide equivalent.

*** Total construction emissions are amortized over 20 years per San Diego's 2016 Guidance.

Cardiff Existing Operation - San Diego County, Annual

Cardiff Existing Operation - 2020

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	40.47	1000sqft	5.71	40,470.00	0
Other Asphalt Surfaces	31.72	1000sqft	0.73	31,720.00	0
Other Non-Asphalt Surfaces	23.50	1000sqft	0.54	23,500.00	0
Parking Lot	18.31	1000sqft	0.42	18,310.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - CalEEMod Assumptions

Construction Phase -

Vehicle Trips - See CalEEMod Assumptions

Area Coating - See CalEEMod Assumptions

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - See CalEEMod Assumptions

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_Parking	4412	1099
tblFleetMix	HHD	0.02	3.5280e-003
tblFleetMix	LDA	0.59	0.68
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	3.0820e-003
tblFleetMix	LHD2	5.5580e-003	9.0200e-004
tblFleetMix	MCY	6.1810e-003	8.2570e-003
tblFleetMix	MDV	0.11	0.02
tblFleetMix	MH	1.2710e-003	0.00
tblFleetMix	MHD	0.02	2.3700e-003
tblFleetMix	OBUS	1.9020e-003	0.00
tblFleetMix	SBUS	7.4500e-004	1.1800e-004
tblFleetMix	UBUS	2.0240e-003	0.00
tblLandUse	LotAcreage	0.93	5.71
tblSolidWaste	SolidWasteGenerationRate	52.61	16.52
tblVehicleTrips	WD_TR	15.43	14.51
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,173,505.24	1,869,498.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1823	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1700e-003
Energy	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	104.1089	104.1089	3.8800e-003	1.0200e-003	104.5085
Mobile	0.1158	0.1759	1.2816	3.4300e-003	0.3434	2.6400e-003	0.3460	0.0913	2.4400e-003	0.0937	0.0000	311.0229	311.0229	0.0135	0.0000	311.3595
Waste						0.0000	0.0000		0.0000	0.0000	3.3524	0.0000	3.3524	0.1981	0.0000	8.3054
Water						0.0000	0.0000		0.0000	0.0000	0.6614	18.9118	19.5732	3.0400e-003	1.6000e-003	20.1248
Total	**0.2996**	**0.1895**	**1.2941**	**3.5100e-003**	**0.3434**	**3.6800e-003**	**0.3471**	**0.0913**	**3.4800e-003**	**0.0947**	**4.0138**	**434.0456**	**438.0594**	**0.2185**	**2.6200e-003**	**444.3003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1823	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1700e-003
Energy	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	104.1089	104.1089	3.8800e-003	1.0200e-003	104.5085
Mobile	0.1158	0.1759	1.2816	3.4300e-003	0.3434	2.6400e-003	0.3460	0.0913	2.4400e-003	0.0937	0.0000	311.0229	311.0229	0.0135	0.0000	311.3595
Waste						0.0000	0.0000		0.0000	0.0000	3.3524	0.0000	3.3524	0.1981	0.0000	8.3054
Water						0.0000	0.0000		0.0000	0.0000	0.6614	18.9118	19.5732	3.0400e-003	1.6000e-003	20.1248
Total	**0.2996**	**0.1895**	**1.2941**	**3.5100e-003**	**0.3434**	**3.6800e-003**	**0.3471**	**0.0913**	**3.4800e-003**	**0.0947**	**4.0138**	**434.0456**	**438.0594**	**0.2185**	**2.6200e-003**	**444.3003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1158	0.1759	1.2816	3.4300e-003	0.3434	2.6400e-003	0.3460	0.0913	2.4400e-003	0.0937	0.0000	311.0229	311.0229	0.0135	0.0000	311.3595
Unmitigated	0.1158	0.1759	1.2816	3.4300e-003	0.3434	2.6400e-003	0.3460	0.0913	2.4400e-003	0.0937	0.0000	311.0229	311.0229	0.0135	0.0000	311.3595

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	587.22	0.00	0.00	924,845	924,845
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	587.22	0.00	0.00	924,845	924,845

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.682510	0.054118	0.225115	0.020000	0.003082	0.000902	0.002370	0.003528	0.000000	0.000000	0.008257	0.000118	0.000000
Other Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Other Non-Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	89.2506	89.2506	3.5900e-003	7.4000e-004	89.5619
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	89.2506	89.2506	3.5900e-003	7.4000e-004	89.5619
NaturalGas Mitigated	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.8583	14.8583	2.8000e-004	2.7000e-004	14.9466
NaturalGas Unmitigated	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.8583	14.8583	2.8000e-004	2.7000e-004	14.9466

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	278434	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.8583	14.8583	2.8000e-004	2.7000e-004	14.9466
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.5000e-003**	**0.0137**	**0.0115**	**8.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**14.8583**	**14.8583**	**2.8000e-004**	**2.7000e-004**	**14.9466**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	278434	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.8583	14.8583	2.8000e-004	2.7000e-004	14.9466
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.5000e-003**	**0.0137**	**0.0115**	**8.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**14.8583**	**14.8583**	**2.8000e-004**	**2.7000e-004**	**14.9466**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	256985	83.9848	3.3800e-003	7.0000e-004	84.2777
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16112.8	5.2658	2.1000e-004	4.0000e-005	5.2842
Total		**89.2506**	**3.5900e-003**	**7.4000e-004**	**89.5619**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	256985	83.9848	3.3800e-003	7.0000e-004	84.2777
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16112.8	5.2658	2.1000e-004	4.0000e-005	5.2842
Total		**89.2506**	**3.5900e-003**	**7.4000e-004**	**89.5619**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1823	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1700e-003
Unmitigated	0.1823	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0194					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1628					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1700e-003
Total	**0.1823**	**1.0000e-005**	**1.0500e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0400e-003**	**2.0400e-003**	**1.0000e-005**	**0.0000**	**2.1700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0194					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1628					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1700e-003
Total	**0.1823**	**1.0000e-005**	**1.0500e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0400e-003**	**2.0400e-003**	**1.0000e-005**	**0.0000**	**2.1700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.5732	3.0400e-003	1.6000e-003	20.1248
Unmitigated	19.5732	3.0400e-003	1.6000e-003	20.1248

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	1.8695 / 3.01758	19.5732	3.0400e-003	1.6000e-003	20.1248
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**19.5732**	**3.0400e-003**	**1.6000e-003**	**20.1248**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	1.8695 / 3.01758	19.5732	3.0400e-003	1.6000e-003	20.1248
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**19.5732**	**3.0400e-003**	**1.6000e-003**	**20.1248**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.3524	0.1981	0.0000	8.3054
Unmitigated	3.3524	0.1981	0.0000	8.3054

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	16.515	3.3524	0.1981	0.0000	8.3054
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3.3524**	**0.1981**	**0.0000**	**8.3054**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	16.515	3.3524	0.1981	0.0000	8.3054
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3.3524**	**0.1981**	**0.0000**	**8.3054**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cardiff Existing Operation - San Diego County, Summer

Cardiff Existing Operation - 2020

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	40.47	1000sqft	5.71	40,470.00	0
Other Asphalt Surfaces	31.72	1000sqft	0.73	31,720.00	0
Other Non-Asphalt Surfaces	23.50	1000sqft	0.54	23,500.00	0
Parking Lot	18.31	1000sqft	0.42	18,310.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - CalEEMod Assumptions

Construction Phase -

Vehicle Trips - See CalEEMod Assumptions

Area Coating - See CalEEMod Assumptions

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - See CalEEMod Assumptions

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_Parking	4412	1099
tblFleetMix	HHD	0.02	3.5280e-003
tblFleetMix	LDA	0.59	0.68
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	3.0820e-003
tblFleetMix	LHD2	5.5580e-003	9.0200e-004
tblFleetMix	MCY	6.1810e-003	8.2570e-003
tblFleetMix	MDV	0.11	0.02
tblFleetMix	MH	1.2710e-003	0.00
tblFleetMix	MHD	0.02	2.3700e-003
tblFleetMix	OBUS	1.9020e-003	0.00
tblFleetMix	SBUS	7.4500e-004	1.1800e-004
tblFleetMix	UBUS	2.0240e-003	0.00
tblLandUse	LotAcreage	0.93	5.71
tblSolidWaste	SolidWasteGenerationRate	52.61	16.52
tblVehicleTrips	WD_TR	15.43	14.51
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,173,505.24	1,869,498.00
tblWater	SepticTankPercent	10.33	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9995	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Energy	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
Mobile	0.9495	1.2664	10.0550	0.0278	2.7058	0.0203	2.7261	0.7177	0.0188	0.7365		2,778.4143	2,778.4143	0.1157		2,781.3077
Total	**1.9572**	**1.3413**	**10.1295**	**0.0283**	**2.7058**	**0.0260**	**2.7318**	**0.7177**	**0.0245**	**0.7422**		**2,868.1841**	**2,868.1841**	**0.1175**	**1.6500e-003**	**2,871.6125**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9995	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Energy	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
Mobile	0.9495	1.2664	10.0550	0.0278	2.7058	0.0203	2.7261	0.7177	0.0188	0.7365		2,778.4143	2,778.4143	0.1157		2,781.3077
Total	**1.9572**	**1.3413**	**10.1295**	**0.0283**	**2.7058**	**0.0260**	**2.7318**	**0.7177**	**0.0245**	**0.7422**		**2,868.1841**	**2,868.1841**	**0.1175**	**1.6500e-003**	**2,871.6125**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9495	1.2664	10.0550	0.0278	2.7058	0.0203	2.7261	0.7177	0.0188	0.7365		2,778.4143	2,778.4143	0.1157		2,781.3077
Unmitigated	0.9495	1.2664	10.0550	0.0278	2.7058	0.0203	2.7261	0.7177	0.0188	0.7365		2,778.4143	2,778.4143	0.1157		2,781.3077

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	587.22	0.00	0.00	924,845	924,845
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	587.22	0.00	0.00	924,845	924,845

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.682510	0.054118	0.225115	0.020000	0.003082	0.000902	0.002370	0.003528	0.000000	0.000000	0.008257	0.000118	0.000000
Other Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Other Non-Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
NaturalGas Unmitigated	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	762.832	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2300e-003**	**0.0748**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**		**89.7449**	**89.7449**	**1.7200e-003**	**1.6500e-003**	**90.2782**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.762832	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2300e-003**	**0.0748**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**		**89.7449**	**89.7449**	**1.7200e-003**	**1.6500e-003**	**90.2782**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9995	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Unmitigated	0.9995	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1063					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-003	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Total	**0.9995**	**1.1000e-004**	**0.0117**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0266**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1063					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-003	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Total	**0.9995**	**1.1000e-004**	**0.0117**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0266**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cardiff Existing Operation - San Diego County, Winter

Cardiff Existing Operation - 2020

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	40.47	1000sqft	5.71	40,470.00	0
Other Asphalt Surfaces	31.72	1000sqft	0.73	31,720.00	0
Other Non-Asphalt Surfaces	23.50	1000sqft	0.54	23,500.00	0
Parking Lot	18.31	1000sqft	0.42	18,310.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - CalEEMod Assumptions

Construction Phase -

Vehicle Trips - See CalEEMod Assumptions

Area Coating - See CalEEMod Assumptions

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - See CalEEMod Assumptions

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_Parking	4412	1099
tblFleetMix	HHD	0.02	3.5280e-003
tblFleetMix	LDA	0.59	0.68
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	3.0820e-003
tblFleetMix	LHD2	5.5580e-003	9.0200e-004
tblFleetMix	MCY	6.1810e-003	8.2570e-003
tblFleetMix	MDV	0.11	0.02
tblFleetMix	MH	1.2710e-003	0.00
tblFleetMix	MHD	0.02	2.3700e-003
tblFleetMix	OBUS	1.9020e-003	0.00
tblFleetMix	SBUS	7.4500e-004	1.1800e-004
tblFleetMix	UBUS	2.0240e-003	0.00
tblLandUse	LotAcreage	0.93	5.71
tblSolidWaste	SolidWasteGenerationRate	52.61	16.52
tblVehicleTrips	WD_TR	15.43	14.51
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,173,505.24	1,869,498.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9995	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Energy	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
Mobile	0.9168	1.3649	9.9936	0.0262	2.7058	0.0204	2.7262	0.7177	0.0188	0.7366		2,613.8593	2,613.8593	0.1149		2,616.7329
Total	**1.9245**	**1.4398**	**10.0681**	**0.0266**	**2.7058**	**0.0261**	**2.7319**	**0.7177**	**0.0246**	**0.7423**		**2,703.6292**	**2,703.6292**	**0.1167**	**1.6500e-003**	**2,707.0377**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9995	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Energy	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
Mobile	0.9168	1.3649	9.9936	0.0262	2.7058	0.0204	2.7262	0.7177	0.0188	0.7366		2,613.8593	2,613.8593	0.1149		2,616.7329
Total	**1.9245**	**1.4398**	**10.0681**	**0.0266**	**2.7058**	**0.0261**	**2.7319**	**0.7177**	**0.0246**	**0.7423**		**2,703.6292**	**2,703.6292**	**0.1167**	**1.6500e-003**	**2,707.0377**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9168	1.3649	9.9936	0.0262	2.7058	0.0204	2.7262	0.7177	0.0188	0.7366		2,613.8593	2,613.8593	0.1149		2,616.7329
Unmitigated	0.9168	1.3649	9.9936	0.0262	2.7058	0.0204	2.7262	0.7177	0.0188	0.7366		2,613.8593	2,613.8593	0.1149		2,616.7329

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	587.22	0.00	0.00	924,845	924,845
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	587.22	0.00	0.00	924,845	924,845

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.682510	0.054118	0.225115	0.020000	0.003082	0.000902	0.002370	0.003528	0.000000	0.000000	0.008257	0.000118	0.000000
Other Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Other Non-Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
NaturalGas Unmitigated	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	762.832	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2300e-003**	**0.0748**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**		**89.7449**	**89.7449**	**1.7200e-003**	**1.6500e-003**	**90.2782**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.762832	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7449	89.7449	1.7200e-003	1.6500e-003	90.2782
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2300e-003**	**0.0748**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**		**89.7449**	**89.7449**	**1.7200e-003**	**1.6500e-003**	**90.2782**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9995	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Unmitigated	0.9995	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1063					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-003	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Total	**0.9995**	**1.1000e-004**	**0.0117**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0266**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1063					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-003	1.1000e-004	0.0117	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0266
Total	**0.9995**	**1.1000e-004**	**0.0117**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0266**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cardiff Existing Operation - San Diego County, Annual

Cardiff Existing Operation - 2018

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	40.47	1000sqft	5.71	40,465.00	0
Other Asphalt Surfaces	31.72	1000sqft	0.73	31,720.00	0
Other Non-Asphalt Surfaces	23.50	1000sqft	0.54	23,500.00	0
Parking Lot	18.31	1000sqft	0.42	18,310.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - CalEEMod Assumptions

Construction Phase -

Vehicle Trips - See CalEEMod Assumptions

Area Coating - See CalEEMod Assumptions

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - See CalEEMod Assumptions

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblFleetMix	HHD	0.02	3.5280e-003
tblFleetMix	LDA	0.57	0.68
tblFleetMix	LDT1	0.05	0.05
tblFleetMix	LDT2	0.19	0.23
tblFleetMix	LHD1	0.02	3.0820e-003
tblFleetMix	LHD2	5.6460e-003	9.0200e-004
tblFleetMix	MCY	6.3850e-003	8.2570e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	1.4520e-003	0.00
tblFleetMix	MHD	0.01	2.3700e-003
tblFleetMix	OBUS	1.8710e-003	0.00
tblFleetMix	SBUS	7.3900e-004	1.1800e-004
tblFleetMix	UBUS	2.1730e-003	0.00
tblLandUse	LandUseSquareFeet	40,470.00	40,465.00
tblLandUse	LotAcreage	0.93	5.71
tblSolidWaste	SolidWasteGenerationRate	52.61	16.52
tblVehicleTrips	WD_TR	15.43	14.51
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,173,505.24	1,869,498.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1842	1.0000e-005	1.0600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1800e-003
Energy	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	104.0967	104.0967	3.8800e-003	1.0200e-003	104.4962
Mobile	0.1355	0.2103	1.5164	3.6700e-003	0.3434	2.8000e-003	0.3462	0.0913	2.6000e-003	0.0938	0.0000	332.0137	332.0137	0.0154	0.0000	332.3974
Waste						0.0000	0.0000		0.0000	0.0000	3.3534	0.0000	3.3534	0.1982	0.0000	8.3079
Water						0.0000	0.0000		0.0000	0.0000	0.6614	18.9118	19.5732	3.0400e-003	1.6000e-003	20.1248
Total	**0.3212**	**0.2240**	**1.5289**	**3.7500e-003**	**0.3434**	**3.8400e-003**	**0.3472**	**0.0913**	**3.6400e-003**	**0.0949**	**4.0148**	**455.0242**	**459.0390**	**0.2205**	**2.6200e-003**	**465.3285**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1842	1.0000e-005	1.0600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1800e-003
Energy	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	104.0967	104.0967	3.8800e-003	1.0200e-003	104.4962
Mobile	0.1355	0.2103	1.5164	3.6700e-003	0.3434	2.8000e-003	0.3462	0.0913	2.6000e-003	0.0938	0.0000	332.0137	332.0137	0.0154	0.0000	332.3974
Waste						0.0000	0.0000		0.0000	0.0000	3.3534	0.0000	3.3534	0.1982	0.0000	8.3079
Water						0.0000	0.0000		0.0000	0.0000	0.6614	18.9118	19.5732	3.0400e-003	1.6000e-003	20.1248
Total	**0.3212**	**0.2240**	**1.5289**	**3.7500e-003**	**0.3434**	**3.8400e-003**	**0.3472**	**0.0913**	**3.6400e-003**	**0.0949**	**4.0148**	**455.0242**	**459.0390**	**0.2205**	**2.6200e-003**	**465.3285**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1355	0.2103	1.5164	3.6700e-003	0.3434	2.8000e-003	0.3462	0.0913	2.6000e-003	0.0938	0.0000	332.0137	332.0137	0.0154	0.0000	332.3974
Unmitigated	0.1355	0.2103	1.5164	3.6700e-003	0.3434	2.8000e-003	0.3462	0.0913	2.6000e-003	0.0938	0.0000	332.0137	332.0137	0.0154	0.0000	332.3974

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	587.22	0.00	0.00	924,845	924,845
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	587.22	0.00	0.00	924,845	924,845

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.682510	0.054118	0.225115	0.020000	0.003082	0.000902	0.002370	0.003528	0.000000	0.000000	0.008257	0.000118	0.000000
Other Asphalt Surfaces	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452
Other Non-Asphalt Surfaces	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452
Parking Lot	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	89.2402	89.2402	3.5900e-003	7.4000e-004	89.5515
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	89.2402	89.2402	3.5900e-003	7.4000e-004	89.5515
NaturalGas Mitigated	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.8564	14.8564	2.8000e-004	2.7000e-004	14.9447
NaturalGas Unmitigated	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.8564	14.8564	2.8000e-004	2.7000e-004	14.9447

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	278399	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.8564	14.8564	2.8000e-004	2.7000e-004	14.9447
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.5000e-003**	**0.0137**	**0.0115**	**8.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**14.8564**	**14.8564**	**2.8000e-004**	**2.7000e-004**	**14.9447**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	278399	1.5000e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.8564	14.8564	2.8000e-004	2.7000e-004	14.9447
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.5000e-003**	**0.0137**	**0.0115**	**8.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**14.8564**	**14.8564**	**2.8000e-004**	**2.7000e-004**	**14.9447**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	256953	83.9744	3.3800e-003	7.0000e-004	84.2673
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16112.8	5.2658	2.1000e-004	4.0000e-005	5.2842
Total		**89.2402**	**3.5900e-003**	**7.4000e-004**	**89.5515**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	256953	83.9744	3.3800e-003	7.0000e-004	84.2673
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	16112.8	5.2658	2.1000e-004	4.0000e-005	5.2842
Total		**89.2402**	**3.5900e-003**	**7.4000e-004**	**89.5515**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1842	1.0000e-005	1.0600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1800e-003
Unmitigated	0.1842	1.0000e-005	1.0600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1628					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1800e-003
Total	**0.1842**	**1.0000e-005**	**1.0600e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0400e-003**	**2.0400e-003**	**1.0000e-005**	**0.0000**	**2.1800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1628					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0600e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0400e-003	2.0400e-003	1.0000e-005	0.0000	2.1800e-003
Total	**0.1842**	**1.0000e-005**	**1.0600e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0400e-003**	**2.0400e-003**	**1.0000e-005**	**0.0000**	**2.1800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.5732	3.0400e-003	1.6000e-003	20.1248
Unmitigated	19.5732	3.0400e-003	1.6000e-003	20.1248

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	1.8695 / 3.01758	19.5732	3.0400e-003	1.6000e-003	20.1248
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**19.5732**	**3.0400e-003**	**1.6000e-003**	**20.1248**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	1.8695 / 3.01758	19.5732	3.0400e-003	1.6000e-003	20.1248
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**19.5732**	**3.0400e-003**	**1.6000e-003**	**20.1248**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.3534	0.1982	0.0000	8.3079
Unmitigated	3.3534	0.1982	0.0000	8.3079

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	16.52	3.3534	0.1982	0.0000	8.3079
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3.3534**	**0.1982**	**0.0000**	**8.3079**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	16.52	3.3534	0.1982	0.0000	8.3079
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3.3534**	**0.1982**	**0.0000**	**8.3079**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cardiff Existing Operation - San Diego County, Summer

Cardiff Existing Operation - 2018

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	40.47	1000sqft	5.71	40,465.00	0
Other Asphalt Surfaces	31.72	1000sqft	0.73	31,720.00	0
Other Non-Asphalt Surfaces	23.50	1000sqft	0.54	23,500.00	0
Parking Lot	18.31	1000sqft	0.42	18,310.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - CalEEMod Assumptions

Construction Phase -

Vehicle Trips - See CalEEMod Assumptions

Area Coating - See CalEEMod Assumptions

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - See CalEEMod Assumptions

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblFleetMix	HHD	0.02	3.5280e-003
tblFleetMix	LDA	0.57	0.68
tblFleetMix	LDT1	0.05	0.05
tblFleetMix	LDT2	0.19	0.23
tblFleetMix	LHD1	0.02	3.0820e-003
tblFleetMix	LHD2	5.6460e-003	9.0200e-004
tblFleetMix	MCY	6.3850e-003	8.2570e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	1.4520e-003	0.00
tblFleetMix	MHD	0.01	2.3700e-003
tblFleetMix	OBUS	1.8710e-003	0.00
tblFleetMix	SBUS	7.3900e-004	1.1800e-004
tblFleetMix	UBUS	2.1730e-003	0.00
tblLandUse	LandUseSquareFeet	40,470.00	40,465.00
tblLandUse	LotAcreage	0.93	5.71
tblSolidWaste	SolidWasteGenerationRate	52.61	16.52
tblVehicleTrips	WD_TR	15.43	14.51
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,173,505.24	1,869,498.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0099	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Energy	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
Mobile	1.1083	1.5118	11.8656	0.0297	2.7058	0.0215	2.7273	0.7177	0.0200	0.7377		2,966.2988	2,966.2988	0.1319		2,969.5970
Total	**2.1264**	**1.5866**	**11.9402**	**0.0302**	**2.7058**	**0.0273**	**2.7330**	**0.7177**	**0.0257**	**0.7434**		**3,056.0576**	**3,056.0576**	**0.1337**	**1.6500e-003**	**3,059.8907**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0099	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Energy	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
Mobile	1.1083	1.5118	11.8656	0.0297	2.7058	0.0215	2.7273	0.7177	0.0200	0.7377		2,966.2988	2,966.2988	0.1319		2,969.5970
Total	**2.1264**	**1.5866**	**11.9402**	**0.0302**	**2.7058**	**0.0273**	**2.7330**	**0.7177**	**0.0257**	**0.7434**		**3,056.0576**	**3,056.0576**	**0.1337**	**1.6500e-003**	**3,059.8907**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1083	1.5118	11.8656	0.0297	2.7058	0.0215	2.7273	0.7177	0.0200	0.7377		2,966.2988	2,966.2988	0.1319		2,969.5970
Unmitigated	1.1083	1.5118	11.8656	0.0297	2.7058	0.0215	2.7273	0.7177	0.0200	0.7377		2,966.2988	2,966.2988	0.1319		2,969.5970

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	587.22	0.00	0.00	924,845	924,845
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	587.22	0.00	0.00	924,845	924,845

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.682510	0.054118	0.225115	0.020000	0.003082	0.000902	0.002370	0.003528	0.000000	0.000000	0.008257	0.000118	0.000000
Other Asphalt Surfaces	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452
Other Non-Asphalt Surfaces	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452
Parking Lot	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
NaturalGas Unmitigated	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	762.738	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2300e-003**	**0.0748**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**		**89.7338**	**89.7338**	**1.7200e-003**	**1.6500e-003**	**90.2671**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.762738	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2300e-003**	**0.0748**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**		**89.7338**	**89.7338**	**1.7200e-003**	**1.6500e-003**	**90.2671**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0099	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Unmitigated	1.0099	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1168					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1300e-003	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Total	**1.0099**	**1.1000e-004**	**0.0118**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0267**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1168					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1300e-003	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Total	**1.0099**	**1.1000e-004**	**0.0118**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0267**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cardiff Existing Operation - San Diego County, Winter

Cardiff Existing Operation - 2018

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	40.47	1000sqft	5.71	40,465.00	0
Other Asphalt Surfaces	31.72	1000sqft	0.73	31,720.00	0
Other Non-Asphalt Surfaces	23.50	1000sqft	0.54	23,500.00	0
Parking Lot	18.31	1000sqft	0.42	18,310.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - CalEEMod Assumptions

Construction Phase -

Vehicle Trips - See CalEEMod Assumptions

Area Coating - See CalEEMod Assumptions

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - See CalEEMod Assumptions

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblFleetMix	HHD	0.02	3.5280e-003
tblFleetMix	LDA	0.57	0.68
tblFleetMix	LDT1	0.05	0.05
tblFleetMix	LDT2	0.19	0.23
tblFleetMix	LHD1	0.02	3.0820e-003
tblFleetMix	LHD2	5.6460e-003	9.0200e-004
tblFleetMix	MCY	6.3850e-003	8.2570e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	1.4520e-003	0.00
tblFleetMix	MHD	0.01	2.3700e-003
tblFleetMix	OBUS	1.8710e-003	0.00
tblFleetMix	SBUS	7.3900e-004	1.1800e-004
tblFleetMix	UBUS	2.1730e-003	0.00
tblLandUse	LandUseSquareFeet	40,470.00	40,465.00
tblLandUse	LotAcreage	0.93	5.71
tblSolidWaste	SolidWasteGenerationRate	52.61	16.52
tblVehicleTrips	WD_TR	15.43	14.51
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,173,505.24	1,869,498.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0099	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Energy	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
Mobile	1.0760	1.6335	11.8366	0.0280	2.7058	0.0216	2.7274	0.7177	0.0200	0.7378		2,790.3250	2,790.3250	0.1311		2,793.6017
Total	**2.0941**	**1.7084**	**11.9112**	**0.0284**	**2.7058**	**0.0273**	**2.7331**	**0.7177**	**0.0258**	**0.7435**		**2,880.0838**	**2,880.0838**	**0.1329**	**1.6500e-003**	**2,883.8955**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0099	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Energy	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
Mobile	1.0760	1.6335	11.8366	0.0280	2.7058	0.0216	2.7274	0.7177	0.0200	0.7378		2,790.3250	2,790.3250	0.1311		2,793.6017
Total	**2.0941**	**1.7084**	**11.9112**	**0.0284**	**2.7058**	**0.0273**	**2.7331**	**0.7177**	**0.0258**	**0.7435**		**2,880.0838**	**2,880.0838**	**0.1329**	**1.6500e-003**	**2,883.8955**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0760	1.6335	11.8366	0.0280	2.7058	0.0216	2.7274	0.7177	0.0200	0.7378		2,790.3250	2,790.3250	0.1311		2,793.6017
Unmitigated	1.0760	1.6335	11.8366	0.0280	2.7058	0.0216	2.7274	0.7177	0.0200	0.7378		2,790.3250	2,790.3250	0.1311		2,793.6017

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	587.22	0.00	0.00	924,845	924,845
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	587.22	0.00	0.00	924,845	924,845

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.682510	0.054118	0.225115	0.020000	0.003082	0.000902	0.002370	0.003528	0.000000	0.000000	0.008257	0.000118	0.000000
Other Asphalt Surfaces	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452
Other Non-Asphalt Surfaces	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452
Parking Lot	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
NaturalGas Unmitigated	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	762.738	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2300e-003**	**0.0748**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**		**89.7338**	**89.7338**	**1.7200e-003**	**1.6500e-003**	**90.2671**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.762738	8.2300e-003	0.0748	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003		89.7338	89.7338	1.7200e-003	1.6500e-003	90.2671
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.2300e-003**	**0.0748**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**		**89.7338**	**89.7338**	**1.7200e-003**	**1.6500e-003**	**90.2671**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0099	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Unmitigated	1.0099	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1168					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1300e-003	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Total	**1.0099**	**1.1000e-004**	**0.0118**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0267**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1168					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1300e-003	1.1000e-004	0.0118	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0250	0.0250	7.0000e-005		0.0267
Total	**1.0099**	**1.1000e-004**	**0.0118**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0250**	**0.0250**	**7.0000e-005**		**0.0267**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cardiff ES Phase 1 Construction - San Diego County, Annual

Cardiff ES Phase 1 Construction

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	34.99	1000sqft	3.28	34,990.00	0
Other Non-Asphalt Surfaces	53.49	1000sqft	1.23	53,490.00	0
Parking Lot	12.71	1000sqft	0.29	12,710.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - Haul phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading - See CalEEMod Assumptions

Architectural Coating - See CalEEmod Assumptions

Construction Off-road Equipment Mitigation - SDAPCD Rule 55

Vehicle Trips -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	17,495.00	19,170.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	17,495.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	52,485.00	57,509.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	52,485.00	0.00
tblArchitecturalCoating	ConstArea_Parking	3,972.00	763.00
tblArchitecturalCoating	ConstArea_Parking	3,972.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	8.00	3.00
tblConstructionPhase	NumDays	18.00	7.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	230.00	4.00
tblConstructionPhase	NumDays	18.00	10.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	18.00	6.00
tblConstructionPhase	NumDays	230.00	251.00
tblConstructionPhase	NumDays	18.00	14.00
tblConstructionPhase	NumDays	18.00	16.00
tblGrading	AcresOfGrading	1.50	0.00
tblGrading	AcresOfGrading	7.50	0.00
tblGrading	AcresOfGrading	7.50	4.80
tblGrading	MaterialExported	0.00	896.00
tblLandUse	LotAcreage	0.80	3.28
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	118.00	153.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	17.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	43.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2567	2.5323	1.7279	3.2200e-003	0.3241	0.1319	0.4560	0.1639	0.1227	0.2866	0.0000	289.2538	289.2538	0.0695	0.0000	290.9900
2020	0.3892	1.8703	1.6522	3.0900e-003	0.0399	0.0997	0.1396	0.0108	0.0938	0.1046	0.0000	271.9159	271.9159	0.0546	0.0000	273.2819
Maximum	**0.3892**	**2.5323**	**1.7279**	**3.2200e-003**	**0.3241**	**0.1319**	**0.4560**	**0.1639**	**0.1227**	**0.2866**	**0.0000**	**289.2538**	**289.2538**	**0.0695**	**0.0000**	**290.9900**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2567	2.5323	1.7279	3.2200e-003	0.1528	0.1319	0.2846	0.0740	0.1227	0.1966	0.0000	289.2535	289.2535	0.0695	0.0000	290.9897
2020	0.3892	1.8703	1.6522	3.0900e-003	0.0369	0.0997	0.1367	0.0101	0.0938	0.1038	0.0000	271.9156	271.9156	0.0546	0.0000	273.2816
Maximum	**0.3892**	**2.5323**	**1.7279**	**3.2200e-003**	**0.1528**	**0.1319**	**0.2846**	**0.0740**	**0.1227**	**0.1966**	**0.0000**	**289.2535**	**289.2535**	**0.0695**	**0.0000**	**290.9897**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**47.89**	**0.00**	**29.27**	**51.89**	**0.00**	**23.18**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-19-2019	9-18-2019	1.7583	1.7583
2	9-19-2019	12-18-2019	0.8433	0.8433
3	12-19-2019	3-18-2020	0.7775	0.7775
4	3-19-2020	6-18-2020	0.7740	0.7740
5	6-19-2020	9-18-2020	0.8360	0.8360
		Highest	1.7583	1.7583

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1A Demolition	Demolition	6/19/2019	7/20/2019	5	23	
2	1A Demo Haul	Demolition	6/19/2019	7/19/2019	5	23	
3	1A Site Preparation	Site Preparation	6/26/2019	7/2/2019	5	5	
4	1A Grading	Grading	7/3/2019	7/5/2019	5	3	
5	1A Trenching	Trenching	7/8/2019	7/11/2019	5	4	
6	1A Concrete Curb & Gutter	Paving	7/12/2019	7/22/2019	5	7	
7	1B Site Preparation	Site Preparation	7/21/2019	8/9/2019	5	15	
8	1A Canopy Installation	Building Construction	7/23/2019	7/26/2019	5	4	
9	1A Paving	Paving	7/29/2019	8/9/2019	5	10	
10	1B Rough Grading	Grading	8/11/2019	8/30/2019	5	15	
11	1B Grading Haul	Grading	8/11/2019	8/30/2019	5	15	
12	1A Landscaping	Architectural Coating	8/11/2019	8/19/2019	5	6	
13	1B Trenching	Trenching	8/15/2019	9/4/2019	5	15	
14	1B Building Construction	Building Construction	9/5/2019	8/20/2020	5	251	
15	1B Asphalt Paving	Paving	8/1/2020	8/20/2020	5	14	
16	1B Architectural Coating	Architectural Coating	8/1/2020	8/24/2020	5	16	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.52

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
1A Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
1A Demolition	Excavators	3	8.00	158	0.38
1A Demolition	Rubber Tired Dozers	2	8.00	247	0.40
1A Demo Haul	Concrete/Industrial Saws	0	8.00	81	0.73
1A Demo Haul	Excavators	0	8.00	158	0.38
1A Demo Haul	Rubber Tired Dozers	0	8.00	247	0.40
1A Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
1A Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
1A Grading	Excavators	1	8.00	158	0.38
1A Grading	Graders	1	8.00	187	0.41
1A Grading	Rubber Tired Dozers	1	8.00	247	0.40
1A Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
1A Trenching	Skid Steer Loaders	1	8.00	65	0.37
1A Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1A Concrete Curb & Gutter	Cement and Mortar Mixers	2	6.00	9	0.56
1A Concrete Curb & Gutter	Pavers	1	8.00	130	0.42
1A Concrete Curb & Gutter	Paving Equipment	2	6.00	132	0.36
1A Concrete Curb & Gutter	Rollers	2	6.00	80	0.38
1A Concrete Curb & Gutter	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
1B Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
1A Canopy Installation	Cranes	0	7.00	231	0.29
1A Canopy Installation	Forklifts	3	8.00	89	0.20

1A Canopy Installation	Generator Sets	0	8.00	84	0.74
1A Canopy Installation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
1A Canopy Installation	Welders	0	8.00	46	0.45
1A Paving	Cement and Mortar Mixers	2	6.00	9	0.56
1A Paving	Pavers	1	8.00	130	0.42
1A Paving	Paving Equipment	2	6.00	132	0.36
1A Paving	Rollers	2	6.00	80	0.38
1A Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Rough Grading	Excavators	1	8.00	158	0.38
1B Rough Grading	Graders	1	8.00	187	0.41
1B Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
1B Rough Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
1B Grading Haul	Excavators	1	8.00	158	0.38
1B Grading Haul	Graders	1	8.00	187	0.41
1B Grading Haul	Rubber Tired Dozers	1	8.00	247	0.40
1B Grading Haul	Tractors/Loaders/Backhoes	3	8.00	97	0.37
1A Landscaping	Air Compressors	0	6.00	78	0.48
1B Trenching	Skid Steer Loaders	1	8.00	65	0.37
1B Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Building Construction	Cranes	1	7.00	231	0.29
1B Building Construction	Forklifts	3	8.00	89	0.20
1B Building Construction	Generator Sets	1	8.00	84	0.74
1B Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
1B Building Construction	Welders	1	8.00	46	0.45
1B Asphalt Paving	Cement and Mortar Mixers	2	6.00	9	0.56
1B Asphalt Paving	Pavers	1	8.00	130	0.42
1B Asphalt Paving	Paving Equipment	2	6.00	132	0.36
1B Asphalt Paving	Rollers	2	6.00	80	0.38
1B Asphalt Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
1A Demolition	6	15.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Demo Haul	0	0.00	0.00	153.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Site Preparation	7	18.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Grading	6	15.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Trenching	2	5.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Concrete Curb & Gutter	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Site Preparation	7	18.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Canopy Installation	4	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Rough Grading	6	15.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Grading Haul	6	0.00	0.00	112.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Landscaping	0	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Trenching	2	5.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Building Construction	9	43.00	17.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Asphalt Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 1A Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0404	0.4115	0.2537	4.5000e-004		0.0206	0.0206		0.0192	0.0192	0.0000	39.8203	39.8203	0.0111	0.0000	40.0972
Total	**0.0404**	**0.4115**	**0.2537**	**4.5000e-004**		**0.0206**	**0.0206**		**0.0192**	**0.0192**	**0.0000**	**39.8203**	**39.8203**	**0.0111**	**0.0000**	**40.0972**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2000e-004	5.7700e-003	1.5500e-003	1.0000e-005	3.1000e-004	4.0000e-005	3.5000e-004	9.0000e-005	4.0000e-005	1.3000e-004	0.0000	1.2221	1.2221	1.0000e-004	0.0000	1.2246
Worker	6.8000e-004	5.2000e-004	5.0500e-003	1.0000e-005	1.3800e-003	1.0000e-005	1.3900e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.2912	1.2912	4.0000e-005	0.0000	1.2922
Total	**9.0000e-004**	**6.2900e-003**	**6.6000e-003**	**2.0000e-005**	**1.6900e-003**	**5.0000e-005**	**1.7400e-003**	**4.6000e-004**	**5.0000e-005**	**5.1000e-004**	**0.0000**	**2.5133**	**2.5133**	**1.4000e-004**	**0.0000**	**2.5168**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0404	0.4115	0.2537	4.5000e-004		0.0206	0.0206		0.0192	0.0192	0.0000	39.8202	39.8202	0.0111	0.0000	40.0972
Total	**0.0404**	**0.4115**	**0.2537**	**4.5000e-004**		**0.0206**	**0.0206**		**0.0192**	**0.0192**	**0.0000**	**39.8202**	**39.8202**	**0.0111**	**0.0000**	**40.0972**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2000e-004	5.7700e-003	1.5500e-003	1.0000e-005	2.9000e-004	4.0000e-005	3.3000e-004	8.0000e-005	4.0000e-005	1.2000e-004	0.0000	1.2221	1.2221	1.0000e-004	0.0000	1.2246
Worker	6.8000e-004	5.2000e-004	5.0500e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.2912	1.2912	4.0000e-005	0.0000	1.2922
Total	**9.0000e-004**	**6.2900e-003**	**6.6000e-003**	**2.0000e-005**	**1.5700e-003**	**5.0000e-005**	**1.6200e-003**	**4.2000e-004**	**5.0000e-005**	**4.7000e-004**	**0.0000**	**2.5133**	**2.5133**	**1.4000e-004**	**0.0000**	**2.5168**

3.3 1A Demo Haul - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0130	0.0000	0.0130	1.9600e-003	0.0000	1.9600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0130**	**0.0000**	**0.0130**	**1.9600e-003**	**0.0000**	**1.9600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.7000e-004	0.0234	5.1100e-003	6.0000e-005	1.3100e-003	9.0000e-005	1.4000e-003	3.6000e-004	8.0000e-005	4.4000e-004	0.0000	5.9639	5.9639	5.4000e-004	0.0000	5.9774
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7000e-004**	**0.0234**	**5.1100e-003**	**6.0000e-005**	**1.3100e-003**	**9.0000e-005**	**1.4000e-003**	**3.6000e-004**	**8.0000e-005**	**4.4000e-004**	**0.0000**	**5.9639**	**5.9639**	**5.4000e-004**	**0.0000**	**5.9774**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.5400e-003	0.0000	5.5400e-003	8.4000e-004	0.0000	8.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.5400e-003**	**0.0000**	**5.5400e-003**	**8.4000e-004**	**0.0000**	**8.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.7000e-004	0.0234	5.1100e-003	6.0000e-005	1.2200e-003	9.0000e-005	1.3100e-003	3.4000e-004	8.0000e-005	4.2000e-004	0.0000	5.9639	5.9639	5.4000e-004	0.0000	5.9774
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7000e-004**	**0.0234**	**5.1100e-003**	**6.0000e-005**	**1.2200e-003**	**9.0000e-005**	**1.3100e-003**	**3.4000e-004**	**8.0000e-005**	**4.2000e-004**	**0.0000**	**5.9639**	**5.9639**	**5.4000e-004**	**0.0000**	**5.9774**

3.4 1A Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1139	0.0552	9.0000e-005		5.9800e-003	5.9800e-003		5.5000e-003	5.5000e-003	0.0000	8.5422	8.5422	2.7000e-003	0.0000	8.6097
Total	**0.0108**	**0.1139**	**0.0552**	**9.0000e-005**	**0.0452**	**5.9800e-003**	**0.0512**	**0.0248**	**5.5000e-003**	**0.0303**	**0.0000**	**8.5422**	**8.5422**	**2.7000e-003**	**0.0000**	**8.6097**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	1.2600e-003	3.4000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2657	0.2657	2.0000e-005	0.0000	0.2662
Worker	1.8000e-004	1.4000e-004	1.3200e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3368	0.3368	1.0000e-005	0.0000	0.3371
Total	**2.3000e-004**	**1.4000e-003**	**1.6600e-003**	**0.0000**	**4.3000e-004**	**1.0000e-005**	**4.4000e-004**	**1.2000e-004**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**0.6025**	**0.6025**	**3.0000e-005**	**0.0000**	**0.6033**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0193	0.0000	0.0193	0.0106	0.0000	0.0106	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1139	0.0552	9.0000e-005		5.9800e-003	5.9800e-003		5.5000e-003	5.5000e-003	0.0000	8.5422	8.5422	2.7000e-003	0.0000	8.6097
Total	**0.0108**	**0.1139**	**0.0552**	**9.0000e-005**	**0.0193**	**5.9800e-003**	**0.0253**	**0.0106**	**5.5000e-003**	**0.0161**	**0.0000**	**8.5422**	**8.5422**	**2.7000e-003**	**0.0000**	**8.6097**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	1.2600e-003	3.4000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2657	0.2657	2.0000e-005	0.0000	0.2662
Worker	1.8000e-004	1.4000e-004	1.3200e-003	0.0000	3.3000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3368	0.3368	1.0000e-005	0.0000	0.3371
Total	**2.3000e-004**	**1.4000e-003**	**1.6600e-003**	**0.0000**	**3.9000e-004**	**1.0000e-005**	**4.1000e-004**	**1.1000e-004**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**0.6025**	**0.6025**	**3.0000e-005**	**0.0000**	**0.6033**

3.5 1A Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.0300e-003	0.0000	9.0300e-003	4.9700e-003	0.0000	4.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8700e-003	0.0425	0.0244	4.0000e-005		2.1000e-003	2.1000e-003		1.9300e-003	1.9300e-003	0.0000	3.9963	3.9963	1.2600e-003	0.0000	4.0280
Total	**3.8700e-003**	**0.0425**	**0.0244**	**4.0000e-005**	**9.0300e-003**	**2.1000e-003**	**0.0111**	**4.9700e-003**	**1.9300e-003**	**6.9000e-003**	**0.0000**	**3.9963**	**3.9963**	**1.2600e-003**	**0.0000**	**4.0280**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	7.5000e-004	2.0000e-004	0.0000	4.0000e-005	1.0000e-005	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1594	0.1594	1.0000e-005	0.0000	0.1597
Worker	9.0000e-005	7.0000e-005	6.6000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1684	0.1684	1.0000e-005	0.0000	0.1686
Total	**1.2000e-004**	**8.2000e-004**	**8.6000e-004**	**0.0000**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.3278**	**0.3278**	**2.0000e-005**	**0.0000**	**0.3283**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8600e-003	0.0000	3.8600e-003	2.1200e-003	0.0000	2.1200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8700e-003	0.0425	0.0244	4.0000e-005		2.1000e-003	2.1000e-003		1.9300e-003	1.9300e-003	0.0000	3.9963	3.9963	1.2600e-003	0.0000	4.0279
Total	**3.8700e-003**	**0.0425**	**0.0244**	**4.0000e-005**	**3.8600e-003**	**2.1000e-003**	**5.9600e-003**	**2.1200e-003**	**1.9300e-003**	**4.0500e-003**	**0.0000**	**3.9963**	**3.9963**	**1.2600e-003**	**0.0000**	**4.0279**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	7.5000e-004	2.0000e-004	0.0000	4.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1594	0.1594	1.0000e-005	0.0000	0.1597
Worker	9.0000e-005	7.0000e-005	6.6000e-004	0.0000	1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.1684	0.1684	1.0000e-005	0.0000	0.1686
Total	**1.2000e-004**	**8.2000e-004**	**8.6000e-004**	**0.0000**	**2.1000e-004**	**1.0000e-005**	**2.1000e-004**	**5.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.3278**	**0.3278**	**2.0000e-005**	**0.0000**	**0.3283**

3.6 1A Trenching - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3000e-004	6.9300e-003	7.3900e-003	1.0000e-005		4.2000e-004	4.2000e-004		3.8000e-004	3.8000e-004	0.0000	0.9292	0.9292	2.9000e-004	0.0000	0.9366
Total	**6.3000e-004**	**6.9300e-003**	**7.3900e-003**	**1.0000e-005**		**4.2000e-004**	**4.2000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**0.9292**	**0.9292**	**2.9000e-004**	**0.0000**	**0.9366**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.0000e-003	2.7000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	2.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2125	0.2125	2.0000e-005	0.0000	0.2130
Worker	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0749	0.0749	0.0000	0.0000	0.0749
Total	**8.0000e-005**	**1.0300e-003**	**5.6000e-004**	**0.0000**	**1.3000e-004**	**1.0000e-005**	**1.4000e-004**	**4.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.2874**	**0.2874**	**2.0000e-005**	**0.0000**	**0.2879**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3000e-004	6.9300e-003	7.3900e-003	1.0000e-005		4.2000e-004	4.2000e-004		3.8000e-004	3.8000e-004	0.0000	0.9292	0.9292	2.9000e-004	0.0000	0.9366
Total	**6.3000e-004**	**6.9300e-003**	**7.3900e-003**	**1.0000e-005**		**4.2000e-004**	**4.2000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**0.9292**	**0.9292**	**2.9000e-004**	**0.0000**	**0.9366**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.0000e-003	2.7000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2125	0.2125	2.0000e-005	0.0000	0.2130
Worker	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0749	0.0749	0.0000	0.0000	0.0749
Total	**8.0000e-005**	**1.0300e-003**	**5.6000e-004**	**0.0000**	**1.2000e-004**	**1.0000e-005**	**1.3000e-004**	**3.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.2874**	**0.2874**	**2.0000e-005**	**0.0000**	**0.2879**

3.7 1A Concrete Curb & Gutter - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4400e-003	0.0447	0.0431	7.0000e-005		2.5200e-003	2.5200e-003		2.3200e-003	2.3200e-003	0.0000	5.8528	5.8528	1.8000e-003	0.0000	5.8978
Paving	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8200e-003**	**0.0447**	**0.0431**	**7.0000e-005**		**2.5200e-003**	**2.5200e-003**		**2.3200e-003**	**2.3200e-003**	**0.0000**	**5.8528**	**5.8528**	**1.8000e-003**	**0.0000**	**5.8978**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.0500e-003	1.0000e-005	5.6000e-004	0.0000	5.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5240	0.5240	2.0000e-005	0.0000	0.5244
Total	**2.8000e-004**	**2.1000e-004**	**2.0500e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.7000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.5240**	**0.5240**	**2.0000e-005**	**0.0000**	**0.5244**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4400e-003	0.0447	0.0431	7.0000e-005		2.5200e-003	2.5200e-003		2.3200e-003	2.3200e-003	0.0000	5.8528	5.8528	1.8000e-003	0.0000	5.8978
Paving	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8200e-003**	**0.0447**	**0.0431**	**7.0000e-005**		**2.5200e-003**	**2.5200e-003**		**2.3200e-003**	**2.3200e-003**	**0.0000**	**5.8528**	**5.8528**	**1.8000e-003**	**0.0000**	**5.8978**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.0500e-003	1.0000e-005	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5240	0.5240	2.0000e-005	0.0000	0.5244
Total	**2.8000e-004**	**2.1000e-004**	**2.0500e-003**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.5240**	**0.5240**	**2.0000e-005**	**0.0000**	**0.5244**

3.8 1B Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1355	0.0000	0.1355	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0325	0.3418	0.1655	2.8000e-004		0.0179	0.0179		0.0165	0.0165	0.0000	25.6265	25.6265	8.1100e-003	0.0000	25.8292
Total	**0.0325**	**0.3418**	**0.1655**	**2.8000e-004**	**0.1355**	**0.0179**	**0.1534**	**0.0745**	**0.0165**	**0.0910**	**0.0000**	**25.6265**	**25.6265**	**8.1100e-003**	**0.0000**	**25.8292**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	3.7700e-003	1.0100e-003	1.0000e-005	2.0000e-004	3.0000e-005	2.3000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7970	0.7970	6.0000e-005	0.0000	0.7986
Worker	5.3000e-004	4.1000e-004	3.9500e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	1.0105	1.0105	3.0000e-005	0.0000	1.0113
Total	**6.7000e-004**	**4.1800e-003**	**4.9600e-003**	**2.0000e-005**	**1.2800e-003**	**4.0000e-005**	**1.3200e-003**	**3.5000e-004**	**3.0000e-005**	**3.7000e-004**	**0.0000**	**1.8075**	**1.8075**	**9.0000e-005**	**0.0000**	**1.8099**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0579	0.0000	0.0579	0.0318	0.0000	0.0318	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0325	0.3418	0.1655	2.8000e-004		0.0179	0.0179		0.0165	0.0165	0.0000	25.6265	25.6265	8.1100e-003	0.0000	25.8292
Total	**0.0325**	**0.3418**	**0.1655**	**2.8000e-004**	**0.0579**	**0.0179**	**0.0759**	**0.0318**	**0.0165**	**0.0483**	**0.0000**	**25.6265**	**25.6265**	**8.1100e-003**	**0.0000**	**25.8292**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	3.7700e-003	1.0100e-003	1.0000e-005	1.9000e-004	3.0000e-005	2.1000e-004	5.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7970	0.7970	6.0000e-005	0.0000	0.7986
Worker	5.3000e-004	4.1000e-004	3.9500e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	1.0105	1.0105	3.0000e-005	0.0000	1.0113
Total	**6.7000e-004**	**4.1800e-003**	**4.9600e-003**	**2.0000e-005**	**1.1900e-003**	**4.0000e-005**	**1.2200e-003**	**3.2000e-004**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**1.8075**	**1.8075**	**9.0000e-005**	**0.0000**	**1.8099**

3.9 1A Canopy Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3700e-003	0.0127	0.0112	1.0000e-005		9.4000e-004	9.4000e-004		8.6000e-004	8.6000e-004	0.0000	1.3119	1.3119	4.2000e-004	0.0000	1.3223
Total	**1.3700e-003**	**0.0127**	**0.0112**	**1.0000e-005**		**9.4000e-004**	**9.4000e-004**		**8.6000e-004**	**8.6000e-004**	**0.0000**	**1.3119**	**1.3119**	**4.2000e-004**	**0.0000**	**1.3223**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0749	0.0749	0.0000	0.0000	0.0749
Total	**4.0000e-005**	**3.0000e-005**	**2.9000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0749**	**0.0749**	**0.0000**	**0.0000**	**0.0749**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3700e-003	0.0127	0.0112	1.0000e-005		9.4000e-004	9.4000e-004		8.6000e-004	8.6000e-004	0.0000	1.3119	1.3119	4.2000e-004	0.0000	1.3223
Total	**1.3700e-003**	**0.0127**	**0.0112**	**1.0000e-005**		**9.4000e-004**	**9.4000e-004**		**8.6000e-004**	**8.6000e-004**	**0.0000**	**1.3119**	**1.3119**	**4.2000e-004**	**0.0000**	**1.3223**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0749	0.0749	0.0000	0.0000	0.0749
Total	**4.0000e-005**	**3.0000e-005**	**2.9000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0749**	**0.0749**	**0.0000**	**0.0000**	**0.0749**

3.10 1A Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3400e-003	0.0638	0.0616	9.0000e-005		3.6000e-003	3.6000e-003		3.3200e-003	3.3200e-003	0.0000	8.3612	8.3612	2.5700e-003	0.0000	8.4255
Paving	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7200e-003**	**0.0638**	**0.0616**	**9.0000e-005**		**3.6000e-003**	**3.6000e-003**		**3.3200e-003**	**3.3200e-003**	**0.0000**	**8.3612**	**8.3612**	**2.5700e-003**	**0.0000**	**8.4255**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.0000e-004	2.9300e-003	1.0000e-005	8.0000e-004	1.0000e-005	8.1000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7485	0.7485	2.0000e-005	0.0000	0.7491
Total	**3.9000e-004**	**3.0000e-004**	**2.9300e-003**	**1.0000e-005**	**8.0000e-004**	**1.0000e-005**	**8.1000e-004**	**2.1000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7485**	**0.7485**	**2.0000e-005**	**0.0000**	**0.7491**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3400e-003	0.0638	0.0616	9.0000e-005		3.6000e-003	3.6000e-003		3.3200e-003	3.3200e-003	0.0000	8.3611	8.3611	2.5700e-003	0.0000	8.4255
Paving	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7200e-003**	**0.0638**	**0.0616**	**9.0000e-005**		**3.6000e-003**	**3.6000e-003**		**3.3200e-003**	**3.3200e-003**	**0.0000**	**8.3611**	**8.3611**	**2.5700e-003**	**0.0000**	**8.4255**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.0000e-004	2.9300e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7485	0.7485	2.0000e-005	0.0000	0.7491
Total	**3.9000e-004**	**3.0000e-004**	**2.9300e-003**	**1.0000e-005**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.7485**	**0.7485**	**2.0000e-005**	**0.0000**	**0.7491**

3.11 1B Rough Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2126	0.1222	2.2000e-004		0.0105	0.0105		9.6400e-003	9.6400e-003	0.0000	19.9817	19.9817	6.3200e-003	0.0000	20.1398
Total	**0.0194**	**0.2126**	**0.1222**	**2.2000e-004**	**0.0452**	**0.0105**	**0.0557**	**0.0248**	**9.6400e-003**	**0.0345**	**0.0000**	**19.9817**	**19.9817**	**6.3200e-003**	**0.0000**	**20.1398**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	3.7700e-003	1.0100e-003	1.0000e-005	2.0000e-004	3.0000e-005	2.3000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7970	0.7970	6.0000e-005	0.0000	0.7986
Worker	4.4000e-004	3.4000e-004	3.2900e-003	1.0000e-005	9.0000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8421	0.8421	3.0000e-005	0.0000	0.8427
Total	**5.8000e-004**	**4.1100e-003**	**4.3000e-003**	**2.0000e-005**	**1.1000e-003**	**4.0000e-005**	**1.1400e-003**	**3.0000e-004**	**3.0000e-005**	**3.3000e-004**	**0.0000**	**1.6391**	**1.6391**	**9.0000e-005**	**0.0000**	**1.6414**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0193	0.0000	0.0193	0.0106	0.0000	0.0106	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2126	0.1222	2.2000e-004		0.0105	0.0105		9.6400e-003	9.6400e-003	0.0000	19.9817	19.9817	6.3200e-003	0.0000	20.1397
Total	**0.0194**	**0.2126**	**0.1222**	**2.2000e-004**	**0.0193**	**0.0105**	**0.0298**	**0.0106**	**9.6400e-003**	**0.0203**	**0.0000**	**19.9817**	**19.9817**	**6.3200e-003**	**0.0000**	**20.1397**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	3.7700e-003	1.0100e-003	1.0000e-005	1.9000e-004	3.0000e-005	2.1000e-004	5.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7970	0.7970	6.0000e-005	0.0000	0.7986
Worker	4.4000e-004	3.4000e-004	3.2900e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.4000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.8421	0.8421	3.0000e-005	0.0000	0.8427
Total	**5.8000e-004**	**4.1100e-003**	**4.3000e-003**	**2.0000e-005**	**1.0200e-003**	**4.0000e-005**	**1.0500e-003**	**2.7000e-004**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.6391**	**1.6391**	**9.0000e-005**	**0.0000**	**1.6414**

3.12 1B Grading Haul - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0478	0.0000	0.0478	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2126	0.1222	2.2000e-004		0.0105	0.0105		9.6400e-003	9.6400e-003	0.0000	19.9817	19.9817	6.3200e-003	0.0000	20.1398
Total	**0.0194**	**0.2126**	**0.1222**	**2.2000e-004**	**0.0478**	**0.0105**	**0.0583**	**0.0251**	**9.6400e-003**	**0.0348**	**0.0000**	**19.9817**	**19.9817**	**6.3200e-003**	**0.0000**	**20.1398**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.9000e-004	0.0172	3.7400e-003	4.0000e-005	9.6000e-004	6.0000e-005	1.0200e-003	2.6000e-004	6.0000e-005	3.2000e-004	0.0000	4.3657	4.3657	4.0000e-004	0.0000	4.3756
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.9000e-004**	**0.0172**	**3.7400e-003**	**4.0000e-005**	**9.6000e-004**	**6.0000e-005**	**1.0200e-003**	**2.6000e-004**	**6.0000e-005**	**3.2000e-004**	**0.0000**	**4.3657**	**4.3657**	**4.0000e-004**	**0.0000**	**4.3756**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0204	0.0000	0.0204	0.0107	0.0000	0.0107	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2126	0.1222	2.2000e-004		0.0105	0.0105		9.6400e-003	9.6400e-003	0.0000	19.9817	19.9817	6.3200e-003	0.0000	20.1397
Total	**0.0194**	**0.2126**	**0.1222**	**2.2000e-004**	**0.0204**	**0.0105**	**0.0309**	**0.0107**	**9.6400e-003**	**0.0204**	**0.0000**	**19.9817**	**19.9817**	**6.3200e-003**	**0.0000**	**20.1397**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.9000e-004	0.0172	3.7400e-003	4.0000e-005	8.9000e-004	6.0000e-005	9.6000e-004	2.5000e-004	6.0000e-005	3.1000e-004	0.0000	4.3657	4.3657	4.0000e-004	0.0000	4.3756
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.9000e-004**	**0.0172**	**3.7400e-003**	**4.0000e-005**	**8.9000e-004**	**6.0000e-005**	**9.6000e-004**	**2.5000e-004**	**6.0000e-005**	**3.1000e-004**	**0.0000**	**4.3657**	**4.3657**	**4.0000e-004**	**0.0000**	**4.3756**

3.13 1A Landscaping - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	7.9000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2021	0.2021	1.0000e-005	0.0000	0.2023
Total	**1.1000e-004**	**8.0000e-005**	**7.9000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.2021**	**0.2021**	**1.0000e-005**	**0.0000**	**0.2023**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	7.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.2021	0.2021	1.0000e-005	0.0000	0.2023
Total	**1.1000e-004**	**8.0000e-005**	**7.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.2021**	**0.2021**	**1.0000e-005**	**0.0000**	**0.2023**

3.14 1B Trenching - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.3800e-003	0.0260	0.0277	4.0000e-005		1.5600e-003	1.5600e-003		1.4300e-003	1.4300e-003	0.0000	3.4846	3.4846	1.1000e-003	0.0000	3.5122
Total	**2.3800e-003**	**0.0260**	**0.0277**	**4.0000e-005**		**1.5600e-003**	**1.5600e-003**		**1.4300e-003**	**1.4300e-003**	**0.0000**	**3.4846**	**3.4846**	**1.1000e-003**	**0.0000**	**3.5122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	3.7700e-003	1.0100e-003	1.0000e-005	2.0000e-004	3.0000e-005	2.3000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7970	0.7970	6.0000e-005	0.0000	0.7986
Worker	1.5000e-004	1.1000e-004	1.1000e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2807	0.2807	1.0000e-005	0.0000	0.2809
Total	**2.9000e-004**	**3.8800e-003**	**2.1100e-003**	**1.0000e-005**	**5.0000e-004**	**3.0000e-005**	**5.3000e-004**	**1.4000e-004**	**2.0000e-005**	**1.6000e-004**	**0.0000**	**1.0777**	**1.0777**	**7.0000e-005**	**0.0000**	**1.0795**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.3800e-003	0.0260	0.0277	4.0000e-005		1.5600e-003	1.5600e-003		1.4300e-003	1.4300e-003	0.0000	3.4846	3.4846	1.1000e-003	0.0000	3.5122
Total	**2.3800e-003**	**0.0260**	**0.0277**	**4.0000e-005**		**1.5600e-003**	**1.5600e-003**		**1.4300e-003**	**1.4300e-003**	**0.0000**	**3.4846**	**3.4846**	**1.1000e-003**	**0.0000**	**3.5122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-004	3.7700e-003	1.0100e-003	1.0000e-005	1.9000e-004	3.0000e-005	2.1000e-004	5.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7970	0.7970	6.0000e-005	0.0000	0.7986
Worker	1.5000e-004	1.1000e-004	1.1000e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2807	0.2807	1.0000e-005	0.0000	0.2809
Total	**2.9000e-004**	**3.8800e-003**	**2.1100e-003**	**1.0000e-005**	**4.7000e-004**	**3.0000e-005**	**4.9000e-004**	**1.2000e-004**	**2.0000e-005**	**1.6000e-004**	**0.0000**	**1.0777**	**1.0777**	**7.0000e-005**	**0.0000**	**1.0795**

3.15 1B Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0992	0.8853	0.7209	1.1300e-003		0.0542	0.0542		0.0509	0.0509	0.0000	98.7438	98.7438	0.0241	0.0000	99.3451
Total	**0.0992**	**0.8853**	**0.7209**	**1.1300e-003**		**0.0542**	**0.0542**		**0.0509**	**0.0509**	**0.0000**	**98.7438**	**98.7438**	**0.0241**	**0.0000**	**99.3451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3400e-003	0.0896	0.0241	2.0000e-004	4.7400e-003	6.2000e-004	5.3600e-003	1.3700e-003	5.9000e-004	1.9600e-003	0.0000	18.9694	18.9694	1.5200e-003	0.0000	19.0075
Worker	7.1200e-003	5.4600e-003	0.0528	1.5000e-004	0.0145	1.1000e-004	0.0146	3.8500e-003	1.0000e-004	3.9500e-003	0.0000	13.5179	13.5179	4.3000e-004	0.0000	13.5287
Total	**0.0105**	**0.0951**	**0.0769**	**3.5000e-004**	**0.0192**	**7.3000e-004**	**0.0200**	**5.2200e-003**	**6.9000e-004**	**5.9100e-003**	**0.0000**	**32.4873**	**32.4873**	**1.9500e-003**	**0.0000**	**32.5362**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0992	0.8853	0.7209	1.1300e-003		0.0542	0.0542		0.0509	0.0509	0.0000	98.7437	98.7437	0.0241	0.0000	99.3450
Total	**0.0992**	**0.8853**	**0.7209**	**1.1300e-003**		**0.0542**	**0.0542**		**0.0509**	**0.0509**	**0.0000**	**98.7437**	**98.7437**	**0.0241**	**0.0000**	**99.3450**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3400e-003	0.0896	0.0241	2.0000e-004	4.4400e-003	6.2000e-004	5.0600e-003	1.2900e-003	5.9000e-004	1.8900e-003	0.0000	18.9694	18.9694	1.5200e-003	0.0000	19.0075
Worker	7.1200e-003	5.4600e-003	0.0528	1.5000e-004	0.0134	1.1000e-004	0.0135	3.5700e-003	1.0000e-004	3.6700e-003	0.0000	13.5179	13.5179	4.3000e-004	0.0000	13.5287
Total	**0.0105**	**0.0951**	**0.0769**	**3.5000e-004**	**0.0178**	**7.3000e-004**	**0.0185**	**4.8600e-003**	**6.9000e-004**	**5.5600e-003**	**0.0000**	**32.4873**	**32.4873**	**1.9500e-003**	**0.0000**	**32.5362**

3.15 1B Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1770	1.6020	1.4069	2.2500e-003		0.0933	0.0933		0.0877	0.0877	0.0000	193.3943	193.3943	0.0472	0.0000	194.5739
Total	**0.1770**	**1.6020**	**1.4069**	**2.2500e-003**		**0.0933**	**0.0933**		**0.0877**	**0.0877**	**0.0000**	**193.3943**	**193.3943**	**0.0472**	**0.0000**	**194.5739**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4100e-003	0.1618	0.0430	3.8000e-004	9.4200e-003	7.9000e-004	0.0102	2.7200e-003	7.6000e-004	3.4800e-003	0.0000	37.4551	37.4551	2.8700e-003	0.0000	37.5269
Worker	0.0132	9.8000e-003	0.0961	2.9000e-004	0.0288	2.1000e-004	0.0290	7.6500e-003	1.9000e-004	7.8400e-003	0.0000	26.0267	26.0267	7.8000e-004	0.0000	26.0462
Total	**0.0186**	**0.1716**	**0.1391**	**6.7000e-004**	**0.0382**	**1.0000e-003**	**0.0392**	**0.0104**	**9.5000e-004**	**0.0113**	**0.0000**	**63.4818**	**63.4818**	**3.6500e-003**	**0.0000**	**63.5731**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1770	1.6020	1.4069	2.2500e-003		0.0933	0.0933		0.0877	0.0877	0.0000	193.3941	193.3941	0.0472	0.0000	194.5736
Total	**0.1770**	**1.6020**	**1.4069**	**2.2500e-003**		**0.0933**	**0.0933**		**0.0877**	**0.0877**	**0.0000**	**193.3941**	**193.3941**	**0.0472**	**0.0000**	**194.5736**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4100e-003	0.1618	0.0430	3.8000e-004	8.8200e-003	7.9000e-004	9.6100e-003	2.5700e-003	7.6000e-004	3.3300e-003	0.0000	37.4551	37.4551	2.8700e-003	0.0000	37.5269
Worker	0.0132	9.8000e-003	0.0961	2.9000e-004	0.0266	2.1000e-004	0.0268	7.1000e-003	1.9000e-004	7.2900e-003	0.0000	26.0267	26.0267	7.8000e-004	0.0000	26.0462
Total	**0.0186**	**0.1716**	**0.1391**	**6.7000e-004**	**0.0354**	**1.0000e-003**	**0.0364**	**9.6700e-003**	**9.5000e-004**	**0.0106**	**0.0000**	**63.4818**	**63.4818**	**3.6500e-003**	**0.0000**	**63.5731**

3.16 1B Asphalt Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2900e-003	0.0826	0.0860	1.3000e-004		4.5600e-003	4.5600e-003		4.2000e-003	4.2000e-003	0.0000	11.4604	11.4604	3.6000e-003	0.0000	11.5504
Paving	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.6700e-003**	**0.0826**	**0.0860**	**1.3000e-004**		**4.5600e-003**	**4.5600e-003**		**4.2000e-003**	**4.2000e-003**	**0.0000**	**11.4604**	**11.4604**	**3.6000e-003**	**0.0000**	**11.5504**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.8000e-004	3.7500e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0148	1.0148	3.0000e-005	0.0000	1.0156
Total	**5.2000e-004**	**3.8000e-004**	**3.7500e-003**	**1.0000e-005**	**1.1200e-003**	**1.0000e-005**	**1.1300e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0148**	**1.0148**	**3.0000e-005**	**0.0000**	**1.0156**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2900e-003	0.0826	0.0860	1.3000e-004		4.5600e-003	4.5600e-003		4.2000e-003	4.2000e-003	0.0000	11.4604	11.4604	3.6000e-003	0.0000	11.5504
Paving	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.6700e-003**	**0.0826**	**0.0860**	**1.3000e-004**		**4.5600e-003**	**4.5600e-003**		**4.2000e-003**	**4.2000e-003**	**0.0000**	**11.4604**	**11.4604**	**3.6000e-003**	**0.0000**	**11.5504**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.8000e-004	3.7500e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0400e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	1.0148	1.0148	3.0000e-005	0.0000	1.0156
Total	**5.2000e-004**	**3.8000e-004**	**3.7500e-003**	**1.0000e-005**	**1.0400e-003**	**1.0000e-005**	**1.0400e-003**	**2.8000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**1.0148**	**1.0148**	**3.0000e-005**	**0.0000**	**1.0156**

3.17 1B Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9400e-003	0.0135	0.0147	2.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	2.0426	2.0426	1.6000e-004	0.0000	2.0466
Total	**0.1841**	**0.0135**	**0.0147**	**2.0000e-005**		**8.9000e-004**	**8.9000e-004**		**8.9000e-004**	**8.9000e-004**	**0.0000**	**2.0426**	**2.0426**	**1.6000e-004**	**0.0000**	**2.0466**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	1.9300e-003	1.0000e-005	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.5219	0.5219	2.0000e-005	0.0000	0.5223
Total	**2.7000e-004**	**2.0000e-004**	**1.9300e-003**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5219**	**0.5219**	**2.0000e-005**	**0.0000**	**0.5223**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9400e-003	0.0135	0.0147	2.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	2.0426	2.0426	1.6000e-004	0.0000	2.0466
Total	**0.1841**	**0.0135**	**0.0147**	**2.0000e-005**		**8.9000e-004**	**8.9000e-004**		**8.9000e-004**	**8.9000e-004**	**0.0000**	**2.0426**	**2.0426**	**1.6000e-004**	**0.0000**	**2.0466**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	1.9300e-003	1.0000e-005	5.3000e-004	0.0000	5.4000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.5219	0.5219	2.0000e-005	0.0000	0.5223
Total	**2.7000e-004**	**2.0000e-004**	**1.9300e-003**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**5.4000e-004**	**1.4000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.5219**	**0.5219**	**2.0000e-005**	**0.0000**	**0.5223**

Cardiff ES Phase 1 Construction - San Diego County, Summer

Cardiff ES Phase 1 Construction

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	34.99	1000sqft	3.28	34,990.00	0
Other Non-Asphalt Surfaces	53.49	1000sqft	1.23	53,490.00	0
Parking Lot	12.71	1000sqft	0.29	12,710.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - Haul phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading - See CalEEMod Assumptions

Architectural Coating - See CalEEmod Assumptions

Construction Off-road Equipment Mitigation - SDAPCD Rule 55

Vehicle Trips -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	17,495.00	19,170.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	17,495.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	52,485.00	57,509.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	52,485.00	0.00
tblArchitecturalCoating	ConstArea_Parking	3,972.00	763.00
tblArchitecturalCoating	ConstArea_Parking	3,972.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	8.00	3.00
tblConstructionPhase	NumDays	18.00	7.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	230.00	4.00
tblConstructionPhase	NumDays	18.00	10.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	18.00	6.00
tblConstructionPhase	NumDays	230.00	251.00
tblConstructionPhase	NumDays	18.00	14.00
tblConstructionPhase	NumDays	18.00	16.00
tblGrading	AcresOfGrading	1.50	0.00
tblGrading	AcresOfGrading	7.50	0.00
tblGrading	AcresOfGrading	7.50	4.80
tblGrading	MaterialExported	0.00	896.00
tblLandUse	LotAcreage	0.80	3.28
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	118.00	153.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	17.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	43.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	8.0725	84.4362	45.8315	0.0872	19.6344	4.2016	23.8360	10.2207	3.8844	14.1050	0.0000	8,683.0590	8,683.0590	2.3319	0.0000	8,741.3564
2020	26.6933	34.7662	33.4915	0.0595	0.7065	1.8924	2.5989	0.1900	1.7746	1.9646	0.0000	5,745.8641	5,745.8641	1.2667	0.0000	5,777.5311
Maximum	**26.6933**	**84.4362**	**45.8315**	**0.0872**	**19.6344**	**4.2016**	**23.8360**	**10.2207**	**3.8844**	**14.1050**	**0.0000**	**8,683.0590**	**8,683.0590**	**2.3319**	**0.0000**	**8,741.3564**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	8.0725	84.4362	45.8315	0.0872	8.6139	4.2016	12.8155	4.4297	3.8844	8.3141	0.0000	8,683.0589	8,683.0589	2.3319	0.0000	8,741.3564
2020	26.6933	34.7662	33.4915	0.0595	0.6529	1.8924	2.5453	0.1768	1.7746	1.9514	0.0000	5,745.8641	5,745.8641	1.2667	0.0000	5,777.5311
Maximum	**26.6933**	**84.4362**	**45.8315**	**0.0872**	**8.6139**	**4.2016**	**12.8155**	**4.4297**	**3.8844**	**8.3141**	**0.0000**	**8,683.0589**	**8,683.0589**	**2.3319**	**0.0000**	**8,741.3564**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.44**	**0.00**	**41.89**	**55.75**	**0.00**	**36.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1A Demolition	Demolition	6/19/2019	7/20/2019	5	23	
2	1A Demo Haul	Demolition	6/19/2019	7/19/2019	5	23	
3	1A Site Preparation	Site Preparation	6/26/2019	7/2/2019	5	5	
4	1A Grading	Grading	7/3/2019	7/5/2019	5	3	
5	1A Trenching	Trenching	7/8/2019	7/11/2019	5	4	
6	1A Concrete Curb & Gutter	Paving	7/12/2019	7/22/2019	5	7	
7	1B Site Preparation	Site Preparation	7/21/2019	8/9/2019	5	15	
8	1A Canopy Installation	Building Construction	7/23/2019	7/26/2019	5	4	
9	1A Paving	Paving	7/29/2019	8/9/2019	5	10	
10	1B Rough Grading	Grading	8/11/2019	8/30/2019	5	15	
11	1B Grading Haul	Grading	8/11/2019	8/30/2019	5	15	
12	1A Landscaping	Architectural Coating	8/11/2019	8/19/2019	5	6	
13	1B Trenching	Trenching	8/15/2019	9/4/2019	5	15	
14	1B Building Construction	Building Construction	9/5/2019	8/20/2020	5	251	
15	1B Asphalt Paving	Paving	8/1/2020	8/20/2020	5	14	
16	1B Architectural Coating	Architectural Coating	8/1/2020	8/24/2020	5	16	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.52

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
1A Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
1A Demolition	Excavators	3	8.00	158	0.38
1A Demolition	Rubber Tired Dozers	2	8.00	247	0.40
1A Demo Haul	Concrete/Industrial Saws	0	8.00	81	0.73
1A Demo Haul	Excavators	0	8.00	158	0.38
1A Demo Haul	Rubber Tired Dozers	0	8.00	247	0.40
1A Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
1A Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
1A Grading	Excavators	1	8.00	158	0.38
1A Grading	Graders	1	8.00	187	0.41
1A Grading	Rubber Tired Dozers	1	8.00	247	0.40
1A Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
1A Trenching	Skid Steer Loaders	1	8.00	65	0.37
1A Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1A Concrete Curb & Gutter	Cement and Mortar Mixers	2	6.00	9	0.56
1A Concrete Curb & Gutter	Pavers	1	8.00	130	0.42
1A Concrete Curb & Gutter	Paving Equipment	2	6.00	132	0.36
1A Concrete Curb & Gutter	Rollers	2	6.00	80	0.38
1A Concrete Curb & Gutter	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
1B Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
1A Canopy Installation	Cranes	0	7.00	231	0.29
1A Canopy Installation	Forklifts	3	8.00	89	0.20
1A Canopy Installation	Generator Sets	0	8.00	84	0.74
1A Canopy Installation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
1A Canopy Installation	Welders	0	8.00	46	0.45
1A Paving	Cement and Mortar Mixers	2	6.00	9	0.56
1A Paving	Pavers	1	8.00	130	0.42

1A Paving	Paving Equipment	2	6.00	132	0.36
1A Paving	Rollers	2	6.00	80	0.38
1A Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Rough Grading	Excavators	1	8.00	158	0.38
1B Rough Grading	Graders	1	8.00	187	0.41
1B Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
1B Rough Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
1B Grading Haul	Excavators	1	8.00	158	0.38
1B Grading Haul	Graders	1	8.00	187	0.41
1B Grading Haul	Rubber Tired Dozers	1	8.00	247	0.40
1B Grading Haul	Tractors/Loaders/Backhoes	3	8.00	97	0.37
1A Landscaping	Air Compressors	0	6.00	78	0.48
1B Trenching	Skid Steer Loaders	1	8.00	65	0.37
1B Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Building Construction	Cranes	1	7.00	231	0.29
1B Building Construction	Forklifts	3	8.00	89	0.20
1B Building Construction	Generator Sets	1	8.00	84	0.74
1B Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
1B Building Construction	Welders	1	8.00	46	0.45
1B Asphalt Paving	Cement and Mortar Mixers	2	6.00	9	0.56
1B Asphalt Paving	Pavers	1	8.00	130	0.42
1B Asphalt Paving	Paving Equipment	2	6.00	132	0.36
1B Asphalt Paving	Rollers	2	6.00	80	0.38
1B Asphalt Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
1A Demolition	6	15.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Demo Haul	0	0.00	0.00	153.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Site Preparation	7	18.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Grading	6	15.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Trenching	2	5.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Concrete Curb & Gutter	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Site Preparation	7	18.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Canopy Installation	4	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Rough Grading	6	15.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Grading Haul	6	0.00	0.00	112.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Landscaping	0	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Trenching	2	5.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Building Construction	9	43.00	17.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Asphalt Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 1A Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**		**1.7949**	**1.7949**		**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0271	3.4500e-003	0.0305	7.8000e-003	3.3000e-003	0.0111		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0773**	**0.5371**	**0.5922**	**2.4100e-003**	**0.1503**	**4.3300e-003**	**0.1546**	**0.0405**	**4.1100e-003**	**0.0446**		**248.9366**	**248.9366**	**0.0133**		**249.2693**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**		**1.7949**	**1.7949**		**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0253	3.4500e-003	0.0288	7.3700e-003	3.3000e-003	0.0107		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1136	8.8000e-004	0.1145	0.0303	8.1000e-004	0.0311		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0773**	**0.5371**	**0.5922**	**2.4100e-003**	**0.1389**	**4.3300e-003**	**0.1433**	**0.0377**	**4.1100e-003**	**0.0418**		**248.9366**	**248.9366**	**0.0133**		**249.2693**

3.3 1A Demo Haul - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1266	0.0000	1.1266	0.1706	0.0000	0.1706			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1266**	**0.0000**	**1.1266**	**0.1706**	**0.0000**	**0.1706**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0577	1.9981	0.4313	5.2800e-003	0.1162	7.5400e-003	0.1238	0.0319	7.2100e-003	0.0391		575.7275	575.7275	0.0510		577.0012
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0577**	**1.9981**	**0.4313**	**5.2800e-003**	**0.1162**	**7.5400e-003**	**0.1238**	**0.0319**	**7.2100e-003**	**0.0391**		**575.7275**	**575.7275**	**0.0510**		**577.0012**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4816	0.0000	0.4816	0.0729	0.0000	0.0729			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.4816**	**0.0000**	**0.4816**	**0.0729**	**0.0000**	**0.0729**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0577	1.9981	0.4313	5.2800e-003	0.1083	7.5400e-003	0.1159	0.0299	7.2100e-003	0.0371		575.7275	575.7275	0.0510		577.0012
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0577**	**1.9981**	**0.4313**	**5.2800e-003**	**0.1083**	**7.5400e-003**	**0.1159**	**0.0299**	**7.2100e-003**	**0.0371**		**575.7275**	**575.7275**	**0.0510**		**577.0012**

3.4 1A Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0271	3.4500e-003	0.0305	7.8000e-003	3.3000e-003	0.0111		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0891**	**0.5453**	**0.6850**	**2.6700e-003**	**0.1750**	**4.5000e-003**	**0.1795**	**0.0470**	**4.2700e-003**	**0.0513**		**275.0426**	**275.0426**	**0.0141**		**275.3962**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0253	3.4500e-003	0.0288	7.3700e-003	3.3000e-003	0.0107		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1363	1.0500e-003	0.1374	0.0364	9.7000e-004	0.0374		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0891**	**0.5453**	**0.6850**	**2.6700e-003**	**0.1616**	**4.5000e-003**	**0.1661**	**0.0438**	**4.2700e-003**	**0.0480**		**275.0426**	**275.0426**	**0.0141**		**275.3962**

3.5 1A Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.0221**	**1.3974**	**7.4195**	**3.3102**	**1.2856**	**4.5958**		**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0271	3.4500e-003	0.0305	7.8000e-003	3.3000e-003	0.0111		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0773**	**0.5371**	**0.5922**	**2.4100e-003**	**0.1503**	**4.3300e-003**	**0.1546**	**0.0405**	**4.1100e-003**	**0.0446**		**248.9366**	**248.9366**	**0.0133**		**249.2693**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5744	0.0000	2.5744	1.4151	0.0000	1.4151			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**2.5744**	**1.3974**	**3.9718**	**1.4151**	**1.2856**	**2.7007**	**0.0000**	**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0253	3.4500e-003	0.0288	7.3700e-003	3.3000e-003	0.0107		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1136	8.8000e-004	0.1145	0.0303	8.1000e-004	0.0311		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0773**	**0.5371**	**0.5922**	**2.4100e-003**	**0.1389**	**4.3300e-003**	**0.1433**	**0.0377**	**4.1100e-003**	**0.0418**		**248.9366**	**248.9366**	**0.0133**		**249.2693**

3.6 1A Trenching - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3174	3.4639	3.6928	5.1700e-003		0.2077	0.2077		0.1910	0.1910		512.1545	512.1545	0.1620		516.2055
Total	**0.3174**	**3.4639**	**3.6928**	**5.1700e-003**		**0.2077**	**0.2077**		**0.1910**	**0.1910**		**512.1545**	**512.1545**	**0.1620**		**516.2055**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0271	3.4500e-003	0.0305	7.8000e-003	3.3000e-003	0.0111		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0196	0.0137	0.1547	4.4000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		43.5100	43.5100	1.3900e-003		43.5447
Total	**0.0380**	**0.5097**	**0.2828**	**1.5400e-003**	**0.0682**	**3.7400e-003**	**0.0719**	**0.0187**	**3.5700e-003**	**0.0223**		**161.9166**	**161.9166**	**0.0105**		**162.1799**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3174	3.4639	3.6928	5.1700e-003		0.2077	0.2077		0.1910	0.1910	0.0000	512.1545	512.1545	0.1620		516.2055
Total	**0.3174**	**3.4639**	**3.6928**	**5.1700e-003**		**0.2077**	**0.2077**		**0.1910**	**0.1910**	**0.0000**	**512.1545**	**512.1545**	**0.1620**		**516.2055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0253	3.4500e-003	0.0288	7.3700e-003	3.3000e-003	0.0107		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0196	0.0137	0.1547	4.4000e-004	0.0379	2.9000e-004	0.0382	0.0101	2.7000e-004	0.0104		43.5100	43.5100	1.3900e-003		43.5447
Total	**0.0380**	**0.5097**	**0.2828**	**1.5400e-003**	**0.0632**	**3.7400e-003**	**0.0669**	**0.0175**	**3.5700e-003**	**0.0211**		**161.9166**	**161.9166**	**0.0105**		**162.1799**

3.7 1A Concrete Curb & Gutter - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637		1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3764**	**12.7604**	**12.3130**	**0.0189**		**0.7196**	**0.7196**		**0.6637**	**0.6637**		**1,843.3191**	**1,843.3191**	**0.5671**		**1,857.4966**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637	0.0000	1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3764**	**12.7604**	**12.3130**	**0.0189**		**0.7196**	**0.7196**		**0.6637**	**0.6637**	**0.0000**	**1,843.3191**	**1,843.3191**	**0.5671**		**1,857.4966**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1514	1.1700e-003	0.1526	0.0404	1.0800e-003	0.0415		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1514**	**1.1700e-003**	**0.1526**	**0.0404**	**1.0800e-003**	**0.0415**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

3.8 1B Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0271	3.4500e-003	0.0305	7.8000e-003	3.3000e-003	0.0111		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0891**	**0.5453**	**0.6850**	**2.6700e-003**	**0.1750**	**4.5000e-003**	**0.1795**	**0.0470**	**4.2700e-003**	**0.0513**		**275.0426**	**275.0426**	**0.0141**		**275.3962**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0253	3.4500e-003	0.0288	7.3700e-003	3.3000e-003	0.0107		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0707	0.0493	0.5569	1.5700e-003	0.1363	1.0500e-003	0.1374	0.0364	9.7000e-004	0.0374		156.6359	156.6359	5.0000e-003		156.7610
Total	**0.0891**	**0.5453**	**0.6850**	**2.6700e-003**	**0.1616**	**4.5000e-003**	**0.1661**	**0.0438**	**4.2700e-003**	**0.0480**		**275.0426**	**275.0426**	**0.0141**		**275.3962**

3.9 1A Canopy Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6836	6.3301	5.5974	7.3000e-003		0.4685	0.4685		0.4310	0.4310		723.0603	723.0603	0.2288		728.7796
Total	**0.6836**	**6.3301**	**5.5974**	**7.3000e-003**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**723.0603**	**723.0603**	**0.2288**		**728.7796**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0196	0.0137	0.1547	4.4000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		43.5100	43.5100	1.3900e-003		43.5447
Total	**0.0196**	**0.0137**	**0.1547**	**4.4000e-004**	**0.0411**	**2.9000e-004**	**0.0414**	**0.0109**	**2.7000e-004**	**0.0112**		**43.5100**	**43.5100**	**1.3900e-003**		**43.5447**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6836	6.3301	5.5974	7.3000e-003		0.4685	0.4685		0.4310	0.4310	0.0000	723.0603	723.0603	0.2288		728.7796
Total	**0.6836**	**6.3301**	**5.5974**	**7.3000e-003**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**723.0603**	**723.0603**	**0.2288**		**728.7796**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0196	0.0137	0.1547	4.4000e-004	0.0379	2.9000e-004	0.0382	0.0101	2.7000e-004	0.0104		43.5100	43.5100	1.3900e-003		43.5447
Total	**0.0196**	**0.0137**	**0.1547**	**4.4000e-004**	**0.0379**	**2.9000e-004**	**0.0382**	**0.0101**	**2.7000e-004**	**0.0104**		**43.5100**	**43.5100**	**1.3900e-003**		**43.5447**

3.10 1A Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637		1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.0760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3439**	**12.7604**	**12.3130**	**0.0189**		**0.7196**	**0.7196**		**0.6637**	**0.6637**		**1,843.3191**	**1,843.3191**	**0.5671**		**1,857.4966**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637	0.0000	1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.0760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3439**	**12.7604**	**12.3130**	**0.0189**		**0.7196**	**0.7196**		**0.6637**	**0.6637**	**0.0000**	**1,843.3191**	**1,843.3191**	**0.5671**		**1,857.4966**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0548	0.6188	1.7500e-003	0.1514	1.1700e-003	0.1526	0.0404	1.0800e-003	0.0415		174.0399	174.0399	5.5600e-003		174.1789
Total	**0.0785**	**0.0548**	**0.6188**	**1.7500e-003**	**0.1514**	**1.1700e-003**	**0.1526**	**0.0404**	**1.0800e-003**	**0.0415**		**174.0399**	**174.0399**	**5.5600e-003**		**174.1789**

3.11 1B Rough Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.0221**	**1.3974**	**7.4195**	**3.3102**	**1.2856**	**4.5958**		**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0271	3.4500e-003	0.0305	7.8000e-003	3.3000e-003	0.0111		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0773**	**0.5371**	**0.5922**	**2.4100e-003**	**0.1503**	**4.3300e-003**	**0.1546**	**0.0405**	**4.1100e-003**	**0.0446**		**248.9366**	**248.9366**	**0.0133**		**249.2693**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5744	0.0000	2.5744	1.4151	0.0000	1.4151			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**2.5744**	**1.3974**	**3.9718**	**1.4151**	**1.2856**	**2.7007**	**0.0000**	**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0253	3.4500e-003	0.0288	7.3700e-003	3.3000e-003	0.0107		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1136	8.8000e-004	0.1145	0.0303	8.1000e-004	0.0311		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0773**	**0.5371**	**0.5922**	**2.4100e-003**	**0.1389**	**4.3300e-003**	**0.1433**	**0.0377**	**4.1100e-003**	**0.0418**		**248.9366**	**248.9366**	**0.0133**		**249.2693**

3.12 1B Grading Haul - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3698	0.0000	6.3698	3.3481	0.0000	3.3481			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.3698**	**1.3974**	**7.7672**	**3.3481**	**1.2856**	**4.6337**		**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0648	2.2428	0.4841	5.9200e-003	0.1305	8.4600e-003	0.1389	0.0358	8.1000e-003	0.0439		646.2196	646.2196	0.0572		647.6493
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0648**	**2.2428**	**0.4841**	**5.9200e-003**	**0.1305**	**8.4600e-003**	**0.1389**	**0.0358**	**8.1000e-003**	**0.0439**		**646.2196**	**646.2196**	**0.0572**		**647.6493**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7231	0.0000	2.7231	1.4313	0.0000	1.4313			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**2.7231**	**1.3974**	**4.1205**	**1.4313**	**1.2856**	**2.7169**	**0.0000**	**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0648	2.2428	0.4841	5.9200e-003	0.1216	8.4600e-003	0.1301	0.0336	8.1000e-003	0.0417		646.2196	646.2196	0.0572		647.6493
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0648**	**2.2428**	**0.4841**	**5.9200e-003**	**0.1216**	**8.4600e-003**	**0.1301**	**0.0336**	**8.1000e-003**	**0.0417**		**646.2196**	**646.2196**	**0.0572**		**647.6493**

3.13 1A Landscaping - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0353	0.0247	0.2785	7.9000e-004	0.0739	5.3000e-004	0.0745	0.0196	4.9000e-004	0.0201		78.3180	78.3180	2.5000e-003		78.3805
Total	**0.0353**	**0.0247**	**0.2785**	**7.9000e-004**	**0.0739**	**5.3000e-004**	**0.0745**	**0.0196**	**4.9000e-004**	**0.0201**		**78.3180**	**78.3180**	**2.5000e-003**		**78.3805**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0353	0.0247	0.2785	7.9000e-004	0.0682	5.3000e-004	0.0687	0.0182	4.9000e-004	0.0187		78.3180	78.3180	2.5000e-003		78.3805
Total	**0.0353**	**0.0247**	**0.2785**	**7.9000e-004**	**0.0682**	**5.3000e-004**	**0.0687**	**0.0182**	**4.9000e-004**	**0.0187**		**78.3180**	**78.3180**	**2.5000e-003**		**78.3805**

3.14 1B Trenching - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3174	3.4639	3.6928	5.1700e-003		0.2077	0.2077		0.1910	0.1910		512.1545	512.1545	0.1620		516.2055
Total	**0.3174**	**3.4639**	**3.6928**	**5.1700e-003**		**0.2077**	**0.2077**		**0.1910**	**0.1910**		**512.1545**	**512.1545**	**0.1620**		**516.2055**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0271	3.4500e-003	0.0305	7.8000e-003	3.3000e-003	0.0111		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0196	0.0137	0.1547	4.4000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		43.5100	43.5100	1.3900e-003		43.5447
Total	**0.0380**	**0.5097**	**0.2828**	**1.5400e-003**	**0.0682**	**3.7400e-003**	**0.0719**	**0.0187**	**3.5700e-003**	**0.0223**		**161.9166**	**161.9166**	**0.0105**		**162.1799**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3174	3.4639	3.6928	5.1700e-003		0.2077	0.2077		0.1910	0.1910	0.0000	512.1545	512.1545	0.1620		516.2055
Total	**0.3174**	**3.4639**	**3.6928**	**5.1700e-003**		**0.2077**	**0.2077**		**0.1910**	**0.1910**	**0.0000**	**512.1545**	**512.1545**	**0.1620**		**516.2055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.4960	0.1280	1.1000e-003	0.0253	3.4500e-003	0.0288	7.3700e-003	3.3000e-003	0.0107		118.4067	118.4067	9.1400e-003		118.6352
Worker	0.0196	0.0137	0.1547	4.4000e-004	0.0379	2.9000e-004	0.0382	0.0101	2.7000e-004	0.0104		43.5100	43.5100	1.3900e-003		43.5447
Total	**0.0380**	**0.5097**	**0.2828**	**1.5400e-003**	**0.0632**	**3.7400e-003**	**0.0669**	**0.0175**	**3.5700e-003**	**0.0211**		**161.9166**	**161.9166**	**0.0105**		**162.1799**

3.15 1B Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0782	2.1078	0.5442	4.6900e-003	0.1151	0.0147	0.1298	0.0331	0.0140	0.0472		503.2283	503.2283	0.0389		504.1996
Worker	0.1688	0.1178	1.3305	3.7600e-003	0.3532	2.5200e-003	0.3558	0.0937	2.3200e-003	0.0960		374.1858	374.1858	0.0120		374.4846
Total	**0.2471**	**2.2256**	**1.8746**	**8.4500e-003**	**0.4683**	**0.0172**	**0.4855**	**0.1268**	**0.0164**	**0.1432**		**877.4141**	**877.4141**	**0.0508**		**878.6841**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0782	2.1078	0.5442	4.6900e-003	0.1077	0.0147	0.1224	0.0313	0.0140	0.0453		503.2283	503.2283	0.0389		504.1996
Worker	0.1688	0.1178	1.3305	3.7600e-003	0.3256	2.5200e-003	0.3281	0.0869	2.3200e-003	0.0892		374.1858	374.1858	0.0120		374.4846
Total	**0.2471**	**2.2256**	**1.8746**	**8.4500e-003**	**0.4333**	**0.0172**	**0.4505**	**0.1182**	**0.0164**	**0.1346**		**877.4141**	**877.4141**	**0.0508**		**878.6841**

3.15 1B Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0635	1.9169	0.4884	4.6500e-003	0.1151	9.3800e-003	0.1245	0.0331	8.9700e-003	0.0421		499.8681	499.8681	0.0369		500.7900
Worker	0.1578	0.1063	1.2189	3.6400e-003	0.3532	2.4800e-003	0.3557	0.0937	2.2800e-003	0.0960		362.3812	362.3812	0.0108		362.6518
Total	**0.2213**	**2.0232**	**1.7072**	**8.2900e-003**	**0.4683**	**0.0119**	**0.4802**	**0.1268**	**0.0113**	**0.1381**		**862.2494**	**862.2494**	**0.0477**		**863.4418**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0635	1.9169	0.4884	4.6500e-003	0.1077	9.3800e-003	0.1171	0.0313	8.9700e-003	0.0403		499.8681	499.8681	0.0369		500.7900
Worker	0.1578	0.1063	1.2189	3.6400e-003	0.3256	2.4800e-003	0.3281	0.0869	2.2800e-003	0.0892		362.3812	362.3812	0.0108		362.6518
Total	**0.2213**	**2.0232**	**1.7072**	**8.2900e-003**	**0.4333**	**0.0119**	**0.4452**	**0.1182**	**0.0113**	**0.1295**		**862.2494**	**862.2494**	**0.0477**		**863.4418**

3.16 1B Asphalt Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005		1,804.7070	1,804.7070	0.5670		1,818.8830
Paving	0.0543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2380**	**11.8015**	**12.2823**	**0.0189**		**0.6509**	**0.6509**		**0.6005**	**0.6005**		**1,804.7070**	**1,804.7070**	**0.5670**		**1,818.8830**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0734	0.0495	0.5669	1.6900e-003	0.1643	1.1500e-003	0.1655	0.0436	1.0600e-003	0.0446		168.5494	168.5494	5.0300e-003		168.6752
Total	**0.0734**	**0.0495**	**0.5669**	**1.6900e-003**	**0.1643**	**1.1500e-003**	**0.1655**	**0.0436**	**1.0600e-003**	**0.0446**		**168.5494**	**168.5494**	**5.0300e-003**		**168.6752**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005	0.0000	1,804.7070	1,804.7070	0.5670		1,818.8830
Paving	0.0543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2380**	**11.8015**	**12.2823**	**0.0189**		**0.6509**	**0.6509**		**0.6005**	**0.6005**	**0.0000**	**1,804.7070**	**1,804.7070**	**0.5670**		**1,818.8830**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0734	0.0495	0.5669	1.6900e-003	0.1514	1.1500e-003	0.1526	0.0404	1.0600e-003	0.0415		168.5494	168.5494	5.0300e-003		168.6752
Total	**0.0734**	**0.0495**	**0.5669**	**1.6900e-003**	**0.1514**	**1.1500e-003**	**0.1526**	**0.0404**	**1.0600e-003**	**0.0415**		**168.5494**	**168.5494**	**5.0300e-003**		**168.6752**

3.17 1B Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**23.0077**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0330	0.0223	0.2551	7.6000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		75.8472	75.8472	2.2600e-003		75.9039
Total	**0.0330**	**0.0223**	**0.2551**	**7.6000e-004**	**0.0739**	**5.2000e-004**	**0.0745**	**0.0196**	**4.8000e-004**	**0.0201**		**75.8472**	**75.8472**	**2.2600e-003**		**75.9039**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**23.0077**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0330	0.0223	0.2551	7.6000e-004	0.0682	5.2000e-004	0.0687	0.0182	4.8000e-004	0.0187		75.8472	75.8472	2.2600e-003		75.9039
Total	**0.0330**	**0.0223**	**0.2551**	**7.6000e-004**	**0.0682**	**5.2000e-004**	**0.0687**	**0.0182**	**4.8000e-004**	**0.0187**		**75.8472**	**75.8472**	**2.2600e-003**		**75.9039**

Cardiff ES Phase 1 Construction - San Diego County, Winter

Cardiff ES Phase 1 Construction

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	34.99	1000sqft	3.28	34,990.00	0
Other Non-Asphalt Surfaces	53.49	1000sqft	1.23	53,490.00	0
Parking Lot	12.71	1000sqft	0.29	12,710.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment - Haul phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - See CalEEMod Assumptions

Trips and VMT - See CalEEMod Assumptions

Demolition -

Grading - See CalEEMod Assumptions

Architectural Coating - See CalEEmod Assumptions

Construction Off-road Equipment Mitigation - SDAPCD Rule 55

Vehicle Trips -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	17,495.00	19,170.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	17,495.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	52,485.00	57,509.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	52,485.00	0.00
tblArchitecturalCoating	ConstArea_Parking	3,972.00	763.00
tblArchitecturalCoating	ConstArea_Parking	3,972.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	8.00	3.00
tblConstructionPhase	NumDays	18.00	7.00
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	230.00	4.00
tblConstructionPhase	NumDays	18.00	10.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	18.00	6.00
tblConstructionPhase	NumDays	230.00	251.00
tblConstructionPhase	NumDays	18.00	14.00
tblConstructionPhase	NumDays	18.00	16.00
tblGrading	AcresOfGrading	1.50	0.00
tblGrading	AcresOfGrading	7.50	0.00
tblGrading	AcresOfGrading	7.50	4.80
tblGrading	MaterialExported	0.00	896.00
tblLandUse	LotAcreage	0.80	3.28
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	118.00	153.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	17.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	43.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	8.0927	84.4686	45.8341	0.0869	19.6344	4.2019	23.8363	10.2207	3.8847	14.1053	0.0000	8,649.7734	8,649.7734	2.3344	0.0000	8,708.1343
2020	26.7313	34.7865	33.4283	0.0591	0.7065	1.8926	2.5991	0.1900	1.7748	1.9648	0.0000	5,695.8189	5,695.8189	1.2680	0.0000	5,727.5195
Maximum	**26.7313**	**84.4686**	**45.8341**	**0.0869**	**19.6344**	**4.2019**	**23.8363**	**10.2207**	**3.8847**	**14.1053**	**0.0000**	**8,649.7734**	**8,649.7734**	**2.3344**	**0.0000**	**8,708.1343**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	8.0927	84.4686	45.8341	0.0869	8.6139	4.2019	12.8158	4.4297	3.8847	8.3144	0.0000	8,649.7734	8,649.7734	2.3344	0.0000	8,708.1343
2020	26.7313	34.7865	33.4283	0.0591	0.6529	1.8926	2.5455	0.1768	1.7748	1.9516	0.0000	5,695.8189	5,695.8189	1.2680	0.0000	5,727.5194
Maximum	**26.7313**	**84.4686**	**45.8341**	**0.0869**	**8.6139**	**4.2019**	**12.8158**	**4.4297**	**3.8847**	**8.3144**	**0.0000**	**8,649.7734**	**8,649.7734**	**2.3344**	**0.0000**	**8,708.1343**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.44**	**0.00**	**41.89**	**55.75**	**0.00**	**36.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1A Demolition	Demolition	6/19/2019	7/20/2019	5	23	
2	1A Demo Haul	Demolition	6/19/2019	7/19/2019	5	23	
3	1A Site Preparation	Site Preparation	6/26/2019	7/2/2019	5	5	
4	1A Grading	Grading	7/3/2019	7/5/2019	5	3	
5	1A Trenching	Trenching	7/8/2019	7/11/2019	5	4	
6	1A Concrete Curb & Gutter	Paving	7/12/2019	7/22/2019	5	7	
7	1B Site Preparation	Site Preparation	7/21/2019	8/9/2019	5	15	
8	1A Canopy Installation	Building Construction	7/23/2019	7/26/2019	5	4	
9	1A Paving	Paving	7/29/2019	8/9/2019	5	10	
10	1B Rough Grading	Grading	8/11/2019	8/30/2019	5	15	
11	1B Grading Haul	Grading	8/11/2019	8/30/2019	5	15	
12	1A Landscaping	Architectural Coating	8/11/2019	8/19/2019	5	6	
13	1B Trenching	Trenching	8/15/2019	9/4/2019	5	15	
14	1B Building Construction	Building Construction	9/5/2019	8/20/2020	5	251	
15	1B Asphalt Paving	Paving	8/1/2020	8/20/2020	5	14	
16	1B Architectural Coating	Architectural Coating	8/1/2020	8/24/2020	5	16	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.52

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
1A Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
1A Demolition	Excavators	3	8.00	158	0.38
1A Demolition	Rubber Tired Dozers	2	8.00	247	0.40
1A Demo Haul	Concrete/Industrial Saws	0	8.00	81	0.73
1A Demo Haul	Excavators	0	8.00	158	0.38
1A Demo Haul	Rubber Tired Dozers	0	8.00	247	0.40
1A Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
1A Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
1A Grading	Excavators	1	8.00	158	0.38
1A Grading	Graders	1	8.00	187	0.41
1A Grading	Rubber Tired Dozers	1	8.00	247	0.40
1A Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
1A Trenching	Skid Steer Loaders	1	8.00	65	0.37
1A Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1A Concrete Curb & Gutter	Cement and Mortar Mixers	2	6.00	9	0.56
1A Concrete Curb & Gutter	Pavers	1	8.00	130	0.42
1A Concrete Curb & Gutter	Paving Equipment	2	6.00	132	0.36
1A Concrete Curb & Gutter	Rollers	2	6.00	80	0.38
1A Concrete Curb & Gutter	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
1B Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
1A Canopy Installation	Cranes	0	7.00	231	0.29
1A Canopy Installation	Forklifts	3	8.00	89	0.20
1A Canopy Installation	Generator Sets	0	8.00	84	0.74
1A Canopy Installation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
1A Canopy Installation	Welders	0	8.00	46	0.45
1A Paving	Cement and Mortar Mixers	2	6.00	9	0.56
1A Paving	Pavers	1	8.00	130	0.42

1A Paving	Paving Equipment	2	6.00	132	0.36
1A Paving	Rollers	2	6.00	80	0.38
1A Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Rough Grading	Excavators	1	8.00	158	0.38
1B Rough Grading	Graders	1	8.00	187	0.41
1B Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
1B Rough Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
1B Grading Haul	Excavators	1	8.00	158	0.38
1B Grading Haul	Graders	1	8.00	187	0.41
1B Grading Haul	Rubber Tired Dozers	1	8.00	247	0.40
1B Grading Haul	Tractors/Loaders/Backhoes	3	8.00	97	0.37
1A Landscaping	Air Compressors	0	6.00	78	0.48
1B Trenching	Skid Steer Loaders	1	8.00	65	0.37
1B Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Building Construction	Cranes	1	7.00	231	0.29
1B Building Construction	Forklifts	3	8.00	89	0.20
1B Building Construction	Generator Sets	1	8.00	84	0.74
1B Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
1B Building Construction	Welders	1	8.00	46	0.45
1B Asphalt Paving	Cement and Mortar Mixers	2	6.00	9	0.56
1B Asphalt Paving	Pavers	1	8.00	130	0.42
1B Asphalt Paving	Paving Equipment	2	6.00	132	0.36
1B Asphalt Paving	Rollers	2	6.00	80	0.38
1B Asphalt Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1B Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
1A Demolition	6	15.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Demo Haul	0	0.00	0.00	153.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Site Preparation	7	18.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Grading	6	15.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Trenching	2	5.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Concrete Curb & Gutter	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Site Preparation	7	18.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Canopy Installation	4	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Rough Grading	6	15.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Grading Haul	6	0.00	0.00	112.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1A Landscaping	0	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Trenching	2	5.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Building Construction	9	43.00	17.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Asphalt Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1B Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 1A Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**		**1.7949**	**1.7949**		**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0271	3.5100e-003	0.0306	7.8000e-003	3.3600e-003	0.0112		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0858**	**0.5425**	**0.5806**	**2.3100e-003**	**0.1503**	**4.3900e-003**	**0.1547**	**0.0405**	**4.1700e-003**	**0.0446**		**237.9372**	**237.9372**	**0.0137**		**238.2791**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**		**1.7949**	**1.7949**		**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0253	3.5100e-003	0.0289	7.3700e-003	3.3600e-003	0.0107		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1136	8.8000e-004	0.1145	0.0303	8.1000e-004	0.0311		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0858**	**0.5425**	**0.5806**	**2.3100e-003**	**0.1389**	**4.3900e-003**	**0.1433**	**0.0377**	**4.1700e-003**	**0.0419**		**237.9372**	**237.9372**	**0.0137**		**238.2791**

3.3 1A Demo Haul - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1266	0.0000	1.1266	0.1706	0.0000	0.1706			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1266**	**0.0000**	**1.1266**	**0.1706**	**0.0000**	**0.1706**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0594	2.0186	0.4622	5.1900e-003	0.1162	7.7200e-003	0.1240	0.0319	7.3800e-003	0.0392		566.0394	566.0394	0.0528		567.3592
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0594**	**2.0186**	**0.4622**	**5.1900e-003**	**0.1162**	**7.7200e-003**	**0.1240**	**0.0319**	**7.3800e-003**	**0.0392**		**566.0394**	**566.0394**	**0.0528**		**567.3592**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4816	0.0000	0.4816	0.0729	0.0000	0.0729			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.4816**	**0.0000**	**0.4816**	**0.0729**	**0.0000**	**0.0729**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0594	2.0186	0.4622	5.1900e-003	0.1083	7.7200e-003	0.1160	0.0299	7.3800e-003	0.0373		566.0394	566.0394	0.0528		567.3592
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0594**	**2.0186**	**0.4622**	**5.1900e-003**	**0.1083**	**7.7200e-003**	**0.1160**	**0.0299**	**7.3800e-003**	**0.0373**		**566.0394**	**566.0394**	**0.0528**		**567.3592**

3.4 1A Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0271	3.5100e-003	0.0306	7.8000e-003	3.3600e-003	0.0112		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0991**	**0.5517**	**0.6683**	**2.5600e-003**	**0.1750**	**4.5600e-003**	**0.1795**	**0.0470**	**4.3300e-003**	**0.0513**		**262.4446**	**262.4446**	**0.0145**		**262.8063**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0253	3.5100e-003	0.0289	7.3700e-003	3.3600e-003	0.0107		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1363	1.0500e-003	0.1374	0.0364	9.7000e-004	0.0374		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0991**	**0.5517**	**0.6683**	**2.5600e-003**	**0.1616**	**4.5600e-003**	**0.1662**	**0.0438**	**4.3300e-003**	**0.0481**		**262.4446**	**262.4446**	**0.0145**		**262.8063**

3.5 1A Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.0221**	**1.3974**	**7.4195**	**3.3102**	**1.2856**	**4.5958**		**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0271	3.5100e-003	0.0306	7.8000e-003	3.3600e-003	0.0112		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0858**	**0.5425**	**0.5806**	**2.3100e-003**	**0.1503**	**4.3900e-003**	**0.1547**	**0.0405**	**4.1700e-003**	**0.0446**		**237.9372**	**237.9372**	**0.0137**		**238.2791**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5744	0.0000	2.5744	1.4151	0.0000	1.4151			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**2.5744**	**1.3974**	**3.9718**	**1.4151**	**1.2856**	**2.7007**	**0.0000**	**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0253	3.5100e-003	0.0289	7.3700e-003	3.3600e-003	0.0107		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1136	8.8000e-004	0.1145	0.0303	8.1000e-004	0.0311		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0858**	**0.5425**	**0.5806**	**2.3100e-003**	**0.1389**	**4.3900e-003**	**0.1433**	**0.0377**	**4.1700e-003**	**0.0419**		**237.9372**	**237.9372**	**0.0137**		**238.2791**

3.6 1A Trenching - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3174	3.4639	3.6928	5.1700e-003		0.2077	0.2077		0.1910	0.1910		512.1545	512.1545	0.1620		516.2055
Total	**0.3174**	**3.4639**	**3.6928**	**5.1700e-003**		**0.2077**	**0.2077**		**0.1910**	**0.1910**		**512.1545**	**512.1545**	**0.1620**		**516.2055**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0271	3.5100e-003	0.0306	7.8000e-003	3.3600e-003	0.0112		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0222	0.0154	0.1462	4.1000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.8457	40.8457	1.3200e-003		40.8786
Total	**0.0414**	**0.5117**	**0.2882**	**1.4900e-003**	**0.0682**	**3.8000e-003**	**0.0720**	**0.0187**	**3.6300e-003**	**0.0223**		**156.2458**	**156.2458**	**0.0110**		**156.5219**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3174	3.4639	3.6928	5.1700e-003		0.2077	0.2077		0.1910	0.1910	0.0000	512.1545	512.1545	0.1620		516.2055
Total	**0.3174**	**3.4639**	**3.6928**	**5.1700e-003**		**0.2077**	**0.2077**		**0.1910**	**0.1910**	**0.0000**	**512.1545**	**512.1545**	**0.1620**		**516.2055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0253	3.5100e-003	0.0289	7.3700e-003	3.3600e-003	0.0107		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0222	0.0154	0.1462	4.1000e-004	0.0379	2.9000e-004	0.0382	0.0101	2.7000e-004	0.0104		40.8457	40.8457	1.3200e-003		40.8786
Total	**0.0414**	**0.5117**	**0.2882**	**1.4900e-003**	**0.0632**	**3.8000e-003**	**0.0670**	**0.0175**	**3.6300e-003**	**0.0211**		**156.2458**	**156.2458**	**0.0110**		**156.5219**

3.7 1A Concrete Curb & Gutter - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637		1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3764**	**12.7604**	**12.3130**	**0.0189**		**0.7196**	**0.7196**		**0.6637**	**0.6637**		**1,843.3191**	**1,843.3191**	**0.5671**		**1,857.4966**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637	0.0000	1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3764**	**12.7604**	**12.3130**	**0.0189**		**0.7196**	**0.7196**		**0.6637**	**0.6637**	**0.0000**	**1,843.3191**	**1,843.3191**	**0.5671**		**1,857.4966**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1514	1.1700e-003	0.1526	0.0404	1.0800e-003	0.0415		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1514**	**1.1700e-003**	**0.1526**	**0.0404**	**1.0800e-003**	**0.0415**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

3.8 1B Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0271	3.5100e-003	0.0306	7.8000e-003	3.3600e-003	0.0112		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1479	1.0500e-003	0.1489	0.0392	9.7000e-004	0.0402		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0991**	**0.5517**	**0.6683**	**2.5600e-003**	**0.1750**	**4.5600e-003**	**0.1795**	**0.0470**	**4.3300e-003**	**0.0513**		**262.4446**	**262.4446**	**0.0145**		**262.8063**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.7233**	**2.3904**	**10.1137**	**4.2454**	**2.1991**	**6.4445**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0253	3.5100e-003	0.0289	7.3700e-003	3.3600e-003	0.0107		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0799	0.0554	0.5263	1.4800e-003	0.1363	1.0500e-003	0.1374	0.0364	9.7000e-004	0.0374		147.0445	147.0445	4.7400e-003		147.1631
Total	**0.0991**	**0.5517**	**0.6683**	**2.5600e-003**	**0.1616**	**4.5600e-003**	**0.1662**	**0.0438**	**4.3300e-003**	**0.0481**		**262.4446**	**262.4446**	**0.0145**		**262.8063**

3.9 1A Canopy Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6836	6.3301	5.5974	7.3000e-003		0.4685	0.4685		0.4310	0.4310		723.0603	723.0603	0.2288		728.7796
Total	**0.6836**	**6.3301**	**5.5974**	**7.3000e-003**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**723.0603**	**723.0603**	**0.2288**		**728.7796**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0222	0.0154	0.1462	4.1000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.8457	40.8457	1.3200e-003		40.8786
Total	**0.0222**	**0.0154**	**0.1462**	**4.1000e-004**	**0.0411**	**2.9000e-004**	**0.0414**	**0.0109**	**2.7000e-004**	**0.0112**		**40.8457**	**40.8457**	**1.3200e-003**		**40.8786**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6836	6.3301	5.5974	7.3000e-003		0.4685	0.4685		0.4310	0.4310	0.0000	723.0603	723.0603	0.2288		728.7796
Total	**0.6836**	**6.3301**	**5.5974**	**7.3000e-003**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**723.0603**	**723.0603**	**0.2288**		**728.7796**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0222	0.0154	0.1462	4.1000e-004	0.0379	2.9000e-004	0.0382	0.0101	2.7000e-004	0.0104		40.8457	40.8457	1.3200e-003		40.8786
Total	**0.0222**	**0.0154**	**0.1462**	**4.1000e-004**	**0.0379**	**2.9000e-004**	**0.0382**	**0.0101**	**2.7000e-004**	**0.0104**		**40.8457**	**40.8457**	**1.3200e-003**		**40.8786**

3.10 1A Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637		1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.0760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3439**	**12.7604**	**12.3130**	**0.0189**		**0.7196**	**0.7196**		**0.6637**	**0.6637**		**1,843.3191**	**1,843.3191**	**0.5671**		**1,857.4966**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1643**	**1.1700e-003**	**0.1655**	**0.0436**	**1.0800e-003**	**0.0447**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2679	12.7604	12.3130	0.0189		0.7196	0.7196		0.6637	0.6637	0.0000	1,843.3191	1,843.3191	0.5671		1,857.4966
Paving	0.0760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3439**	**12.7604**	**12.3130**	**0.0189**		**0.7196**	**0.7196**		**0.6637**	**0.6637**	**0.0000**	**1,843.3191**	**1,843.3191**	**0.5671**		**1,857.4966**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0888	0.0616	0.5848	1.6400e-003	0.1514	1.1700e-003	0.1526	0.0404	1.0800e-003	0.0415		163.3828	163.3828	5.2700e-003		163.5146
Total	**0.0888**	**0.0616**	**0.5848**	**1.6400e-003**	**0.1514**	**1.1700e-003**	**0.1526**	**0.0404**	**1.0800e-003**	**0.0415**		**163.3828**	**163.3828**	**5.2700e-003**		**163.5146**

3.11 1B Rough Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.0221**	**1.3974**	**7.4195**	**3.3102**	**1.2856**	**4.5958**		**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0271	3.5100e-003	0.0306	7.8000e-003	3.3600e-003	0.0112		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0858**	**0.5425**	**0.5806**	**2.3100e-003**	**0.1503**	**4.3900e-003**	**0.1547**	**0.0405**	**4.1700e-003**	**0.0446**		**237.9372**	**237.9372**	**0.0137**		**238.2791**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5744	0.0000	2.5744	1.4151	0.0000	1.4151			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**2.5744**	**1.3974**	**3.9718**	**1.4151**	**1.2856**	**2.7007**	**0.0000**	**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0253	3.5100e-003	0.0289	7.3700e-003	3.3600e-003	0.0107		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0666	0.0462	0.4386	1.2300e-003	0.1136	8.8000e-004	0.1145	0.0303	8.1000e-004	0.0311		122.5371	122.5371	3.9500e-003		122.6359
Total	**0.0858**	**0.5425**	**0.5806**	**2.3100e-003**	**0.1389**	**4.3900e-003**	**0.1433**	**0.0377**	**4.1700e-003**	**0.0419**		**237.9372**	**237.9372**	**0.0137**		**238.2791**

3.12 1B Grading Haul - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3698	0.0000	6.3698	3.3481	0.0000	3.3481			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.3698**	**1.3974**	**7.7672**	**3.3481**	**1.2856**	**4.6337**		**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0666	2.2658	0.5188	5.8200e-003	0.1305	8.6600e-003	0.1391	0.0358	8.2900e-003	0.0440		635.3453	635.3453	0.0593		636.8267
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0666**	**2.2658**	**0.5188**	**5.8200e-003**	**0.1305**	**8.6600e-003**	**0.1391**	**0.0358**	**8.2900e-003**	**0.0440**		**635.3453**	**635.3453**	**0.0593**		**636.8267**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7231	0.0000	2.7231	1.4313	0.0000	1.4313			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**2.7231**	**1.3974**	**4.1205**	**1.4313**	**1.2856**	**2.7169**	**0.0000**	**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0666	2.2658	0.5188	5.8200e-003	0.1216	8.6600e-003	0.1303	0.0336	8.2900e-003	0.0419		635.3453	635.3453	0.0593		636.8267
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0666**	**2.2658**	**0.5188**	**5.8200e-003**	**0.1216**	**8.6600e-003**	**0.1303**	**0.0336**	**8.2900e-003**	**0.0419**		**635.3453**	**635.3453**	**0.0593**		**636.8267**

3.13 1A Landscaping - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0277	0.2632	7.4000e-004	0.0739	5.3000e-004	0.0745	0.0196	4.9000e-004	0.0201		73.5222	73.5222	2.3700e-003		73.5816
Total	**0.0400**	**0.0277**	**0.2632**	**7.4000e-004**	**0.0739**	**5.3000e-004**	**0.0745**	**0.0196**	**4.9000e-004**	**0.0201**		**73.5222**	**73.5222**	**2.3700e-003**		**73.5816**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0277	0.2632	7.4000e-004	0.0682	5.3000e-004	0.0687	0.0182	4.9000e-004	0.0187		73.5222	73.5222	2.3700e-003		73.5816
Total	**0.0400**	**0.0277**	**0.2632**	**7.4000e-004**	**0.0682**	**5.3000e-004**	**0.0687**	**0.0182**	**4.9000e-004**	**0.0187**		**73.5222**	**73.5222**	**2.3700e-003**		**73.5816**

3.14 1B Trenching - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3174	3.4639	3.6928	5.1700e-003		0.2077	0.2077		0.1910	0.1910		512.1545	512.1545	0.1620		516.2055
Total	**0.3174**	**3.4639**	**3.6928**	**5.1700e-003**		**0.2077**	**0.2077**		**0.1910**	**0.1910**		**512.1545**	**512.1545**	**0.1620**		**516.2055**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0271	3.5100e-003	0.0306	7.8000e-003	3.3600e-003	0.0112		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0222	0.0154	0.1462	4.1000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.8457	40.8457	1.3200e-003		40.8786
Total	**0.0414**	**0.5117**	**0.2882**	**1.4900e-003**	**0.0682**	**3.8000e-003**	**0.0720**	**0.0187**	**3.6300e-003**	**0.0223**		**156.2458**	**156.2458**	**0.0110**		**156.5219**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3174	3.4639	3.6928	5.1700e-003		0.2077	0.2077		0.1910	0.1910	0.0000	512.1545	512.1545	0.1620		516.2055
Total	**0.3174**	**3.4639**	**3.6928**	**5.1700e-003**		**0.2077**	**0.2077**		**0.1910**	**0.1910**	**0.0000**	**512.1545**	**512.1545**	**0.1620**		**516.2055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.4964	0.1420	1.0800e-003	0.0253	3.5100e-003	0.0289	7.3700e-003	3.3600e-003	0.0107		115.4001	115.4001	9.7200e-003		115.6432
Worker	0.0222	0.0154	0.1462	4.1000e-004	0.0379	2.9000e-004	0.0382	0.0101	2.7000e-004	0.0104		40.8457	40.8457	1.3200e-003		40.8786
Total	**0.0414**	**0.5117**	**0.2882**	**1.4900e-003**	**0.0632**	**3.8000e-003**	**0.0670**	**0.0175**	**3.6300e-003**	**0.0211**		**156.2458**	**156.2458**	**0.0110**		**156.5219**

3.15 1B Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0816	2.1095	0.6033	4.5800e-003	0.1151	0.0149	0.1300	0.0331	0.0143	0.0474		490.4504	490.4504	0.0413		491.4837
Worker	0.1910	0.1323	1.2573	3.5300e-003	0.3532	2.5200e-003	0.3558	0.0937	2.3200e-003	0.0960		351.2729	351.2729	0.0113		351.5563
Total	**0.2726**	**2.2418**	**1.8606**	**8.1100e-003**	**0.4683**	**0.0174**	**0.4858**	**0.1268**	**0.0166**	**0.1434**		**841.7233**	**841.7233**	**0.0527**		**843.0400**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0816	2.1095	0.6033	4.5800e-003	0.1077	0.0149	0.1226	0.0313	0.0143	0.0456		490.4504	490.4504	0.0413		491.4837
Worker	0.1910	0.1323	1.2573	3.5300e-003	0.3256	2.5200e-003	0.3281	0.0869	2.3200e-003	0.0892		351.2729	351.2729	0.0113		351.5563
Total	**0.2726**	**2.2418**	**1.8606**	**8.1100e-003**	**0.4333**	**0.0174**	**0.4507**	**0.1182**	**0.0166**	**0.1348**		**841.7233**	**841.7233**	**0.0527**		**843.0400**

3.15 1B Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0665	1.9153	0.5420	4.5400e-003	0.1151	9.5600e-003	0.1246	0.0331	9.1400e-003	0.0423		486.9858	486.9858	0.0392		487.9654
Worker	0.1787	0.1194	1.1492	3.4100e-003	0.3532	2.4800e-003	0.3557	0.0937	2.2800e-003	0.0960		340.1867	340.1867	0.0102		340.4428
Total	**0.2452**	**2.0347**	**1.6911**	**7.9500e-003**	**0.4683**	**0.0120**	**0.4804**	**0.1268**	**0.0114**	**0.1383**		**827.1725**	**827.1725**	**0.0494**		**828.4082**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0665	1.9153	0.5420	4.5400e-003	0.1077	9.5600e-003	0.1173	0.0313	9.1400e-003	0.0405		486.9858	486.9858	0.0392		487.9654
Worker	0.1787	0.1194	1.1492	3.4100e-003	0.3256	2.4800e-003	0.3281	0.0869	2.2800e-003	0.0892		340.1867	340.1867	0.0102		340.4428
Total	**0.2452**	**2.0347**	**1.6911**	**7.9500e-003**	**0.4333**	**0.0120**	**0.4453**	**0.1182**	**0.0114**	**0.1297**		**827.1725**	**827.1725**	**0.0494**		**828.4082**

3.16 1B Asphalt Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005		1,804.7070	1,804.7070	0.5670		1,818.8830
Paving	0.0543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2380**	**11.8015**	**12.2823**	**0.0189**		**0.6509**	**0.6509**		**0.6005**	**0.6005**		**1,804.7070**	**1,804.7070**	**0.5670**		**1,818.8830**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0555	0.5345	1.5900e-003	0.1643	1.1500e-003	0.1655	0.0436	1.0600e-003	0.0446		158.2264	158.2264	4.7600e-003		158.3455
Total	**0.0831**	**0.0555**	**0.5345**	**1.5900e-003**	**0.1643**	**1.1500e-003**	**0.1655**	**0.0436**	**1.0600e-003**	**0.0446**		**158.2264**	**158.2264**	**4.7600e-003**		**158.3455**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005	0.0000	1,804.7070	1,804.7070	0.5670		1,818.8830
Paving	0.0543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2380**	**11.8015**	**12.2823**	**0.0189**		**0.6509**	**0.6509**		**0.6005**	**0.6005**	**0.0000**	**1,804.7070**	**1,804.7070**	**0.5670**		**1,818.8830**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0555	0.5345	1.5900e-003	0.1514	1.1500e-003	0.1526	0.0404	1.0600e-003	0.0415		158.2264	158.2264	4.7600e-003		158.3455
Total	**0.0831**	**0.0555**	**0.5345**	**1.5900e-003**	**0.1514**	**1.1500e-003**	**0.1526**	**0.0404**	**1.0600e-003**	**0.0415**		**158.2264**	**158.2264**	**4.7600e-003**		**158.3455**

3.17 1B Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**23.0077**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0374	0.0250	0.2405	7.1000e-004	0.0739	5.2000e-004	0.0745	0.0196	4.8000e-004	0.0201		71.2019	71.2019	2.1400e-003		71.2555
Total	**0.0374**	**0.0250**	**0.2405**	**7.1000e-004**	**0.0739**	**5.2000e-004**	**0.0745**	**0.0196**	**4.8000e-004**	**0.0201**		**71.2019**	**71.2019**	**2.1400e-003**		**71.2555**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**23.0077**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0374	0.0250	0.2405	7.1000e-004	0.0682	5.2000e-004	0.0687	0.0182	4.8000e-004	0.0187		71.2019	71.2019	2.1400e-003		71.2555
Total	**0.0374**	**0.0250**	**0.2405**	**7.1000e-004**	**0.0682**	**5.2000e-004**	**0.0687**	**0.0182**	**4.8000e-004**	**0.0187**		**71.2019**	**71.2019**	**2.1400e-003**		**71.2555**

Cardiff ES Construction Phase 2 - San Diego County, Annual

Cardiff ES Construction Phase 2

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	2.03	1000sqft	1.59	2,030.00	0
Other Asphalt Surfaces	17.00	1000sqft	0.39	17,000.00	0
Other Non-Asphalt Surfaces	18.46	1000sqft	0.42	18,460.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment - Haul Phase

Off-road Equipment - Haul Phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Haul Phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - See CalEEMod Assumptions

Demolition -

Trips and VMT - See CalEEMod Assumptions

Architectural Coating - See CalEEMod Assumptions

Construction Off-road Equipment Mitigation - SDAPCD Rule 55

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1,015.00	2,770.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	3,045.00	8,309.00
tblArchitecturalCoating	ConstArea_Parking	2,128.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	6.00	2.00
tblConstructionPhase	NumDays	6.00	2.00
tblConstructionPhase	NumDays	220.00	106.00
tblConstructionPhase	NumDays	10.00	7.00
tblConstructionPhase	NumDays	10.00	14.00
tblConstructionPhase	PhaseEndDate	7/14/2020	6/26/2020
tblConstructionPhase	PhaseEndDate	8/11/2020	6/26/2020
tblConstructionPhase	PhaseEndDate	8/14/2020	7/1/2020
tblConstructionPhase	PhaseEndDate	8/24/2020	7/3/2020
tblConstructionPhase	PhaseEndDate	9/1/2020	7/3/2020
tblConstructionPhase	PhaseEndDate	9/1/2020	7/8/2020
tblConstructionPhase	PhaseEndDate	7/6/2021	12/3/2020
tblConstructionPhase	PhaseEndDate	7/20/2021	11/13/2020
tblConstructionPhase	PhaseEndDate	8/3/2021	12/3/2020
tblConstructionPhase	PhaseStartDate	7/15/2020	6/17/2020
tblConstructionPhase	PhaseStartDate	8/12/2020	6/27/2020
tblConstructionPhase	PhaseStartDate	8/15/2020	7/2/2020
tblConstructionPhase	PhaseStartDate	8/25/2020	7/2/2020
tblConstructionPhase	PhaseStartDate	9/2/2020	7/6/2020
tblConstructionPhase	PhaseStartDate	9/2/2020	7/9/2020

tblConstructionPhase	PhaseStartDate	7/7/2021	11/5/2020
tblConstructionPhase	PhaseStartDate	7/21/2021	11/15/2020
tblGrading	AcresOfGrading	0.00	2.40
tblGrading	MaterialExported	0.00	224.00
tblLandUse	LotAcreage	0.05	1.59
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	HaulingTripNumber	55.00	187.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1724	1.1893	0.9791	1.8300e-003	0.0284	0.0607	0.0891	7.9800e-003	0.0579	0.0659	0.0000	156.2112	156.2112	0.0299	0.0000	156.9583
Maximum	**0.1724**	**1.1893**	**0.9791**	**1.8300e-003**	**0.0284**	**0.0607**	**0.0891**	**7.9800e-003**	**0.0579**	**0.0659**	**0.0000**	**156.2112**	**156.2112**	**0.0299**	**0.0000**	**156.9583**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1724	1.1893	0.9791	1.8300e-003	0.0182	0.0607	0.0790	5.0900e-003	0.0579	0.0630	0.0000	156.2111	156.2111	0.0299	0.0000	156.9582
Maximum	**0.1724**	**1.1893**	**0.9791**	**1.8300e-003**	**0.0182**	**0.0607**	**0.0790**	**5.0900e-003**	**0.0579**	**0.0630**	**0.0000**	**156.2111**	**156.2111**	**0.0299**	**0.0000**	**156.9582**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**35.80**	**0.00**	**11.41**	**36.22**	**0.00**	**4.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-17-2020**	**9-16-2020**	0.7116	0.7116
2	**9-17-2020**	**9-30-2020**	0.1026	0.1026
		Highest	0.7116	0.7116

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/17/2020	6/26/2020	5	8	
2	Demolition Haul	Demolition	6/17/2020	6/26/2020	5	8	
3	Site Preparation	Site Preparation	6/27/2020	7/1/2020	5	3	
4	Grading	Grading	7/2/2020	7/3/2020	5	2	
5	Grading Haul	Grading	7/2/2020	7/3/2020	5	2	
6	Utility Trenching	Trenching	7/6/2020	7/8/2020	5	3	
7	Building Construction	Building Construction	7/9/2020	12/3/2020	5	106	
8	Paving	Paving	11/5/2020	11/13/2020	5	7	
9	Architectural Coating	Architectural Coating	11/15/2020	12/3/2020	5	14	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 1

Acres of Paving: 0.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 8,309; Non-Residential Outdoor: 2,770; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition Haul	Rubber Tired Dozers	0	8.00	247	0.40
Demolition Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading Haul	Graders	0	8.00	187	0.41
Grading Haul	Rubber Tired Dozers	0	8.00	247	0.40
Grading Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Skid Steer Loaders	1	8.00	65	0.37
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	16.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition Haul	0	0.00	0.00	187.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading Haul	0	0.00	0.00	28.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	2	5.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.5000e-003	0.0838	0.0586	1.0000e-004		4.6100e-003	4.6100e-003		4.3000e-003	4.3000e-003	0.0000	8.4271	8.4271	2.1700e-003	0.0000	8.4812
Total	**8.5000e-003**	**0.0838**	**0.0586**	**1.0000e-004**		**4.6100e-003**	**4.6100e-003**		**4.3000e-003**	**4.3000e-003**	**0.0000**	**8.4271**	**8.4271**	**2.1700e-003**	**0.0000**	**8.4812**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	1.8200e-003	4.8000e-004	0.0000	1.1000e-004	1.0000e-005	1.2000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4222	0.4222	3.0000e-005	0.0000	0.4230
Worker	1.9000e-004	1.4000e-004	1.3900e-003	0.0000	4.2000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3769	0.3769	1.0000e-005	0.0000	0.3772
Total	**2.5000e-004**	**1.9600e-003**	**1.8700e-003**	**0.0000**	**5.3000e-004**	**1.0000e-005**	**5.4000e-004**	**1.4000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**0.7991**	**0.7991**	**4.0000e-005**	**0.0000**	**0.8002**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.5000e-003	0.0838	0.0586	1.0000e-004		4.6100e-003	4.6100e-003		4.3000e-003	4.3000e-003	0.0000	8.4271	8.4271	2.1700e-003	0.0000	8.4812
Total	**8.5000e-003**	**0.0838**	**0.0586**	**1.0000e-004**		**4.6100e-003**	**4.6100e-003**		**4.3000e-003**	**4.3000e-003**	**0.0000**	**8.4271**	**8.4271**	**2.1700e-003**	**0.0000**	**8.4812**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	1.8200e-003	4.8000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4222	0.4222	3.0000e-005	0.0000	0.4230
Worker	1.9000e-004	1.4000e-004	1.3900e-003	0.0000	3.8000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3769	0.3769	1.0000e-005	0.0000	0.3772
Total	**2.5000e-004**	**1.9600e-003**	**1.8700e-003**	**0.0000**	**4.8000e-004**	**1.0000e-005**	**5.0000e-004**	**1.3000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**0.7991**	**0.7991**	**4.0000e-005**	**0.0000**	**0.8002**

3.3 Demolition Haul - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.9800e-003	0.0000	5.9800e-003	9.1000e-004	0.0000	9.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.9800e-003**	**0.0000**	**5.9800e-003**	**9.1000e-004**	**0.0000**	**9.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.5000e-004	0.0266	6.0900e-003	7.0000e-005	1.6000e-003	8.0000e-005	1.6800e-003	4.4000e-004	8.0000e-005	5.2000e-004	0.0000	7.2112	7.2112	6.5000e-004	0.0000	7.2274
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.5000e-004**	**0.0266**	**6.0900e-003**	**7.0000e-005**	**1.6000e-003**	**8.0000e-005**	**1.6800e-003**	**4.4000e-004**	**8.0000e-005**	**5.2000e-004**	**0.0000**	**7.2112**	**7.2112**	**6.5000e-004**	**0.0000**	**7.2274**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5600e-003	0.0000	2.5600e-003	3.9000e-004	0.0000	3.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5600e-003**	**0.0000**	**2.5600e-003**	**3.9000e-004**	**0.0000**	**3.9000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.5000e-004	0.0266	6.0900e-003	7.0000e-005	1.4900e-003	8.0000e-005	1.5800e-003	4.1000e-004	8.0000e-005	4.9000e-004	0.0000	7.2112	7.2112	6.5000e-004	0.0000	7.2274
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.5000e-004**	**0.0266**	**6.0900e-003**	**7.0000e-005**	**1.4900e-003**	**8.0000e-005**	**1.5800e-003**	**4.1000e-004**	**8.0000e-005**	**4.9000e-004**	**0.0000**	**7.2112**	**7.2112**	**6.5000e-004**	**0.0000**	**7.2274**

3.4 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4800e-003	0.0299	0.0169	4.0000e-005		1.1700e-003	1.1700e-003		1.0700e-003	1.0700e-003	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.4800e-003**	**0.0299**	**0.0169**	**4.0000e-005**	**2.3900e-003**	**1.1700e-003**	**3.5600e-003**	**2.6000e-004**	**1.0700e-003**	**1.3300e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	6.8000e-004	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1583	0.1583	1.0000e-005	0.0000	0.1586
Worker	4.0000e-005	3.0000e-005	3.2000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0870	0.0870	0.0000	0.0000	0.0871
Total	**6.0000e-005**	**7.1000e-004**	**5.0000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.2453**	**0.2453**	**1.0000e-005**	**0.0000**	**0.2457**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0200e-003	0.0000	1.0200e-003	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4800e-003	0.0299	0.0169	4.0000e-005		1.1700e-003	1.1700e-003		1.0700e-003	1.0700e-003	0.0000	3.2290	3.2290	1.0400e-003	0.0000	3.2551
Total	**2.4800e-003**	**0.0299**	**0.0169**	**4.0000e-005**	**1.0200e-003**	**1.1700e-003**	**2.1900e-003**	**1.1000e-004**	**1.0700e-003**	**1.1800e-003**	**0.0000**	**3.2290**	**3.2290**	**1.0400e-003**	**0.0000**	**3.2551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	6.8000e-004	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1583	0.1583	1.0000e-005	0.0000	0.1586
Worker	4.0000e-005	3.0000e-005	3.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0870	0.0870	0.0000	0.0000	0.0871
Total	**6.0000e-005**	**7.1000e-004**	**5.0000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.2453**	**0.2453**	**1.0000e-005**	**0.0000**	**0.2457**

3.5 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.5500e-003	0.0000	6.5500e-003	3.3700e-003	0.0000	3.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0213	9.9400e-003	2.0000e-005		9.9000e-004	9.9000e-004		9.1000e-004	9.1000e-004	0.0000	1.8111	1.8111	5.9000e-004	0.0000	1.8258
Total	**1.9200e-003**	**0.0213**	**9.9400e-003**	**2.0000e-005**	**6.5500e-003**	**9.9000e-004**	**7.5400e-003**	**3.3700e-003**	**9.1000e-004**	**4.2800e-003**	**0.0000**	**1.8111**	**1.8111**	**5.9000e-004**	**0.0000**	**1.8258**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	4.6000e-004	1.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1055	0.1055	1.0000e-005	0.0000	0.1058
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0725	0.0725	0.0000	0.0000	0.0725
Total	**6.0000e-005**	**4.9000e-004**	**3.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1780**	**0.1780**	**1.0000e-005**	**0.0000**	**0.1783**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.8000e-003	0.0000	2.8000e-003	1.4400e-003	0.0000	1.4400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0213	9.9400e-003	2.0000e-005		9.9000e-004	9.9000e-004		9.1000e-004	9.1000e-004	0.0000	1.8111	1.8111	5.9000e-004	0.0000	1.8258
Total	**1.9200e-003**	**0.0213**	**9.9400e-003**	**2.0000e-005**	**2.8000e-003**	**9.9000e-004**	**3.7900e-003**	**1.4400e-003**	**9.1000e-004**	**2.3500e-003**	**0.0000**	**1.8111**	**1.8111**	**5.9000e-004**	**0.0000**	**1.8258**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	4.6000e-004	1.2000e-004	0.0000	2.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1055	0.1055	1.0000e-005	0.0000	0.1058
Worker	4.0000e-005	3.0000e-005	2.7000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0725	0.0725	0.0000	0.0000	0.0725
Total	**6.0000e-005**	**4.9000e-004**	**3.9000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1780**	**0.1780**	**1.0000e-005**	**0.0000**	**0.1783**

3.6 Grading Haul - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2900e-003	0.0000	1.2900e-003	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.2900e-003**	**0.0000**	**1.2900e-003**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	3.9800e-003	9.1000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	1.0798	1.0798	1.0000e-004	0.0000	1.0822
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1000e-004**	**3.9800e-003**	**9.1000e-004**	**1.0000e-005**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**7.0000e-005**	**1.0000e-005**	**8.0000e-005**	**0.0000**	**1.0798**	**1.0798**	**1.0000e-004**	**0.0000**	**1.0822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.5000e-004	0.0000	5.5000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.5000e-004**	**0.0000**	**5.5000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	3.9800e-003	9.1000e-004	1.0000e-005	2.2000e-004	1.0000e-005	2.4000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0798	1.0798	1.0000e-004	0.0000	1.0822
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1000e-004**	**3.9800e-003**	**9.1000e-004**	**1.0000e-005**	**2.2000e-004**	**1.0000e-005**	**2.4000e-004**	**6.0000e-005**	**1.0000e-005**	**7.0000e-005**	**0.0000**	**1.0798**	**1.0798**	**1.0000e-004**	**0.0000**	**1.0822**

3.7 Utility Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.3000e-004	4.7500e-003	5.5000e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.5000e-004	2.5000e-004	0.0000	0.6817	0.6817	2.2000e-004	0.0000	0.6872
Total	**4.3000e-004**	**4.7500e-003**	**5.5000e-003**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.6817**	**0.6817**	**2.2000e-004**	**0.0000**	**0.6872**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	6.8000e-004	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1583	0.1583	1.0000e-005	0.0000	0.1586
Worker	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0544	0.0544	0.0000	0.0000	0.0544
Total	**5.0000e-005**	**7.0000e-004**	**3.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.2127**	**0.2127**	**1.0000e-005**	**0.0000**	**0.2130**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.3000e-004	4.7500e-003	5.5000e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.5000e-004	2.5000e-004	0.0000	0.6817	0.6817	2.2000e-004	0.0000	0.6872
Total	**4.3000e-004**	**4.7500e-003**	**5.5000e-003**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.6817**	**0.6817**	**2.2000e-004**	**0.0000**	**0.6872**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	6.8000e-004	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1583	0.1583	1.0000e-005	0.0000	0.1586
Worker	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0544	0.0544	0.0000	0.0000	0.0544
Total	**5.0000e-005**	**7.0000e-004**	**3.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**2.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.2127**	**0.2127**	**1.0000e-005**	**0.0000**	**0.2130**

3.8 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1213	0.9240	0.7896	1.3300e-003		0.0503	0.0503		0.0482	0.0482	0.0000	110.0515	110.0515	0.0223	0.0000	110.6099
Total	**0.1213**	**0.9240**	**0.7896**	**1.3300e-003**		**0.0503**	**0.0503**		**0.0482**	**0.0482**	**0.0000**	**110.0515**	**110.0515**	**0.0223**	**0.0000**	**110.6099**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2100e-003	0.0363	9.6300e-003	9.0000e-005	2.1100e-003	1.8000e-004	2.2900e-003	6.1000e-004	1.7000e-004	7.8000e-004	0.0000	8.3908	8.3908	6.4000e-004	0.0000	8.4069
Worker	3.1300e-003	2.3100e-003	0.0227	7.0000e-005	6.8000e-003	5.0000e-005	6.8500e-003	1.8100e-003	5.0000e-005	1.8500e-003	0.0000	6.1469	6.1469	1.8000e-004	0.0000	6.1516
Total	**4.3400e-003**	**0.0386**	**0.0323**	**1.6000e-004**	**8.9100e-003**	**2.3000e-004**	**9.1400e-003**	**2.4200e-003**	**2.2000e-004**	**2.6300e-003**	**0.0000**	**14.5377**	**14.5377**	**8.2000e-004**	**0.0000**	**14.5584**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1213	0.9240	0.7896	1.3300e-003		0.0503	0.0503		0.0482	0.0482	0.0000	110.0514	110.0514	0.0223	0.0000	110.6098
Total	**0.1213**	**0.9240**	**0.7896**	**1.3300e-003**		**0.0503**	**0.0503**		**0.0482**	**0.0482**	**0.0000**	**110.0514**	**110.0514**	**0.0223**	**0.0000**	**110.6098**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2100e-003	0.0363	9.6300e-003	9.0000e-005	1.9800e-003	1.8000e-004	2.1500e-003	5.8000e-004	1.7000e-004	7.5000e-004	0.0000	8.3908	8.3908	6.4000e-004	0.0000	8.4069
Worker	3.1300e-003	2.3100e-003	0.0227	7.0000e-005	6.2700e-003	5.0000e-005	6.3200e-003	1.6800e-003	5.0000e-005	1.7200e-003	0.0000	6.1469	6.1469	1.8000e-004	0.0000	6.1516
Total	**4.3400e-003**	**0.0386**	**0.0323**	**1.6000e-004**	**8.2500e-003**	**2.3000e-004**	**8.4700e-003**	**2.2600e-003**	**2.2000e-004**	**2.4700e-003**	**0.0000**	**14.5377**	**14.5377**	**8.2000e-004**	**0.0000**	**14.5584**

3.9 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.0400e-003	0.0406	0.0413	6.0000e-005		2.3000e-003	2.3000e-003		2.1200e-003	2.1200e-003	0.0000	5.4270	5.4270	1.7200e-003	0.0000	5.4700
Paving	5.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.5500e-003**	**0.0406**	**0.0413**	**6.0000e-005**		**2.3000e-003**	**2.3000e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**5.4270**	**5.4270**	**1.7200e-003**	**0.0000**	**5.4700**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.4000e-004	1.4000e-003	0.0000	4.2000e-004	0.0000	4.2000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3806	0.3806	1.0000e-005	0.0000	0.3809
Total	**1.9000e-004**	**1.4000e-004**	**1.4000e-003**	**0.0000**	**4.2000e-004**	**0.0000**	**4.2000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3806**	**0.3806**	**1.0000e-005**	**0.0000**	**0.3809**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.0400e-003	0.0406	0.0413	6.0000e-005		2.3000e-003	2.3000e-003		2.1200e-003	2.1200e-003	0.0000	5.4270	5.4270	1.7200e-003	0.0000	5.4700
Paving	5.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.5500e-003**	**0.0406**	**0.0413**	**6.0000e-005**		**2.3000e-003**	**2.3000e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**5.4270**	**5.4270**	**1.7200e-003**	**0.0000**	**5.4700**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.4000e-004	1.4000e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3806	0.3806	1.0000e-005	0.0000	0.3809
Total	**1.9000e-004**	**1.4000e-004**	**1.4000e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3806**	**0.3806**	**1.0000e-005**	**0.0000**	**0.3809**

3.10 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0257					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7000e-003	0.0118	0.0128	2.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	1.7873	1.7873	1.4000e-004	0.0000	1.7907
Total	**0.0274**	**0.0118**	**0.0128**	**2.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.8000e-004**	**7.8000e-004**	**0.0000**	**1.7873**	**1.7873**	**1.4000e-004**	**0.0000**	**1.7907**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	5.6000e-004	0.0000	1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.1522	0.1522	0.0000	0.0000	0.1523
Total	**8.0000e-005**	**6.0000e-005**	**5.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1522**	**0.1522**	**0.0000**	**0.0000**	**0.1523**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0257					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7000e-003	0.0118	0.0128	2.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	1.7873	1.7873	1.4000e-004	0.0000	1.7907
Total	**0.0274**	**0.0118**	**0.0128**	**2.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.8000e-004**	**7.8000e-004**	**0.0000**	**1.7873**	**1.7873**	**1.4000e-004**	**0.0000**	**1.7907**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	5.6000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1522	0.1522	0.0000	0.0000	0.1523
Total	**8.0000e-005**	**6.0000e-005**	**5.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1522**	**0.1522**	**0.0000**	**0.0000**	**0.1523**

Cardiff ES Construction Phase 2 - San Diego County, Summer

Cardiff ES Construction Phase 2

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	2.03	1000sqft	1.59	2,030.00	0
Other Asphalt Surfaces	17.00	1000sqft	0.39	17,000.00	0
Other Non-Asphalt Surfaces	18.46	1000sqft	0.42	18,460.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment - Haul Phase

Off-road Equipment - Haul Phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Haul Phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - See CalEEMod Assumptions

Demolition -

Trips and VMT - See CalEEMod Assumptions

Architectural Coating - See CalEEMod Assumptions

Construction Off-road Equipment Mitigation - SDAPCD Rule 55

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1,015.00	2,770.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	3,045.00	8,309.00
tblArchitecturalCoating	ConstArea_Parking	2,128.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	6.00	2.00
tblConstructionPhase	NumDays	6.00	2.00
tblConstructionPhase	NumDays	220.00	106.00
tblConstructionPhase	NumDays	10.00	7.00
tblConstructionPhase	NumDays	10.00	14.00
tblConstructionPhase	PhaseEndDate	7/14/2020	6/26/2020
tblConstructionPhase	PhaseEndDate	8/11/2020	6/26/2020
tblConstructionPhase	PhaseEndDate	8/14/2020	7/1/2020
tblConstructionPhase	PhaseEndDate	8/24/2020	7/3/2020
tblConstructionPhase	PhaseEndDate	9/1/2020	7/3/2020
tblConstructionPhase	PhaseEndDate	9/1/2020	7/8/2020

tblConstructionPhase	PhaseEndDate	7/6/2021	12/3/2020
tblConstructionPhase	PhaseEndDate	7/20/2021	11/13/2020
tblConstructionPhase	PhaseEndDate	8/3/2021	12/3/2020
tblConstructionPhase	PhaseStartDate	7/15/2020	6/17/2020
tblConstructionPhase	PhaseStartDate	8/12/2020	6/27/2020
tblConstructionPhase	PhaseStartDate	8/15/2020	7/2/2020
tblConstructionPhase	PhaseStartDate	8/25/2020	7/2/2020
tblConstructionPhase	PhaseStartDate	9/2/2020	7/6/2020
tblConstructionPhase	PhaseStartDate	9/2/2020	7/9/2020
tblConstructionPhase	PhaseStartDate	7/7/2021	11/5/2020
tblConstructionPhase	PhaseStartDate	7/21/2021	11/15/2020
tblGrading	AcresOfGrading	0.00	2.40
tblGrading	MaterialExported	0.00	224.00
tblLandUse	LotAcreage	0.05	1.59
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	HaulingTripNumber	55.00	187.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	6.2901	29.7741	27.7558	0.0471	8.1945	1.6098	9.1999	3.6039	1.5188	4.5294	0.0000	4,551.1494	4,551.1494	1.0271	0.0000	4,570.7797
Maximum	**6.2901**	**29.7741**	**27.7558**	**0.0471**	**8.1945**	**1.6098**	**9.1999**	**3.6039**	**1.5188**	**4.5294**	**0.0000**	**4,551.1494**	**4,551.1494**	**1.0271**	**0.0000**	**4,570.7797**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	6.2901	29.7741	27.7558	0.0471	3.6809	1.6098	4.6863	1.5899	1.5188	2.5154	0.0000	4,551.1494	4,551.1494	1.0271	0.0000	4,570.7797
Maximum	**6.2901**	**29.7741**	**27.7558**	**0.0471**	**3.6809**	**1.6098**	**4.6863**	**1.5899**	**1.5188**	**2.5154**	**0.0000**	**4,551.1494**	**4,551.1494**	**1.0271**	**0.0000**	**4,570.7797**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**55.08**	**0.00**	**49.06**	**55.88**	**0.00**	**44.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/17/2020	6/26/2020	5	8	
2	Demolition Haul	Demolition	6/17/2020	6/26/2020	5	8	
3	Site Preparation	Site Preparation	6/27/2020	7/1/2020	5	3	
4	Grading	Grading	7/2/2020	7/3/2020	5	2	
5	Grading Haul	Grading	7/2/2020	7/3/2020	5	2	
6	Utility Trenching	Trenching	7/6/2020	7/8/2020	5	3	
7	Building Construction	Building Construction	7/9/2020	12/3/2020	5	106	
8	Paving	Paving	11/5/2020	11/13/2020	5	7	
9	Architectural Coating	Architectural Coating	11/15/2020	12/3/2020	5	14	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 1

Acres of Paving: 0.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 8,309; Non-Residential Outdoor: 2,770; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition Haul	Rubber Tired Dozers	0	8.00	247	0.40
Demolition Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading Haul	Graders	0	8.00	187	0.41
Grading Haul	Rubber Tired Dozers	0	8.00	247	0.40
Grading Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Skid Steer Loaders	1	8.00	65	0.37
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	16.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition Haul	0	0.00	0.00	187.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading Haul	0	0.00	0.00	28.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	2	5.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761		2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**		**1.1525**	**1.1525**		**1.0761**	**1.0761**		**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0271	2.2100e-003	0.0293	7.8000e-003	2.1100e-003	9.9100e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0477	0.0321	0.3685	1.1000e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		109.5571	109.5571	3.2700e-003		109.6389
Total	**0.0627**	**0.4832**	**0.4834**	**2.2000e-003**	**0.1339**	**2.9600e-003**	**0.1368**	**0.0361**	**2.8000e-003**	**0.0389**		**227.1732**	**227.1732**	**0.0120**		**227.4719**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761	0.0000	2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**		**1.1525**	**1.1525**		**1.0761**	**1.0761**	**0.0000**	**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0253	2.2100e-003	0.0276	7.3700e-003	2.1100e-003	9.4800e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0477	0.0321	0.3685	1.1000e-003	0.0984	7.5000e-004	0.0992	0.0263	6.9000e-004	0.0270		109.5571	109.5571	3.2700e-003		109.6389
Total	**0.0627**	**0.4832**	**0.4834**	**2.2000e-003**	**0.1238**	**2.9600e-003**	**0.1267**	**0.0337**	**2.8000e-003**	**0.0365**		**227.1732**	**227.1732**	**0.0120**		**227.4719**

3.3 Demolition Haul - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4950	0.0000	1.4950	0.2264	0.0000	0.2264			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.4950**	**0.0000**	**1.4950**	**0.2264**	**0.0000**	**0.2264**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1848	6.5208	1.4805	0.0183	0.4085	0.0208	0.4293	0.1119	0.0199	0.1318		2,001.6636	2,001.6636	0.1763		2,006.0715
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1848**	**6.5208**	**1.4805**	**0.0183**	**0.4085**	**0.0208**	**0.4293**	**0.1119**	**0.0199**	**0.1318**		**2,001.6636**	**2,001.6636**	**0.1763**		**2,006.0715**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6391	0.0000	0.6391	0.0968	0.0000	0.0968			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.6391**	**0.0000**	**0.6391**	**0.0968**	**0.0000**	**0.0968**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1848	6.5208	1.4805	0.0183	0.3806	0.0208	0.4014	0.1051	0.0199	0.1250		2,001.6636	2,001.6636	0.1763		2,006.0715
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1848**	**6.5208**	**1.4805**	**0.0183**	**0.3806**	**0.0208**	**0.4014**	**0.1051**	**0.0199**	**0.1250**		**2,001.6636**	**2,001.6636**	**0.1763**		**2,006.0715**

3.4 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.6521	19.9196	11.2678	0.0245		0.7771	0.7771		0.7149	0.7149		2,372.9062	2,372.9062	0.7675		2,392.0924
Total	**1.6521**	**19.9196**	**11.2678**	**0.0245**	**1.5908**	**0.7771**	**2.3678**	**0.1718**	**0.7149**	**0.8867**		**2,372.9062**	**2,372.9062**	**0.7675**		**2,392.0924**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0271	2.2100e-003	0.0293	7.8000e-003	2.1100e-003	9.9100e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0294	0.0198	0.2268	6.8000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		67.4198	67.4198	2.0100e-003		67.4701
Total	**0.0443**	**0.4708**	**0.3417**	**1.7800e-003**	**0.0928**	**2.6700e-003**	**0.0955**	**0.0252**	**2.5300e-003**	**0.0278**		**185.0358**	**185.0358**	**0.0107**		**185.3030**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6801	0.0000	0.6801	0.0734	0.0000	0.0734			0.0000			0.0000
Off-Road	1.6521	19.9196	11.2678	0.0245		0.7771	0.7771		0.7149	0.7149	0.0000	2,372.9062	2,372.9062	0.7675		2,392.0924
Total	**1.6521**	**19.9196**	**11.2678**	**0.0245**	**0.6801**	**0.7771**	**1.4571**	**0.0734**	**0.7149**	**0.7883**	**0.0000**	**2,372.9062**	**2,372.9062**	**0.7675**		**2,392.0924**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0253	2.2100e-003	0.0276	7.3700e-003	2.1100e-003	9.4800e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0294	0.0198	0.2268	6.8000e-004	0.0606	4.6000e-004	0.0610	0.0162	4.2000e-004	0.0166		67.4198	67.4198	2.0100e-003		67.4701
Total	**0.0443**	**0.4708**	**0.3417**	**1.7800e-003**	**0.0859**	**2.6700e-003**	**0.0886**	**0.0235**	**2.5300e-003**	**0.0261**		**185.0358**	**185.0358**	**0.0107**		**185.3030**

3.5 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9219	21.3418	9.9355	0.0206		0.9902	0.9902		0.9110	0.9110		1,996.4061	1,996.4061	0.6457		2,012.5480
Total	**1.9219**	**21.3418**	**9.9355**	**0.0206**	**6.5523**	**0.9902**	**7.5425**	**3.3675**	**0.9110**	**4.2784**		**1,996.4061**	**1,996.4061**	**0.6457**		**2,012.5480**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0271	2.2100e-003	0.0293	7.8000e-003	2.1100e-003	9.9100e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0367	0.0247	0.2835	8.5000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		84.2747	84.2747	2.5200e-003		84.3376
Total	**0.0517**	**0.4758**	**0.3984**	**1.9500e-003**	**0.1092**	**2.7900e-003**	**0.1120**	**0.0296**	**2.6400e-003**	**0.0322**		**201.8907**	**201.8907**	**0.0112**		**202.1706**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	1.9219	21.3418	9.9355	0.0206		0.9902	0.9902		0.9110	0.9110	0.0000	1,996.4061	1,996.4061	0.6457		2,012.5480
Total	**1.9219**	**21.3418**	**9.9355**	**0.0206**	**2.8011**	**0.9902**	**3.7913**	**1.4396**	**0.9110**	**2.3506**	**0.0000**	**1,996.4061**	**1,996.4061**	**0.6457**		**2,012.5480**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0253	2.2100e-003	0.0276	7.3700e-003	2.1100e-003	9.4800e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0367	0.0247	0.2835	8.5000e-004	0.0757	5.8000e-004	0.0763	0.0202	5.3000e-004	0.0207		84.2747	84.2747	2.5200e-003		84.3376
Total	**0.0517**	**0.4758**	**0.3984**	**1.9500e-003**	**0.1011**	**2.7900e-003**	**0.1039**	**0.0276**	**2.6400e-003**	**0.0302**		**201.8907**	**201.8907**	**0.0112**		**202.1706**

3.6 Grading Haul - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2883	0.0000	1.2883	0.1398	0.0000	0.1398			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.2883**	**0.0000**	**1.2883**	**0.1398**	**0.0000**	**0.1398**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1107	3.9055	0.8867	0.0110	0.2446	0.0125	0.2571	0.0670	0.0119	0.0790		1,198.8573	1,198.8573	0.1056		1,201.4974
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1107**	**3.9055**	**0.8867**	**0.0110**	**0.2446**	**0.0125**	**0.2571**	**0.0670**	**0.0119**	**0.0790**		**1,198.8573**	**1,198.8573**	**0.1056**		**1,201.4974**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5508	0.0000	0.5508	0.0598	0.0000	0.0598			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.5508**	**0.0000**	**0.5508**	**0.0598**	**0.0000**	**0.0598**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1107	3.9055	0.8867	0.0110	0.2280	0.0125	0.2404	0.0630	0.0119	0.0749		1,198.8573	1,198.8573	0.1056		1,201.4974
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1107**	**3.9055**	**0.8867**	**0.0110**	**0.2280**	**0.0125**	**0.2404**	**0.0630**	**0.0119**	**0.0749**		**1,198.8573**	**1,198.8573**	**0.1056**		**1,201.4974**

3.7 Utility Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2894	3.1675	3.6697	5.1700e-003		0.1791	0.1791		0.1648	0.1648		500.9372	500.9372	0.1620		504.9876
Total	**0.2894**	**3.1675**	**3.6697**	**5.1700e-003**		**0.1791**	**0.1791**		**0.1648**	**0.1648**		**500.9372**	**500.9372**	**0.1620**		**504.9876**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0271	2.2100e-003	0.0293	7.8000e-003	2.1100e-003	9.9100e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0184	0.0124	0.1417	4.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		42.1374	42.1374	1.2600e-003		42.1688
Total	**0.0333**	**0.4634**	**0.2566**	**1.5200e-003**	**0.0682**	**2.5000e-003**	**0.0707**	**0.0187**	**2.3800e-003**	**0.0211**		**159.7534**	**159.7534**	**9.9400e-003**		**160.0018**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2894	3.1675	3.6697	5.1700e-003		0.1791	0.1791		0.1648	0.1648	0.0000	500.9372	500.9372	0.1620		504.9876
Total	**0.2894**	**3.1675**	**3.6697**	**5.1700e-003**		**0.1791**	**0.1791**		**0.1648**	**0.1648**	**0.0000**	**500.9372**	**500.9372**	**0.1620**		**504.9876**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0253	2.2100e-003	0.0276	7.3700e-003	2.1100e-003	9.4800e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0184	0.0124	0.1417	4.2000e-004	0.0379	2.9000e-004	0.0382	0.0101	2.7000e-004	0.0104		42.1374	42.1374	1.2600e-003		42.1688
Total	**0.0333**	**0.4634**	**0.2566**	**1.5200e-003**	**0.0632**	**2.5000e-003**	**0.0657**	**0.0175**	**2.3800e-003**	**0.0199**		**159.7534**	**159.7534**	**9.9400e-003**		**160.0018**

3.8 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089		2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**		**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0224	0.6766	0.1724	1.6400e-003	0.0406	3.3100e-003	0.0439	0.0117	3.1700e-003	0.0149		176.4241	176.4241	0.0130		176.7494
Worker	0.0587	0.0396	0.4535	1.3500e-003	0.1314	9.2000e-004	0.1324	0.0349	8.5000e-004	0.0357		134.8395	134.8395	4.0300e-003		134.9402
Total	**0.0811**	**0.7161**	**0.6259**	**2.9900e-003**	**0.1721**	**4.2300e-003**	**0.1763**	**0.0466**	**4.0200e-003**	**0.0506**		**311.2636**	**311.2636**	**0.0170**		**311.6896**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089	0.0000	2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**	**0.0000**	**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0224	0.6766	0.1724	1.6400e-003	0.0380	3.3100e-003	0.0413	0.0111	3.1700e-003	0.0142		176.4241	176.4241	0.0130		176.7494
Worker	0.0587	0.0396	0.4535	1.3500e-003	0.1212	9.2000e-004	0.1221	0.0323	8.5000e-004	0.0332		134.8395	134.8395	4.0300e-003		134.9402
Total	**0.0811**	**0.7161**	**0.6259**	**2.9900e-003**	**0.1592**	**4.2300e-003**	**0.1634**	**0.0434**	**4.0200e-003**	**0.0474**		**311.2636**	**311.2636**	**0.0170**		**311.6896**

3.9 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051		1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1460					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3007**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**		**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0371	0.4252	1.2700e-003	0.1232	8.6000e-004	0.1241	0.0327	8.0000e-004	0.0335		126.4121	126.4121	3.7700e-003		126.5064
Total	**0.0550**	**0.0371**	**0.4252**	**1.2700e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**8.0000e-004**	**0.0335**		**126.4121**	**126.4121**	**3.7700e-003**		**126.5064**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051	0.0000	1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1460					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3007**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**	**0.0000**	**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0371	0.4252	1.2700e-003	0.1136	8.6000e-004	0.1145	0.0303	8.0000e-004	0.0311		126.4121	126.4121	3.7700e-003		126.5064
Total	**0.0550**	**0.0371**	**0.4252**	**1.2700e-003**	**0.1136**	**8.6000e-004**	**0.1145**	**0.0303**	**8.0000e-004**	**0.0311**		**126.4121**	**126.4121**	**3.7700e-003**		**126.5064**

3.10 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.6679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**3.9101**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0110	7.4200e-003	0.0850	2.5000e-004	0.0246	1.7000e-004	0.0248	6.5400e-003	1.6000e-004	6.7000e-003		25.2824	25.2824	7.5000e-004		25.3013
Total	**0.0110**	**7.4200e-003**	**0.0850**	**2.5000e-004**	**0.0246**	**1.7000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.7000e-003**		**25.2824**	**25.2824**	**7.5000e-004**		**25.3013**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.6679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**3.9101**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0110	7.4200e-003	0.0850	2.5000e-004	0.0227	1.7000e-004	0.0229	6.0600e-003	1.6000e-004	6.2200e-003		25.2824	25.2824	7.5000e-004		25.3013
Total	**0.0110**	**7.4200e-003**	**0.0850**	**2.5000e-004**	**0.0227**	**1.7000e-004**	**0.0229**	**6.0600e-003**	**1.6000e-004**	**6.2200e-003**		**25.2824**	**25.2824**	**7.5000e-004**		**25.3013**

Cardiff ES Construction Phase 2 - San Diego County, Winter

Cardiff ES Construction Phase 2

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	2.03	1000sqft	1.59	2,030.00	0
Other Asphalt Surfaces	17.00	1000sqft	0.39	17,000.00	0
Other Non-Asphalt Surfaces	18.46	1000sqft	0.42	18,460.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See CalEEMod Assumptions

Construction Phase - See CalEEMod Assumptions

Off-road Equipment - Haul Phase

Off-road Equipment - Haul Phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Haul Phase

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - See CalEEMod Assumptions

Demolition -

Trips and VMT - See CalEEMod Assumptions

Architectural Coating - See CalEEMod Assumptions

Construction Off-road Equipment Mitigation - SDAPCD Rule 55

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1,015.00	2,770.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	3,045.00	8,309.00
tblArchitecturalCoating	ConstArea_Parking	2,128.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	6.00	2.00
tblConstructionPhase	NumDays	6.00	2.00
tblConstructionPhase	NumDays	220.00	106.00
tblConstructionPhase	NumDays	10.00	7.00
tblConstructionPhase	NumDays	10.00	14.00
tblConstructionPhase	PhaseEndDate	7/14/2020	6/26/2020
tblConstructionPhase	PhaseEndDate	8/11/2020	6/26/2020
tblConstructionPhase	PhaseEndDate	8/14/2020	7/1/2020
tblConstructionPhase	PhaseEndDate	8/24/2020	7/3/2020
tblConstructionPhase	PhaseEndDate	9/1/2020	7/3/2020
tblConstructionPhase	PhaseEndDate	9/1/2020	7/8/2020

tblConstructionPhase	PhaseEndDate	7/6/2021	12/3/2020
tblConstructionPhase	PhaseEndDate	7/20/2021	11/13/2020
tblConstructionPhase	PhaseEndDate	8/3/2021	12/3/2020
tblConstructionPhase	PhaseStartDate	7/15/2020	6/17/2020
tblConstructionPhase	PhaseStartDate	8/12/2020	6/27/2020
tblConstructionPhase	PhaseStartDate	8/15/2020	7/2/2020
tblConstructionPhase	PhaseStartDate	8/25/2020	7/2/2020
tblConstructionPhase	PhaseStartDate	9/2/2020	7/6/2020
tblConstructionPhase	PhaseStartDate	9/2/2020	7/9/2020
tblConstructionPhase	PhaseStartDate	7/7/2021	11/5/2020
tblConstructionPhase	PhaseStartDate	7/21/2021	11/15/2020
tblGrading	AcresOfGrading	0.00	2.40
tblGrading	MaterialExported	0.00	224.00
tblLandUse	LotAcreage	0.05	1.59
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	HaulingTripNumber	55.00	187.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	6.3004	29.7829	27.7245	0.0469	8.1945	1.6099	9.2002	3.6039	1.5189	4.5297	0.0000	4,507.0675	4,507.0675	1.0275	0.0000	4,526.8580
Maximum	**6.3004**	**29.7829**	**27.7245**	**0.0469**	**8.1945**	**1.6099**	**9.2002**	**3.6039**	**1.5189**	**4.5297**	**0.0000**	**4,507.0675**	**4,507.0675**	**1.0275**	**0.0000**	**4,526.8580**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	6.3004	29.7829	27.7245	0.0469	3.6809	1.6099	4.6866	1.5899	1.5189	2.5157	0.0000	4,507.0675	4,507.0675	1.0275	0.0000	4,526.8580
Maximum	**6.3004**	**29.7829**	**27.7245**	**0.0469**	**3.6809**	**1.6099**	**4.6866**	**1.5899**	**1.5189**	**2.5157**	**0.0000**	**4,507.0675**	**4,507.0675**	**1.0275**	**0.0000**	**4,526.8580**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**55.08**	**0.00**	**49.06**	**55.88**	**0.00**	**44.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/17/2020	6/26/2020	5	8	
2	Demolition Haul	Demolition	6/17/2020	6/26/2020	5	8	
3	Site Preparation	Site Preparation	6/27/2020	7/1/2020	5	3	
4	Grading	Grading	7/2/2020	7/3/2020	5	2	
5	Grading Haul	Grading	7/2/2020	7/3/2020	5	2	
6	Utility Trenching	Trenching	7/6/2020	7/8/2020	5	3	
7	Building Construction	Building Construction	7/9/2020	12/3/2020	5	106	
8	Paving	Paving	11/5/2020	11/13/2020	5	7	
9	Architectural Coating	Architectural Coating	11/15/2020	12/3/2020	5	14	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 1

Acres of Paving: 0.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 8,309; Non-Residential Outdoor: 2,770; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition Haul	Rubber Tired Dozers	0	8.00	247	0.40
Demolition Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading Haul	Graders	0	8.00	187	0.41
Grading Haul	Rubber Tired Dozers	0	8.00	247	0.40
Grading Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Skid Steer Loaders	1	8.00	65	0.37
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	16.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition Haul	0	0.00	0.00	187.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading Haul	0	0.00	0.00	28.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	2	5.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761		2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**		**1.1525**	**1.1525**		**1.0761**	**1.0761**		**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0271	2.2500e-003	0.0293	7.8000e-003	2.1500e-003	9.9500e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0540	0.0361	0.3474	1.0300e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		102.8472	102.8472	3.1000e-003		102.9246
Total	**0.0697**	**0.4868**	**0.4749**	**2.1000e-003**	**0.1339**	**3.0000e-003**	**0.1369**	**0.0361**	**2.8400e-003**	**0.0390**		**217.4320**	**217.4320**	**0.0123**		**217.7400**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1262	20.9463	14.6573	0.0241		1.1525	1.1525		1.0761	1.0761	0.0000	2,322.3127	2,322.3127	0.5970		2,337.2363
Total	**2.1262**	**20.9463**	**14.6573**	**0.0241**		**1.1525**	**1.1525**		**1.0761**	**1.0761**	**0.0000**	**2,322.3127**	**2,322.3127**	**0.5970**		**2,337.2363**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0253	2.2500e-003	0.0276	7.3700e-003	2.1500e-003	9.5200e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0540	0.0361	0.3474	1.0300e-003	0.0984	7.5000e-004	0.0992	0.0263	6.9000e-004	0.0270		102.8472	102.8472	3.1000e-003		102.9246
Total	**0.0697**	**0.4868**	**0.4749**	**2.1000e-003**	**0.1238**	**3.0000e-003**	**0.1268**	**0.0337**	**2.8400e-003**	**0.0365**		**217.4320**	**217.4320**	**0.0123**		**217.7400**

3.3 Demolition Haul - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4950	0.0000	1.4950	0.2264	0.0000	0.2264			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.4950**	**0.0000**	**1.4950**	**0.2264**	**0.0000**	**0.2264**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1899	6.5835	1.5784	0.0180	0.4085	0.0212	0.4297	0.1119	0.0203	0.1323		1,967.3228	1,967.3228	0.1824		1,971.8817
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1899**	**6.5835**	**1.5784**	**0.0180**	**0.4085**	**0.0212**	**0.4297**	**0.1119**	**0.0203**	**0.1323**		**1,967.3228**	**1,967.3228**	**0.1824**		**1,971.8817**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6391	0.0000	0.6391	0.0968	0.0000	0.0968			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.6391**	**0.0000**	**0.6391**	**0.0968**	**0.0000**	**0.0968**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1899	6.5835	1.5784	0.0180	0.3806	0.0212	0.4019	0.1051	0.0203	0.1254		1,967.3228	1,967.3228	0.1824		1,971.8817
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1899**	**6.5835**	**1.5784**	**0.0180**	**0.3806**	**0.0212**	**0.4019**	**0.1051**	**0.0203**	**0.1254**		**1,967.3228**	**1,967.3228**	**0.1824**		**1,971.8817**

3.4 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.6521	19.9196	11.2678	0.0245		0.7771	0.7771		0.7149	0.7149		2,372.9062	2,372.9062	0.7675		2,392.0924
Total	**1.6521**	**19.9196**	**11.2678**	**0.0245**	**1.5908**	**0.7771**	**2.3678**	**0.1718**	**0.7149**	**0.8867**		**2,372.9062**	**2,372.9062**	**0.7675**		**2,392.0924**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0271	2.2500e-003	0.0293	7.8000e-003	2.1500e-003	9.9500e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0333	0.0222	0.2138	6.4000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.2000e-004	0.0179		63.2906	63.2906	1.9100e-003		63.3382
Total	**0.0489**	**0.4729**	**0.3413**	**1.7100e-003**	**0.0928**	**2.7100e-003**	**0.0955**	**0.0252**	**2.5700e-003**	**0.0278**		**177.8755**	**177.8755**	**0.0111**		**178.1536**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6801	0.0000	0.6801	0.0734	0.0000	0.0734			0.0000			0.0000
Off-Road	1.6521	19.9196	11.2678	0.0245		0.7771	0.7771		0.7149	0.7149	0.0000	2,372.9062	2,372.9062	0.7675		2,392.0924
Total	**1.6521**	**19.9196**	**11.2678**	**0.0245**	**0.6801**	**0.7771**	**1.4571**	**0.0734**	**0.7149**	**0.7883**	**0.0000**	**2,372.9062**	**2,372.9062**	**0.7675**		**2,392.0924**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0253	2.2500e-003	0.0276	7.3700e-003	2.1500e-003	9.5200e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0333	0.0222	0.2138	6.4000e-004	0.0606	4.6000e-004	0.0610	0.0162	4.2000e-004	0.0166		63.2906	63.2906	1.9100e-003		63.3382
Total	**0.0489**	**0.4729**	**0.3413**	**1.7100e-003**	**0.0859**	**2.7100e-003**	**0.0886**	**0.0235**	**2.5700e-003**	**0.0261**		**177.8755**	**177.8755**	**0.0111**		**178.1536**

3.5 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9219	21.3418	9.9355	0.0206		0.9902	0.9902		0.9110	0.9110		1,996.4061	1,996.4061	0.6457		2,012.5480
Total	**1.9219**	**21.3418**	**9.9355**	**0.0206**	**6.5523**	**0.9902**	**7.5425**	**3.3675**	**0.9110**	**4.2784**		**1,996.4061**	**1,996.4061**	**0.6457**		**2,012.5480**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0271	2.2500e-003	0.0293	7.8000e-003	2.1500e-003	9.9500e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0416	0.0278	0.2673	7.9000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		79.1132	79.1132	2.3800e-003		79.1727
Total	**0.0572**	**0.4784**	**0.3948**	**1.8600e-003**	**0.1092**	**2.8300e-003**	**0.1121**	**0.0296**	**2.6800e-003**	**0.0323**		**193.6981**	**193.6981**	**0.0116**		**193.9881**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	1.9219	21.3418	9.9355	0.0206		0.9902	0.9902		0.9110	0.9110	0.0000	1,996.4061	1,996.4061	0.6457		2,012.5480
Total	**1.9219**	**21.3418**	**9.9355**	**0.0206**	**2.8011**	**0.9902**	**3.7913**	**1.4396**	**0.9110**	**2.3506**	**0.0000**	**1,996.4061**	**1,996.4061**	**0.6457**		**2,012.5480**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0253	2.2500e-003	0.0276	7.3700e-003	2.1500e-003	9.5200e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0416	0.0278	0.2673	7.9000e-004	0.0757	5.8000e-004	0.0763	0.0202	5.3000e-004	0.0207		79.1132	79.1132	2.3800e-003		79.1727
Total	**0.0572**	**0.4784**	**0.3948**	**1.8600e-003**	**0.1011**	**2.8300e-003**	**0.1039**	**0.0276**	**2.6800e-003**	**0.0303**		**193.6981**	**193.6981**	**0.0116**		**193.9881**

3.6 Grading Haul - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2883	0.0000	1.2883	0.1398	0.0000	0.1398			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.2883**	**0.0000**	**1.2883**	**0.1398**	**0.0000**	**0.1398**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1137	3.9431	0.9453	0.0108	0.2446	0.0127	0.2574	0.0670	0.0122	0.0792		1,178.2896	1,178.2896	0.1092		1,181.0201
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1137**	**3.9431**	**0.9453**	**0.0108**	**0.2446**	**0.0127**	**0.2574**	**0.0670**	**0.0122**	**0.0792**		**1,178.2896**	**1,178.2896**	**0.1092**		**1,181.0201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5508	0.0000	0.5508	0.0598	0.0000	0.0598			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.5508**	**0.0000**	**0.5508**	**0.0598**	**0.0000**	**0.0598**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1137	3.9431	0.9453	0.0108	0.2280	0.0127	0.2407	0.0630	0.0122	0.0751		1,178.2896	1,178.2896	0.1092		1,181.0201
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1137**	**3.9431**	**0.9453**	**0.0108**	**0.2280**	**0.0127**	**0.2407**	**0.0630**	**0.0122**	**0.0751**		**1,178.2896**	**1,178.2896**	**0.1092**		**1,181.0201**

3.7 Utility Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2894	3.1675	3.6697	5.1700e-003		0.1791	0.1791		0.1648	0.1648		500.9372	500.9372	0.1620		504.9876
Total	**0.2894**	**3.1675**	**3.6697**	**5.1700e-003**		**0.1791**	**0.1791**		**0.1648**	**0.1648**		**500.9372**	**500.9372**	**0.1620**		**504.9876**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0271	2.2500e-003	0.0293	7.8000e-003	2.1500e-003	9.9500e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0208	0.0139	0.1336	4.0000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		39.5566	39.5566	1.1900e-003		39.5864
Total	**0.0364**	**0.4646**	**0.2611**	**1.4700e-003**	**0.0682**	**2.5400e-003**	**0.0707**	**0.0187**	**2.4200e-003**	**0.0211**		**154.1415**	**154.1415**	**0.0104**		**154.4018**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2894	3.1675	3.6697	5.1700e-003		0.1791	0.1791		0.1648	0.1648	0.0000	500.9372	500.9372	0.1620		504.9876
Total	**0.2894**	**3.1675**	**3.6697**	**5.1700e-003**		**0.1791**	**0.1791**		**0.1648**	**0.1648**	**0.0000**	**500.9372**	**500.9372**	**0.1620**		**504.9876**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0253	2.2500e-003	0.0276	7.3700e-003	2.1500e-003	9.5200e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0208	0.0139	0.1336	4.0000e-004	0.0379	2.9000e-004	0.0382	0.0101	2.7000e-004	0.0104		39.5566	39.5566	1.1900e-003		39.5864
Total	**0.0364**	**0.4646**	**0.2611**	**1.4700e-003**	**0.0632**	**2.5400e-003**	**0.0657**	**0.0175**	**2.4200e-003**	**0.0199**		**154.1415**	**154.1415**	**0.0104**		**154.4018**

3.8 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089		2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**		**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0235	0.6760	0.1913	1.6000e-003	0.0406	3.3700e-003	0.0440	0.0117	3.2300e-003	0.0149		171.8773	171.8773	0.0138		172.2231
Worker	0.0665	0.0444	0.4276	1.2700e-003	0.1314	9.2000e-004	0.1324	0.0349	8.5000e-004	0.0357		126.5811	126.5811	3.8100e-003		126.6764
Total	**0.0900**	**0.7204**	**0.6189**	**2.8700e-003**	**0.1721**	**4.2900e-003**	**0.1764**	**0.0466**	**4.0800e-003**	**0.0506**		**298.4584**	**298.4584**	**0.0176**		**298.8995**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089	0.0000	2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**	**0.0000**	**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0235	0.6760	0.1913	1.6000e-003	0.0380	3.3700e-003	0.0414	0.0111	3.2300e-003	0.0143		171.8773	171.8773	0.0138		172.2231
Worker	0.0665	0.0444	0.4276	1.2700e-003	0.1212	9.2000e-004	0.1221	0.0323	8.5000e-004	0.0332		126.5811	126.5811	3.8100e-003		126.6764
Total	**0.0900**	**0.7204**	**0.6189**	**2.8700e-003**	**0.1592**	**4.2900e-003**	**0.1635**	**0.0434**	**4.0800e-003**	**0.0475**		**298.4584**	**298.4584**	**0.0176**		**298.8995**

3.9 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051		1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1460					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3007**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**		**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0416	0.4009	1.1900e-003	0.1232	8.6000e-004	0.1241	0.0327	8.0000e-004	0.0335		118.6698	118.6698	3.5700e-003		118.7591
Total	**0.0623**	**0.0416**	**0.4009**	**1.1900e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**8.0000e-004**	**0.0335**		**118.6698**	**118.6698**	**3.5700e-003**		**118.7591**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051	0.0000	1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.1460					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3007**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**	**0.0000**	**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0416	0.4009	1.1900e-003	0.1136	8.6000e-004	0.1145	0.0303	8.0000e-004	0.0311		118.6698	118.6698	3.5700e-003		118.7591
Total	**0.0623**	**0.0416**	**0.4009**	**1.1900e-003**	**0.1136**	**8.6000e-004**	**0.1145**	**0.0303**	**8.0000e-004**	**0.0311**		**118.6698**	**118.6698**	**3.5700e-003**		**118.7591**

3.10 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.6679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**3.9101**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0125	8.3300e-003	0.0802	2.4000e-004	0.0246	1.7000e-004	0.0248	6.5400e-003	1.6000e-004	6.7000e-003		23.7340	23.7340	7.1000e-004		23.7518
Total	**0.0125**	**8.3300e-003**	**0.0802**	**2.4000e-004**	**0.0246**	**1.7000e-004**	**0.0248**	**6.5400e-003**	**1.6000e-004**	**6.7000e-003**		**23.7340**	**23.7340**	**7.1000e-004**		**23.7518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.6679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**3.9101**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0125	8.3300e-003	0.0802	2.4000e-004	0.0227	1.7000e-004	0.0229	6.0600e-003	1.6000e-004	6.2200e-003		23.7340	23.7340	7.1000e-004		23.7518
Total	**0.0125**	**8.3300e-003**	**0.0802**	**2.4000e-004**	**0.0227**	**1.7000e-004**	**0.0229**	**6.0600e-003**	**1.6000e-004**	**6.2200e-003**		**23.7340**	**23.7340**	**7.1000e-004**		**23.7518**

Cardiff Proposed Operation - San Diego County, Annual

Cardiff Proposed Operation

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	42.23	1000sqft	4.97	42,225.00	0
Other Asphalt Surfaces	17.00	1000sqft	0.39	17,000.00	0
Other Non-Asphalt Surfaces	71.95	1000sqft	1.65	71,950.00	0
Parking Lot	12.71	1000sqft	0.29	12,710.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - CalEEMod Assumptions

Vehicle Trips - See CalEEMod Assumptions

Area Coating - See CalEEMod Assumptions

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - See CalEEMod Assumptions

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_Parking	6100	1783
tblFleetMix	HHD	0.02	3.7040e-003
tblFleetMix	LDA	0.59	0.69
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.18	0.22
tblFleetMix	LHD1	0.02	2.7830e-003
tblFleetMix	LHD2	5.5580e-003	8.9400e-004
tblFleetMix	MCY	6.1810e-003	7.9000e-003
tblFleetMix	MDV	0.11	0.02
tblFleetMix	MH	1.2710e-003	0.00
tblFleetMix	MHD	0.02	2.4990e-003
tblFleetMix	OBUS	1.9020e-003	0.00
tblFleetMix	SBUS	7.4500e-004	1.2000e-004
tblFleetMix	UBUS	2.0240e-003	0.00
tblLandUse	LotAcreage	0.97	4.97
tblSolidWaste	SolidWasteGenerationRate	54.90	19.80
tblVehicleTrips	WD_TR	15.43	16.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,224,539.81	2,241,360.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1922	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7400e-003
Energy	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	87.1027	87.1027	3.2200e-003	8.6000e-004	87.4392
Mobile	0.1367	0.2120	1.5208	4.1100e-003	0.4116	3.1700e-003	0.4148	0.1094	2.9300e-003	0.1123	0.0000	372.0294	372.0294	0.0160	0.0000	372.4288
Waste						0.0000	0.0000		0.0000	0.0000	4.0192	0.0000	4.0192	0.2375	0.0000	9.9575
Water						0.0000	0.0000		0.0000	0.0000	0.7930	20.9707	21.7637	3.5700e-003	1.9000e-003	22.4190
Total	**0.3303**	**0.2243**	**1.5324**	**4.1800e-003**	**0.4116**	**4.1000e-003**	**0.4157**	**0.1094**	**3.8600e-003**	**0.1133**	**4.8122**	**480.1053**	**484.9176**	**0.2603**	**2.7600e-003**	**492.2472**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1922	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7400e-003
Energy	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	87.1027	87.1027	3.2200e-003	8.6000e-004	87.4392
Mobile	0.1367	0.2120	1.5208	4.1100e-003	0.4116	3.1700e-003	0.4148	0.1094	2.9300e-003	0.1123	0.0000	372.0294	372.0294	0.0160	0.0000	372.4288
Waste						0.0000	0.0000		0.0000	0.0000	4.0192	0.0000	4.0192	0.2375	0.0000	9.9575
Water						0.0000	0.0000		0.0000	0.0000	0.6344	18.3657	19.0001	2.9200e-003	1.5300e-003	19.5299
Total	**0.3303**	**0.2243**	**1.5324**	**4.1800e-003**	**0.4116**	**4.1000e-003**	**0.4157**	**0.1094**	**3.8600e-003**	**0.1133**	**4.6536**	**477.5004**	**482.1540**	**0.2597**	**2.3900e-003**	**489.3581**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.30**	**0.54**	**0.57**	**0.25**	**13.41**	**0.59**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1367	0.2120	1.5208	4.1100e-003	0.4116	3.1700e-003	0.4148	0.1094	2.9300e-003	0.1123	0.0000	372.0294	372.0294	0.0160	0.0000	372.4288
Unmitigated	0.1367	0.2120	1.5208	4.1100e-003	0.4116	3.1700e-003	0.4148	0.1094	2.9300e-003	0.1123	0.0000	372.0294	372.0294	0.0160	0.0000	372.4288

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	703.89	0.00	0.00	1,108,597	1,108,597
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	703.89	0.00	0.00	1,108,597	1,108,597

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.693924	0.050616	0.217559	0.020000	0.002783	0.000894	0.002499	0.003704	0.000000	0.000000	0.007900	0.000120	0.000000
Other Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Other Non-Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	73.7632	73.7632	2.9700e-003	6.1000e-004	74.0205
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	73.7632	73.7632	2.9700e-003	6.1000e-004	74.0205
NaturalGas Mitigated	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3395	13.3395	2.6000e-004	2.4000e-004	13.4187
NaturalGas Unmitigated	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3395	13.3395	2.6000e-004	2.4000e-004	13.4187

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	249972	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3395	13.3395	2.6000e-004	2.4000e-004	13.4187
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.3500e-003**	**0.0123**	**0.0103**	**7.0000e-005**		**9.3000e-004**	**9.3000e-004**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**13.3395**	**13.3395**	**2.6000e-004**	**2.4000e-004**	**13.4187**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	249972	1.3500e-003	0.0123	0.0103	7.0000e-005		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	13.3395	13.3395	2.6000e-004	2.4000e-004	13.4187
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.3500e-003**	**0.0123**	**0.0103**	**7.0000e-005**		**9.3000e-004**	**9.3000e-004**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**13.3395**	**13.3395**	**2.6000e-004**	**2.4000e-004**	**13.4187**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	221259	72.3094	2.9100e-003	6.0000e-004	72.5616
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	4448.5	1.4538	6.0000e-005	1.0000e-005	1.4589
Total		**73.7632**	**2.9700e-003**	**6.1000e-004**	**74.0205**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	221259	72.3094	2.9100e-003	6.0000e-004	72.5616
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	4448.5	1.4538	6.0000e-005	1.0000e-005	1.4589
Total		**73.7632**	**2.9700e-003**	**6.1000e-004**	**74.0205**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1922	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7400e-003
Unmitigated	0.1922	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0206					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1715					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7400e-003
Total	**0.1922**	**1.0000e-005**	**1.3300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5700e-003**	**2.5700e-003**	**1.0000e-005**	**0.0000**	**2.7400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0206					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1715					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7400e-003
Total	**0.1922**	**1.0000e-005**	**1.3300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5700e-003**	**2.5700e-003**	**1.0000e-005**	**0.0000**	**2.7400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.0001	2.9200e-003	1.5300e-003	19.5299
Unmitigated	21.7637	3.5700e-003	1.9000e-003	22.4190

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	2.24136 / 3.14882	21.7637	3.5700e-003	1.9000e-003	22.4190
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**21.7637**	**3.5700e-003**	**1.9000e-003**	**22.4190**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	1.79309 / 2.95674	19.0001	2.9200e-003	1.5300e-003	19.5299
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**19.0001**	**2.9200e-003**	**1.5300e-003**	**19.5299**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.0192	0.2375	0.0000	9.9575
Unmitigated	4.0192	0.2375	0.0000	9.9575

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	19.8	4.0192	0.2375	0.0000	9.9575
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**4.0192**	**0.2375**	**0.0000**	**9.9575**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	19.8	4.0192	0.2375	0.0000	9.9575
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**4.0192**	**0.2375**	**0.0000**	**9.9575**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cardiff Proposed Operation - San Diego County, Summer

Cardiff Proposed Operation

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	42.23	1000sqft	4.97	42,225.00	0
Other Asphalt Surfaces	17.00	1000sqft	0.39	17,000.00	0
Other Non-Asphalt Surfaces	71.95	1000sqft	1.65	71,950.00	0
Parking Lot	12.71	1000sqft	0.29	12,710.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - CalEEMod Assumptions

Vehicle Trips - See CalEEMod Assumptions

Area Coating - See CalEEMod Assumptions

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - See CalEEMod Assumptions

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_Parking	6100	1783
tblFleetMix	HHD	0.02	3.7040e-003
tblFleetMix	LDA	0.59	0.69
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.18	0.22
tblFleetMix	LHD1	0.02	2.7830e-003
tblFleetMix	LHD2	5.5580e-003	8.9400e-004
tblFleetMix	MCY	6.1810e-003	7.9000e-003
tblFleetMix	MDV	0.11	0.02
tblFleetMix	MH	1.2710e-003	0.00
tblFleetMix	MHD	0.02	2.4990e-003
tblFleetMix	OBUS	1.9020e-003	0.00
tblFleetMix	SBUS	7.4500e-004	1.2000e-004
tblFleetMix	UBUS	2.0240e-003	0.00
tblLandUse	LotAcreage	0.97	4.97
tblSolidWaste	SolidWasteGenerationRate	54.90	19.80
tblVehicleTrips	WD_TR	15.43	16.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,224,539.81	2,241,360.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0539	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Energy	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
Mobile	1.1213	1.5285	11.9367	0.0333	3.2436	0.0244	3.2679	0.8604	0.0225	0.8829		3,323.3668	3,323.3668	0.1374		3,326.8012
Total	**2.1826**	**1.5958**	**12.0079**	**0.0337**	**3.2436**	**0.0295**	**3.2731**	**0.8604**	**0.0277**	**0.8881**		**3,403.9694**	**3,403.9694**	**0.1390**	**1.4800e-003**	**3,407.8847**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0539	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Energy	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
Mobile	1.1213	1.5285	11.9367	0.0333	3.2436	0.0244	3.2679	0.8604	0.0225	0.8829		3,323.3668	3,323.3668	0.1374		3,326.8012
Total	**2.1826**	**1.5958**	**12.0079**	**0.0337**	**3.2436**	**0.0295**	**3.2731**	**0.8604**	**0.0277**	**0.8881**		**3,403.9694**	**3,403.9694**	**0.1390**	**1.4800e-003**	**3,407.8847**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1213	1.5285	11.9367	0.0333	3.2436	0.0244	3.2679	0.8604	0.0225	0.8829		3,323.3668	3,323.3668	0.1374		3,326.8012
Unmitigated	1.1213	1.5285	11.9367	0.0333	3.2436	0.0244	3.2679	0.8604	0.0225	0.8829		3,323.3668	3,323.3668	0.1374		3,326.8012

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	703.89	0.00	0.00	1,108,597	1,108,597
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	703.89	0.00	0.00	1,108,597	1,108,597

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.693924	0.050616	0.217559	0.020000	0.002783	0.000894	0.002499	0.003704	0.000000	0.000000	0.007900	0.000120	0.000000
Other Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Other Non-Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
NaturalGas Unmitigated	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	684.855	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.3900e-003**	**0.0671**	**0.0564**	**4.0000e-004**		**5.1000e-003**	**5.1000e-003**		**5.1000e-003**	**5.1000e-003**		**80.5712**	**80.5712**	**1.5400e-003**	**1.4800e-003**	**81.0500**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.684855	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.3900e-003**	**0.0671**	**0.0564**	**4.0000e-004**		**5.1000e-003**	**5.1000e-003**		**5.1000e-003**	**5.1000e-003**		**80.5712**	**80.5712**	**1.5400e-003**	**1.4800e-003**	**81.0500**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0539	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Unmitigated	1.0539	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3900e-003	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Total	**1.0539**	**1.4000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0315**	**0.0315**	**8.0000e-005**		**0.0336**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3900e-003	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Total	**1.0539**	**1.4000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0315**	**0.0315**	**8.0000e-005**		**0.0336**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cardiff Proposed Operation - San Diego County, Winter

Cardiff Proposed Operation

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	42.23	1000sqft	4.97	42,225.00	0
Other Asphalt Surfaces	17.00	1000sqft	0.39	17,000.00	0
Other Non-Asphalt Surfaces	71.95	1000sqft	1.65	71,950.00	0
Parking Lot	12.71	1000sqft	0.29	12,710.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - CalEEMod Assumptions

Vehicle Trips - See CalEEMod Assumptions

Area Coating - See CalEEMod Assumptions

Energy Use -

Water And Wastewater - See CalEEMod Assumptions

Solid Waste - See CalEEMod Assumptions

Water Mitigation -

Fleet Mix - See CalEEMod Assumptions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_Parking	6100	1783
tblFleetMix	HHD	0.02	3.7040e-003
tblFleetMix	LDA	0.59	0.69
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.18	0.22
tblFleetMix	LHD1	0.02	2.7830e-003
tblFleetMix	LHD2	5.5580e-003	8.9400e-004
tblFleetMix	MCY	6.1810e-003	7.9000e-003
tblFleetMix	MDV	0.11	0.02
tblFleetMix	MH	1.2710e-003	0.00
tblFleetMix	MHD	0.02	2.4990e-003
tblFleetMix	OBUS	1.9020e-003	0.00
tblFleetMix	SBUS	7.4500e-004	1.2000e-004
tblFleetMix	UBUS	2.0240e-003	0.00
tblLandUse	LotAcreage	0.97	4.97
tblSolidWaste	SolidWasteGenerationRate	54.90	19.80
tblVehicleTrips	WD_TR	15.43	16.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,224,539.81	2,241,360.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0539	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Energy	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
Mobile	1.0823	1.6451	11.8574	0.0313	3.2436	0.0244	3.2680	0.8604	0.0226	0.8830		3,126.4701	3,126.4701	0.1364		3,129.8794
Total	**2.1436**	**1.7124**	**11.9286**	**0.0317**	**3.2436**	**0.0296**	**3.2731**	**0.8604**	**0.0277**	**0.8881**		**3,207.0727**	**3,207.0727**	**0.1380**	**1.4800e-003**	**3,210.9629**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0539	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Energy	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
Mobile	1.0823	1.6451	11.8574	0.0313	3.2436	0.0244	3.2680	0.8604	0.0226	0.8830		3,126.4701	3,126.4701	0.1364		3,129.8794
Total	**2.1436**	**1.7124**	**11.9286**	**0.0317**	**3.2436**	**0.0296**	**3.2731**	**0.8604**	**0.0277**	**0.8881**		**3,207.0727**	**3,207.0727**	**0.1380**	**1.4800e-003**	**3,210.9629**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0823	1.6451	11.8574	0.0313	3.2436	0.0244	3.2680	0.8604	0.0226	0.8830		3,126.4701	3,126.4701	0.1364		3,129.8794
Unmitigated	1.0823	1.6451	11.8574	0.0313	3.2436	0.0244	3.2680	0.8604	0.0226	0.8830		3,126.4701	3,126.4701	0.1364		3,129.8794

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	703.89	0.00	0.00	1,108,597	1,108,597
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	703.89	0.00	0.00	1,108,597	1,108,597

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.693924	0.050616	0.217559	0.020000	0.002783	0.000894	0.002499	0.003704	0.000000	0.000000	0.007900	0.000120	0.000000
Other Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Other Non-Asphalt Surfaces	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Parking Lot	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
NaturalGas Unmitigated	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	684.855	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.3900e-003**	**0.0671**	**0.0564**	**4.0000e-004**		**5.1000e-003**	**5.1000e-003**		**5.1000e-003**	**5.1000e-003**		**80.5712**	**80.5712**	**1.5400e-003**	**1.4800e-003**	**81.0500**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.684855	7.3900e-003	0.0671	0.0564	4.0000e-004		5.1000e-003	5.1000e-003		5.1000e-003	5.1000e-003		80.5712	80.5712	1.5400e-003	1.4800e-003	81.0500
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.3900e-003**	**0.0671**	**0.0564**	**4.0000e-004**		**5.1000e-003**	**5.1000e-003**		**5.1000e-003**	**5.1000e-003**		**80.5712**	**80.5712**	**1.5400e-003**	**1.4800e-003**	**81.0500**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0539	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Unmitigated	1.0539	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3900e-003	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Total	**1.0539**	**1.4000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0315**	**0.0315**	**8.0000e-005**		**0.0336**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1129					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3900e-003	1.4000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0315	0.0315	8.0000e-005		0.0336
Total	**1.0539**	**1.4000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0315**	**0.0315**	**8.0000e-005**		**0.0336**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix 5.3-1 Campus Tree Evaluation

Appendices

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Consulting Arborist's Report
April 21, 2018

Campus Tree Evaluation

For: Cardiff Elementary School

Prepared for: Jill Vinson
Superintendent
Cardiff School District
1888 Montgomery Ave
Cardiff by the Sea, CA 92007

Prepared by: Arborgate Consulting, Inc.
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Introduction

Background

The Cardiff Elementary School has a large and open campus with pleasant open fields for shade trees, and with more than average root space for most of the trees. The campus has a mixture of old and young trees in various conditions and health status. Several trees at the Cardiff Elementary School have broken and dropped limbs. The district and landscape designers would like to save as many existing trees as is safe and reasonable.

This consultant inspected, measured the trees and took photographs on April 16th, 2018.

Assignment

Ms. Amelia Capron, of Spurlock Landscape Architecture, contacted this consultant and asked that I propose directly to the Cardiff School District to provide an arboricultural evaluation of 36 palms' and trees' health and condition, professional opinions and report as appropriate. Arborgate Consulting reviewed the designated trees on a campus mapprovided by Spurlock Landscape Architecture; measured their trunks, estimated their height and spread, assessed their health and structure, provided other specific notes on our observations, which are included in this report that follows.

Tree Map


Montgomery Ave
San Elijo Ave
Cardiff School District
Cardiff Elementary School
George Berkich Park
Public Elementary School
Cardiff Elementary South Field
Westminster Dr
Mozart Ave
1
2
3
4
5
6
9
10
11
13
14
15
16
17
18
19
20
21
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59
65
Google

Summary

Cardiff Elementary School has many beautiful large trees. There are excellent examples of mature red flowered gums, Torrey pines, and New Zealand Christmas trees. Generally pruning and maintenance of these trees has been above average compared to other schools.

This consultant is aware that construction and changes to the campus are planned, but is not aware of specifics. Consider though that when buildings are built, trenches are dug, or new paving installed near existing mature trees, some trees may deserve to be saved and some may not, but all will suffer some health impacts – visible or not.

In the recommendations chapter separate clearances for health and safety are provided, so that campus administrators can opt to risk a tree's health, but not go so far as to put people at risk due to loss of stability. Clearances are developed to keep an acceptable loss rate, but some trees defy the odds and survive despite exceeding the standards. Regardless, reports do not save trees unless their recommendations are implemented.

Prior to my inspection, the trees on campus already had a number of past failures, injuries and stress factors. The tree map above shows the locations of the trees I was to inspect. The campus staff and Cardiff School District administration consider these important trees and desired a professional opinion on which trees are worthy to retain and how to protect them during construction.

Protecting trees during construction requires good fencing, more than orange plastic fencing, to protect their root zones from compaction, trenching and pollution. A few of the trees have less open root space than they would need to remain healthy into old age. Compacted soil under paving may have some roots growing there, but they are much less healthy and dense. Trees like Ficus tend to create their own new root space by breaking up the paving, but that could be a danger to the students. To mitigate the effects of confined root space, existing compaction and construction compaction, vertical mulching and a reduction of paved area will be needed. The needs of trees and paving are not compatible when considered on a long term basis. If the surface roots can be protected, replacing large areas of paving around trees with good organic mulch will over time reduce water use and increase root health, root density, and tree health as well as stability.

Planning for the survival of large trees will require protecting them and providing ample space for ever increasing root space needs. If, after construction, the remaining protected trees had too many roots cut, they will decline and die over the following years. This can take years and the trees may look terrible over that time. If even more roots were cut, they may topple suddenly during a storm or Santa Ana wind. The clearances are minimums. Long term growth and health requires even more space. Good root and soil protection will be needed from here on, especially during landscaping when trenching for irrigation may cut additional roots. Supervision or work around the trees through the whole process is essential.

Observations

General Findings

The Cardiff Elementary School campus is located in Cardiff-by-the Sea, near the railroad tracks that run along the Pacific coast. The site is nearly level. Most of the site soil is compacted due to decades of foot and maintenance vehicle traffic. The soil compaction causes trees to be shallow rooted. Fortunately the sandy soil here allows for deeper rooting.

The most abundant tree species around this site are the Mexican fan palms, *Washingtonia robusta*; Queen palms, *Syagrus romanzoffianum*; Canary Island date palms, *Phoenix canariensis*; New Zealand Christmas trees, *Metrosideros excelsus*; Torrey pines, *Pinus torreyana*; and red flowering gums, *Corymbia ficifolia* (formerly Eucalyptus ficifolia).

For several trees, crowding has caused some unnatural one-sided growth as they reach for sunlight around their neighbor. A number of trees have crowded roots, due to being in small cutouts in the paving. The younger trees have not been affected by root crowding. Several of the trees growing in turf have been damaged by turf maintenance equipment.

The larger specimen trees include the Morton Bay fig, Torrey pines, and red flowered gums. Past pruning of the these trees included lion-tail pruning, i.e. stripping out inner growth and leaving the weight and wind load concentrated at branch ends, but allowed limbs to grow long, creating a longer lever arm. Lion-tail pruning has left large gaps of the inner branching and concentrated foliage and weight at the branch ends. This may have led to several limb failures in both the red flowered gums and the Torrey pines.

Several trees have large amounts of included bark in the branch crotches, making for weak branch attachments. Such limbs need to be removed or reduced. Of these trees, only the broadleaf trees produce sprouts. Sprouts (epicormic shoots) indicate recovery after insect attack, over-pruning or heading. Sprouts are weakly attached as well, but can be spaced and reduced to correct some of the lion-tail pruning.

Many of the older and larger trees have been lion-tailed, leaving the weight of the limbs more concentrated near the ends. Lion-tailing also eliminates trees' "old age insurance", meaning that because trees often develop longer and longer limbs as they age and the weight becomes cantilevered more and more end heavy, it becomes necessary to "drop-crotch" or reduce such long limbs by cutting them back to a good sized interior limb. If most of the interior limbs have been stripped out, there may be no good place to cut them back to. Without the ability to reduce much end weight, those limbs with included bark may need to be entirely removed. Older trees and conifers do not tolerate heavy pruning. The large Torrey pines have overly long limbs that need to be either shortened or have some of the end weight reduced. They will not tolerate more than 10 percent foliage removal and they cannot be pruned until late fall or winter.

There is a large healthy Shamel ash, *Fraxinus uhdei*, with 36" trunk diameter. It is growing near the street in the east corner of Mozart Avenue and Montgomery. This species is notorious for root damage and occasional limbs splitting out. This tree has a serious amount of included bark, making splitting more likely.

The New Zealand Christmas trees are a small and well-behaved evergreen species with attractive red flowers. They are useful near the coast, are not prone to damaging paving, and have few pest or disease problems. Most are in good health and condition, but tree number 5 is a multi-trunk specimen with six trunks. The trunks are crossing and have a large amount of included bark. A limb could split out, but the limbs are not very large.

None of the trees have adequate amounts or adequate coverage of mulch. Mulch will increase root health and soil water retention. It will also protect shallow, exposed roots and, by increasing root density, maximize root utilization of small spaces. Mulch returns many necessary elements to the soil as it breaks down and it encourages beneficial soil organisms. Mulch presents no danger to students, and is cleaner than muddy soil. The turf around some of the trees has the opposite effect. It competes for water and nutrients. Root growth under turf is much less dense and health. Turf maintenance equipment often damages exposed roots and the lower trunk. Irrigation of turf that grows near the trunk often leads to disease.

Common abbreviations in the following matrix include:

1s=one-sided
2long = too long
Circ = circling roots
CO = cutout
Cod=codominant
Cr=crowding or crowded, CrS = crowded scaffolds
Crk = crack
Db=dieback
DBH – Diameter at breast height, i.e. 4.5'
DL=dogleg, DLS = dogleg scaffold limbs
EH=end heavy
epi = epicormic shoots
FC=flush cut
Hd = headed
Inc=included bark
Inj = injury, R-inj = root injury
Lt = lion-tailed
MB = mower blight, root injury
NC = narrow crotch angles
OP=over pruned
OL = over-lifted
RF = root flare, 1sRF = 1-sided root flare
Sh = shallow roots
Sml = small
Sp=sparse
Tinj = trunk injury
TO – tear out
Top'd = Topped
WW = weed whip damage
Xing = crossing branches

"m" preceding an abbreviation indicates a minor problem.

Matrix of Findings

Tree #	Species	DBH	Height	Spread	Health	Condition	Comments
1	Juniperus c. Torulosa	4.5+6	10	10	C-	C	1s Db
2	Juniperus c. Torulosa	11	16	23	B	C	1s against bldg.
3	Corymbia ficifolia	46	40	42	B	C	Cod DLS Lt Hd
4	Corymbia ficifolia	48.5	45	55	B	C	Bleeding base, cod Hd DL, in turf
5	Metrosideros excelsus	6x7"	33	30	B	C	Cod inc Xing-trunks
6	Cassia leptophylla	6.3	18	18	B	C	Cod TO DLS
9	Pinus torreyana	28	60	45	C-	C	1s Sp
10	Pinus torreyana	46	60	55	C	C	Cod OL Lt, stub cuts
11	Pinus torreyana	40	65	50	C	C	Cod
13	Corymbia ficifolia	41	32	40	C	C	mBleeding cod CrS R-inj Lt
14	Pinus torreyana	53	60	50	C	C	Sp cod 2long EH

Tree #	Species	DBH	Height	Spread	Health	Condition	Comments
15	Phoenix canariensis	40	40’th	24	C-	C-	1s cut for wires, Mg deficiency
16	Phoenix canariensis	32	32’th	25	C	B	mMg deficiency, trunk shaved
17	Pinus thunbergiana	8	8	16	D	D	Cod Lt Db mites
18	Pinus halepensis	24	24	40	B	C	Cod inc OL 2long mSagging
19	Fraxinus uhdei	36	36	40	C	C-	Cod inc 1sDb Xing
20	Schinus terebinthifolius	24+14	35	40	C	D	mSp Xing-trunks cod inc MB Hd DL
21	Schinus terebinthifolius	40	37	52	C	C	LB cod Lt
22	Pinus halepensis	30	30	38	C	C	OL big-FC cod
23	Corymbia ficifolia	24	30	30	B	C	Lt 2long cod EH
24	Washingtonia robusta		60'th	10	A	B	Gaff damage
25	Washingtonia robusta		60'th	10	A	B	Gaff damage
35	Pinus torreyana	41	60	53	C	C-	Sp cod top'd 2long mSagging
36	Pinus torreyana	36	60	55	C	C	Sp cod 2long
38	Phoenix canariensis		60'th	25	B	B	Old gaff injuries + rachis streaks
49	Ficus macrophylla	30+30+20	45	45	A	C	Cod inc Lt epi TO Hd
50	Lyonothamnus f. asplenifolius	2	9	4	D	D	Db Sp leans epis
51	Metrosideros excelsus	13	24	25	B	C-	Cod inc Xing 30^{o} off vertical lean circ
52	Metrosideros excelsus	13	28	28	B	C	Cod inc mLean
53	Metrosideros excelsus	14	30	30	B	C	Cod circ
54	Araucaria heterophylla	37	58	40	B	B	lost top or top'd, in turf
55	Araucaria heterophylla	28	60	40	C	B	lost top or top'd, in turf
59	Pinus torreyana	39.4	42	60	C	C-	Sp Lt cod 1sRF MB, trunk seam
65	Corymbia ficifolia	22	38	36	B	C-	Cod TO & crack, WW

DBH = diameter at breast height, i.e. 4.5 feet above grade.

Photographic Documentation



Hollywood junipers #1 and #2 (right to left)



#3 Red flowered gum



#4 Red flowered gum



#4 Red flowered gum



#5 New Zealand Christmas tree – note limb crossing back through



#4 Red flowered gum & #5 New Zealand Christmas tree



Golden medalian tree (Cassia)



#9, 10 & 11 Torrey pines (left to right) - note long limbs.



#13 Red flowered gum



#14 Torrey pine – note long limbs



#15 Canary Island pine – note line clearance trimming.



#16 Canary Island pine – yellow on lower fronds is Mg deficiency



#17 Japanese black pine has mite and is gradually dying back.



#18 Aleppo pine is codominant, but healthy



#19 Shamel ash is large amounts of included bark between limbs.



#20 and 21 Brazil peppers are crowded and have overly long, end-heavy limbs



#22 Aleppo pine is overly limbed up, but health.



#23 Red flowered gum is outside the fence



#35 and 36 Torrey pines as slightly sparse, but adequately healthy. The limbs are getting too long



Mexican fan palms #24 and 25



#38 Canary Island date palm – a fine old specimen.



#49 Morton Bay fig is codominant with included bark.



#50 Catalina ironwood is in poor health



#51 New Zealand Christmas tree



#52 New Zealand Christmas tree



#53 New Zealand Christmas tree is crowded by #54 star pine



#54 Star pine does not have a normal top. It may have been topped.



#51, 52 and 53 New Zealand Christmas trees near the corner.



#55 Star pine does not have a normal top. It may be topped.



#59 Torrey pine is sparse on the sunken side



#59 Torrey pine – note lawn mower damage to th roots.



Mexican fan palms along San Elijo.



#65 Red flowered gum

Testing & Evaluation

Visual Analysis of Tree Condition

All the subject trees were evaluated for condition of the trunk, its lean, scaffold limbs, secondary branching, foliage density, and root crown condition. The root crown was examined, as far as it was visible, without excavation. Surface roots of trees in play fields were damaged by string trimmers or lawn mowers.

The health was evaluated on a visual basis. If there were no nutrient deficiency symptoms, the foliage was full and dense, there were few dead twigs or limbs, and there were no pest or disease symptoms, it was assumed that they were healthy. To the degree that symptoms or problems existed, the trees were rated on a five point scale (A to F). The best condition is termed “A“ or excellent. If there were only a couple minor problems the condition is called “B“or good. If the health was such that the tree was not in jeopardy, but it was not good, the condition is called “C “or fair. If the tree was in decline, but might be recuperated, the condition is called “D“or poor. “F” is dead or as good as dead. The condition of the structure, i.e. trunk, scaffold limbs and branches were evaluated on a similar five point scale.

The trunk diameter was measured with a Biltmore stick. The measurements were taken at 4.5 feet (DBH) to be in conformity with industry standards. If a tree branched low and the narrowest point of the trunk was below 4.5 feet, the diameter was measured there, i.e. at the narrowest point.

No internal testing was done, but if decay is suspected, Shigometer, Resistograph and Picus sonic tomography testing is available.

Discussion

Construction Stress and Risk

The preservation of Cardiff Elementary School's valuable and possibly historic trees should be based not only on the soundness, health and value of the trees, but how well they fit the new development on campus. The preservation decision must be based on an accurate forecast of the extra stresses imposed on trees during the construction period and landscaping, and the probable condition of the trees after construction. The full effects of some construction damage, such as soil compaction or damage to large roots may not be apparent for years afterwards.

The main stresses and risks of construction are:

- Ignoring arborist reports and instructions
- Soil compaction
- Lack of water
- Change of grade in the root zone
- Physical damage to the roots and upper structure
- Spilling or dumping of potentially toxic construction wastes
- Lack of pest control and other care
- Dust

All of these trees will be affected by the planned work on campus to some degree. It was assumed that no matter what level of protection is given the trees from here on, there will be considerable stress imposed on the trees close to construction. It was also considered that the new site use will allow students and staff to hold activities or pass beneath the weakened trees.

Roots spread much further than the dripline, are shallower and much longer than many people imagine. With early planning, monitoring and observing certain precautions, many of these valuable large trees may be preserved. Trees as large as the ones found on this site are irreplaceable and are valuable campus landmarks, establishing a sense of continuity in the history of the campus. They can provide an instant benefit after the new building(s), hardscape and landscape are installed. Sound and healthy large trees in favorable locations will justify more expense to preserve, since they can easily be worth tens of thousands of dollars and still have a good remaining lifespan. Trees like the Torrey pines and large red flowering gums may have "value" beyond what any appraisal formula would yield.

There are limits to how close roots can be cut without sacrificing health or stability. Although I am a tree advocate, I know that the lives of people are more important than trees and I will recommend the removal of any tree that cannot be made reasonably safe. Most of the trees can be made reasonably safe with corrective pruning, but a formal risk assessment was not performed or requested. Future construction could raise the risk level of the trees, if tree protection measures are not followed.

Decay that may have been held in check when a tree was healthy can advance when the trees' reserve carbohydrates are reduced or depleted by construction impacts, or just by aging. Large roots cut for irrigation, underground utilities and footings can immediately render trees less stable during storms and strong winds. Large roots cut inside the root plate are also more likely to decay back into the base of the trunk. However, I cannot forecast which individual trees will be affected at this time, and without personally monitoring the work, of course.

Pruning

Topping, heading and over pruning are harmful and must be prevented. The City and the State of California both decry topping. Epicormic sprouts form from dormant buds and ray traces and have a weak attachment just in the outer growth ring. Normal branches are laminated on year after year with alternating branch and trunk tissue and have a very strong attachment. The shoots can be kept small to minimize the risk of their breaking out, but this will reduce the amount of green foliage and therefore the amount of food (carbohydrates from photosynthesis) that the trees get. This sort of "starvation" will prevent the tree from forming good new conductive vessels, healthy roots and strong compartmentalization.

Lion-tail pruning can only be corrected by keeping more internal shoots and grooming them to become permanent branches. This will take several years of annual pruning, and more thought and better supervision than is usually applied to low-bid maintenance pruning. Older trees of low vigor will take even longer. Without the ability to significantly reduce end weight, those limbs with included bark may need to be entirely removed. When such limbs begin to show signs of sagging and there is no good place to cut back to, they must be removed back to the branch collar.

Careful pruning *can* reduce the risk of limb failure in such cases, but careless or unprofessional pruning will probably make matters worse. A balance needs to be struck, based on the health of the tree and how many shoots need to be removed and how soon they need to be removed. To achieve such a balance will usually require good supervision by a certified arborist, but more appropriately by a board certified master arborist or registered consulting arborist.

Soil Compaction

One of the major impacts of construction is soil compaction, both deliberate and circumstantial. Soil compaction is already at a near critical level due to decades of foot traffic, the paving and turf. The compaction of the soil at a developed site is beneficial for the construction of footings, structures, and paving, but almost fatal to the roots of trees. This soil compaction can often go well beyond the needs for footings. Root systems are very demanding and simply will not grow in compacted soil. A number of the necessary symbiotic partners of tree roots will not survive in less than ten percent pore space.

Converting the areas with surface roots to mulch beds will eliminate the need to mow, increase root depth, and reduce root injuries. Using good green-waste mulch would improve the health of the soil and roots. The campus's own green waste from pruning could be chipped and spread to save money, improve the soil, and minimize land fill problems.

Lack of Water

Water may be disconnected or shut down during construction. Dry soil has benefits and drawbacks. Wet or moist soil compacts more easily, but the trees need water to survive. During construction trees may receive at best light watering from a hose or water trucks, which is far less than most mature trees need. The red flowered gums, New Zealand Christmas trees,

Aleppo pines, star pines and Torrey pines could probably tolerate lack of supplemental irrigation for a year or more. However, the palms are not very drought tolerant.

All trees to remain should be deep watered before construction begins and kept well irrigated inside the fenced protection zones during construction. Other non protected areas that will have foot or equipment traffic should be kept dry as dry as possible when the equipment traffic level is high and watered when it is low. Wet soil run over by equipment will be excessively compacted. Once compacted, the usual methods of compaction reduction cannot be used without damaging the roots in the soil. Prevention and protection is the only realistic way to reduce soil compaction.

Change of Grade in the Root Zone

Proposed grading plans are unknown to this consultant; however without controls, the grade level near some trees may be changed. The soil level within the protection zone must remain unchanged. Changing the grade around trees is a significant health risk.

Having the proper proportion of air and water in the soil is related to proper watering and avoiding soil compaction. As you go deeper in the soil, the amount of available oxygen naturally drops off rapidly. When roots are deprived of adequate oxygen they quickly die. For the fine feeder roots of a tree this can happen in a matter of minutes. When soil is piled on top of the root system, available oxygen is excluded and the soil compacted. The soil is permanently compressed below, so the effect can last years after a pile of soil is removed.

Piles of soil or spoils from trenches and footings can severely compact the soil below, and the equipment used to remove the piles can further compact the soil. Since much of the damage is already done, the best we can do is make sure the original grade is restored and that only track mounted small equipment is used to remove soil piles. This work must also be done when the soil in the haul route is dry.

Physical Damage to the Roots and Structure

Damage to the upper structure of trees seems to always happen on job sites unless secure fencing is in place out to the dripline. Not everyone on a construction site knows about or is concerned about trees. Only physical barriers work, and they need to be supplemented by the cooperation and help of the construction superintendent or inspectors.

Without real fencing, versus orange plastic snow fence, physical injuries to the trunk and branches are likely. Well secured chain link fence is about the only thing that seems to work. Shallow roots are more likely to be damaged during construction. Without controls, trenching for utilities or sprinkler lines is likely to damage roots. Beyond reducing the trees' health, such impacts could also destabilize the trees. Utilities need to be planned to avoid the root zones of trees. Tunneling may be needed to avoid ruining a valuable specimen. Although many people believe mature trees depend on strong, deep tap roots, it is a myth.

Many times trees that people have gone to great measures to preserve through development are severely injured when landscaping is installed under them. Digging holes for shrubs and ground covers can injure main lateral roots, causing extensive damage. Nicking the roots can also open up roots to infection. Trenching for irrigation mains and laterals needs to be carefully planned and implemented. Roto-tilling can also destroy a large percentage of the feeder roots. The trees on this campus are very valuable, and their root systems must be treated with care.

Spilling of Potentially Toxic Construction Wastes

Oil and hydraulic fluid from construction equipment, cement, concrete debris, asphalt, form oil, acid washes, paint and solvents are toxic to tree roots. Again, without fencing and active controls, such dumping is likely and often happens. Many times debris is just buried on job sites. Concrete debris, some base materials and sand can also be harmful to soils. Concrete debris increases the alkalinity of the soil as do base materials that contain concrete or lime. Sand and gravel disrupt the capillary spread of water in the soil and can create a "perched water table" if enough material is buried. Even the Port-a Johns can pollute the soil by the detergents used to clean them.

Lack of Pest Control and Other Care

Construction can last for more than a year on projects such as this. During this time the pest cycles come and go, especially in spring. Dust accumulates on leaf surfaces and in leaf pores. Most often pest control is put on hold or blocked by fencing until construction is finished. However this is a stressful and demanding time for the trees. Pests can further deplete the reserves of trees and allow decay to advance. Drought stressed trees are more vulnerable to borers and certain other pests.

The polyphagous shot-hole borer (PSHB) is spreading quickly and has already killed tens of thousands of trees. It spreads a Fusarium disease and there is no effective treatment approved so far. The Huntington Botanic Garden said that almost a third of their 900 species are vulnerable. UCI is losing all their sycamores, about 1,600 trees. No preventative treatment is known to be effective, so the best that can be done is to recommend that only trees known to be resistant be planted. Ficus, crape myrtles, deodars and magnolias for example are thought to be resistant.

Dust

Construction creates copious amounts of dust. The trees, on the other hand, do not benefit from dust. Dust can block the pores the leaves breathe through (stomata) and dust blocks sunlight, reducing photosynthesis. The trees will need to be kept clean. Strict dust control measures may help, but dust is inevitable.

Assumptions and Limiting Conditions

This consultant has not been able to locate the City's list of "Heritage Trees". Assuming that the trees on this site are not considered City trees, the City of Encinitas heritage trees have special protection under Ordinance 2017-02. Pruning and tree selection may require approval of the City Arborist. The Landscape Architect is responsible for complying with City requirements if this campus, or a part of it, is considered a City Park.

Recommendations

Removals

Only a few trees are in such poor health that removal may be necessary. Trees #17 and #50 should be removed. Both are small and too far declined to be worth trying to restore. No imminent tree failures were observed. Removals will be primarily necessary for construction purposes.

The following matrix shows the radius of protection needed around each tree going forward. One column is for maintaining the health of the trees, which should be provided unless Cardiff School District administrators are willing to risk killing certain trees for a chance of *possibly* preserving them. However, consider that removing trees after the site is in use will be more expensive and disruptive. It is impossible to predict where all the roots are, and many times trees with work inside the health clearance radius do survive. However, testing by Bartlett Tree Research has shown that there are predictable limits beyond which tree stability is reduced. The column called “safety clearance” is a column that must not be tested here.

Prior to demolition, meet on site with the contractor and clearly mark all trees to be removed. Impress on the demolition contractor that if there are adjoining trees to remain, the roots of the tree to be removed must be cut by a trencher prior to being grubbed out. Otherwise the roots of the adjoining tree may be damaged or ripped up with the roots of the removed tree.

Desirable trees that the district wants to save should have more extensive study done to determine as precisely as possible the extent and depth of their root systems. In addition, an accurate survey, versus GPS, needs to be done to verify or know there will be sufficient room to preserve these trees before construction begins. Stake off and measure the limits of grading and construction near trees to remain and compare to the following matrix. Deep water trees to be remain prior to construction.

The health clearances given are based on formulas presented in *Trees and Development: a Technical Guide to Preservation of Trees during Construction*, by Matheny and Clark and published by the International Society of Arboriculture.

Future Landscaping

To achieve a longer lasting landscape and lower maintenance costs, the landscape architects and site designers should attempt to provide as much root space as possible and still select smaller tree species. New planting spaces should have compaction resistant soil throughout. Root space around existing trees in enclosed areas should be expanded and include vertical mulching to maximize root depth and volume.

Prior to construction, carefully remove the turf below trees along the sports field edge and replace it with a 2-3" deep layer of well-composted, coarse-textured, green-waste type mulch, e.g. Aguinaga Forest Floor ½ to 1 ½ inch particle size. While removing the turf, be careful not to damage shallow roots. Where the roots are dense and near the surface, killing the turf and mulching over it is a better approach.

The new landscape plan should be designed and installed to protect and improve the health and habitat of the valuable preserved trees. The trees closer to construction may be in critical care for a decade or more. Once they are clearly recovered, more liberties can be taken with the surrounding landscape.

Irrigation in particular must be designed for the needs of the trees first. Spot bubblers will not serve the needs of mature trees. Deep watering devices sound helpful, but they require water to be drawn up through capillary action and the salts are deposited near the surface rather than being leached below the roots. Low precipitation systems will allow deep irrigation to leach salts and improve root health. Fewer heads will allow less trenching and less trenching causes less root damage. Trenches that approach trees directly toward the trunk will cut fewer roots than trenches passing their canopy as a tangent. Irrigation design around existing trees needs to be more specific and less schematic.

As much as possible, turf and other planting should be eliminated under these trees. Any shrubs should be planted outside the driplines of these trees or have the planting holes dug using an AirSpade. Mulch beds will be the best way to improve root health and depth. Apply a 2-3" deep layer of well composted, coarse-textured green waste mulch, e.g Aguinaga Forest Floor ½ to 1½", below all the trees after removing construction debris, including sand, base material, gravel, asphalt and concrete debris. Do not use bark mulch or mulch containing manure. Cover all the soil at least under the driplines and between surrounding paving areas, but do not apply against the trunks.

All trenches for the irrigation should be marked out and approved by this consultant prior to trenching. All soil disturbances within the critical/safety root zone must be prevented or very carefully controlled.

City approval will probably be more likely if new trees are chosen from the "Approved Tree Species Master List", a listing of trees as approved by the City Council that are deemed appropriate for planting on a Citywide basis, Other trees not on the list should be reviewed by the city arborist.

Pruning

All pruning must be done by properly licensed and insured tree service that provides a certified arborist to supervise his crew. The project consulting arborist should oversee the pruning of sample trees of each species. The tree service must demonstrate ability to carry out an understanding of the instructions before allowing them to proceed. Do not allow the general contractor to cut on any trees for any reason. Clearance pruning should be done only by the properly licensed and insured tree service, with the general contractor's information of clearance needs.

Beyond clearance pruning, do not prune the more impacted trees for at least 3 years or until they resume normal growth. Focus on balance, subordination of codominant leaders, reducing the length of overly long limbs and control (not necessarily removal) of epicormic shoots. Do not remove more than the City's limit of 25%, and then only when the tree is healthy and the season is correct. All pruning must be done in late fall or winter for the pines and other conifers. All the ficus and other subtropicals can be pruned in spring or early summer.

Follow the recommendations in the matrix to follow and ANSI A300, part 1 pruning standards and the ISA supporting publication "Best Management Practices, Pruning".

Recommendations Matrix

*Clearances are shown for the purpose of possible relocation of paving, trenching or planting.

Tree #	Species	DBH	Height	Spread	Safety clearance	Health clearance	Pruning season	Pruning type
1	Juniperus c. Torulosa	4.5+6	10	10	2.5	7.5	winter	none
2	Juniperus c. Torulosa	11	16	23	3.7	11	winter	none
3	Corymbia ficifolia	46	40	42	15.3	46	winter	subordinate
4	Corymbia ficifolia	48.5	45	55	16.2	48	winter	subordinate
5	Metrosideros excelsus	6x7"	33	30	5.7	17	spring	none
6	Cassia leptophylla	6.3	18	18	2.1	6.3	spring	subordinate
9	Pinus torreyana	28	60	45	9.3	28	winter	reduction
10	Pinus torreyana	46	60	55	15.3	46	winter	reduction
11	Pinus torreyana	40	65	50	13.3	40	winter	reduction
13	Corymbia ficifolia	41	32	40	13.7	41	winter	subordinate
14	Pinus torreyana	53	60	50	17.7	53	winter	reduction
15	Phoenix canariensis		40'th	24	5.0	5	summer	dead only
16	Phoenix canariensis		32'th	25	5.0	5	summer	dead only
17	Pinus thunbergiana	8	8	16	N/A	N/A	N/A	N/A
18	Pinus halepensis	24	24	40	8.0	24	winter	reduction
19	Fraxinus uhdei	36	36	40	12.0	27	winter	reduction
20	Schinus terebinthifolius	24+14	35	40	9.3	28	summer	reduction
21	Schinus terebinthifolius	40	37	52	13.3	30	summer	reduction
22	Pinus halepensis	30	30	38	10.0	30	winter	reduction
23	Corymbia ficifolia	24	30	30	8.0	24	winter	subordinate
24	Washingtonia robusta		60'th	10	4.0	5	summer	dead only
25	Washingtonia robusta		60'th	10	4.0	5	summer	dead only
35	Pinus torreyana	41	60	53	13.7	41	winter	reduction
36	Pinus torreyana	36	60	55	12.0	36	winter	reduction

Tree #	Species	DBH	Height	Spread	Safety clearance	Health clearance	Pruning season	Pruning type
38	Phoenix canariensis		60'th	25	5.0	5	summer	dead only
49	Ficus macrophylla	30+30+20	45	45	15.7	40	summer	reduction
50	Lyonothamnus f. asplenifolius	2	9	4	N/A	N/A	N/A	N/A
51	Metrosideros excelsus	13	24	25	4.3	13	spring	subordinate
52	Metrosideros excelsus	13	28	28	4.3	13	spring	subordinate
53	Metrosideros excelsus	14	30	30	4.7	14	spring	subordinate
54	Araucaria heterophylla	37	58	40	12.3	37	winter	crown restoration
55	Araucaria heterophylla	28	60	40	9.3	28	winter	crown restoration
59	Pinus torreyana	39.4	42	60	13.1	39.4	winter	reduction
65	Corymbia ficifolia	22	38	36	7.3	22	winter	subordinate

General Tree Preservation Recommendations

1. Protection Barrier: A protection barrier shall be installed around the tree or trees to be preserved. The barrier shall be constructed of 6' high chain-link fencing. The barrier shall be placed as far from the base of the tree(s) as possible, preferably at or beyond the dripline and the health clearance radius. The fencing shall be maintained in good repair throughout the duration of the project, and shall not be removed, relocated, or encroached upon without permission of the arborist involved.
2. Storage of Materials: There shall be NO storage of materials or supplies of any kind within the area of the protection zone. Concrete and cement materials, block, stone, sand and soil shall not be placed within the protection zone of the tree.
3. Fuel Storage: Fuel storage shall NOT be permitted within 150 feet of any tree to be preserved. Refueling, servicing and maintenance of equipment and machinery shall NOT be permitted within 150 feet of protected trees. Equipment that leaks hydraulic fluid shall be removed from the site immediately.
4. Debris and Waste Materials: Debris and waste from construction or other activities shall NOT be permitted within the protection zone. Wash down of concrete or cement handling equipment, in particular, shall NOT be permitted within 150 feet of protected trees.
5. Grade Changes: Grade changes can be particularly damaging to trees. Even as little as two inches of fill can cause the death of a tree. Lowering the grade can destroy major portions of a root system. Any grade changes proposed should be approved by a Registered Consulting Arborist before construction begins, and precautions taken to mitigate potential injuries.
6. Damages: Any damages or injuries should be reported to the project arborist as soon as possible. Severed roots shall be pruned cleanly to healthy tissue, using proper pruning tools. Broken branches or limbs shall be pruned according to International Society of Arboriculture "Best Management Practices – Pruning", and ANSI A-300, part 1 Pruning Standards.
7. Preventive Measures: Pruning of the tree canopies and branches should be done at the direction of the project arborist to remove any dead or broken branches, and to provide the necessary clearances for the construction equipment.

Appendix

A. Resume

B. Glossary

A. Resume GREGORY W. APPLEGATE, ASCA, ASLA

PROFESSIONAL REGISTRATIONS:

American Society of Consulting Arborists - Registered Consulting Arborist #365
International Society of Arboriculture - Tree Risk Assessment Qualified
International Society of Arboriculture - Certified Arborist # WE-180a

EXPERIENCE:

Mr. Applegate is an independent consulting arborist. He has been in the horticulture field since 1963, providing professional arboricultural consulting since 1984 within both private and public sectors. His expertise includes appraisal, tree preservation, diagnosis of tree growth problems, construction impact mitigation, environmental assessment, expert witness testimony, hazard evaluation, pruning programs, species selection and tree health monitoring.

Mr. Applegate has consulted for insurance companies, major developers, theme parks, homeowners, homeowners' associations, landscape architects, landscape contractors, property managers, attorneys and governmental bodies.

Notable projects on which he has consulted are: Disneyland, Disneyland Hotel, DisneySeas-Tokyo, Disney's Wild Animal Kingdom, the New Tomorrowland, Disney's California Adventure, Disney Hong Kong project, Knott's Berry Farm, J. Paul Getty Museum, Tustin Ranch, Newport Coast, Crystal Court, Newport Fashion Island Palms, Bixby Ranch Country Club, Playa Vista, Laguna Canyon Road and Myford Road for The Irvine Company, MTA Expo Line, MWD-California Lakes, Paseo Westpark Palms, Loyola-Marymount campus, Cal Tech, Cal State Long Beach, Pierce College, The Irvine Concourse, UCI, USC, UCLA, LA City College, LA Trade Tech, Riverside City College, Crafton Hills College, MTA projects, and the State of California review of the Landscape Architecture License exam (re: plant materials)

EDUCATION:

Bachelor of Science in Landscape Architecture, California State Polytechnic University, Pomona 1973
Arboricultural Consulting Academy (by ASCA) Arbor-Day Farm, Kansas City 1995
Continuing Education Courses in Arboriculture, required to maintain Certified Arborist status and for ASCA membership

PROFESSIONAL AFFILIATIONS:

American Society of Landscape Architects (ASLA), Full member
American Society of Consulting Arborists (ASCA), Full member
International Society of Arboriculture (ISA), Regular member
California Tree Failure Report Program, UC Davis, Participant
Street Tree Seminar (STS), Member

COMMUNITY AFFILIATIONS:

Horticulture Advisory Committee, Saddleback College (1988 until present)
Landscape Architecture License Exam, Reviewer, Cal Poly Pomona (1986-90)
American Institute of Landscape Architects (L.A.) Board of Directors (1980-82)
California Landscape Architect Student Scholarship Fund - Chairman (1985)
International Society of Arboriculture - Examiner-tree worker certification (1990)
Guest lecturer at UCLA, Cal Poly, Saddleback College, & Palomar Junior College

B. Glossary

ANSI-A300	American National Standards Institute performance standards for the care and maintenance of trees, shrubs and other woody plants. Consists of nine parts in separate documents. Part 1 covers pruning.
Arboriculture	The cultivation and care of trees and shrubs.
Arborist	professional who possesses the technical competence gained through experience and related training to provide for or supervise the management of trees and other woody plants in residential, commercial or public settings.
Caliper	Diameter of a tree trunk. Larger trees are usually measured at 4½ feet (see DBH) Trees with calipers 4 inches and below are measured at 6 inches above grade. Trees above 4 inches, but still transplantable are measured at 12 inches above grade.
Codominant	stems: two or more vigorous and upright branches of relatively equal size that originate from a common point, usually where the leader has been lost or removed.
Compaction	(Soil Compaction) The compression of soil, causing a reduction of pore space and an increase in the density of the soil. Tree roots cannot grow in compacted soil.
Conifer-	A gymnosperm which bears cones, such as pine or fir, but sometimes another of the Coniferae group which does not produce cones, such as Gingko.
Crotch	The union of two or more branches; the axillary zone between branches.
Crown	The upper portions of a tree or shrub, including the main limbs, branches, and twigs.
Crown restoration	method of restoring the natural growth habit of a tree that has been topped or damaged in any other way. Aka Restoration pruning.
DBH	Diameter of the trunk, measured at breast height or 54 inches above the average grade. Syn. = caliper.
Decay	Progressive deterioration of organic tissues, usually caused by fungal or bacterial organisms, resulting in loss of cell structure, strength, and function. In wood, the loss of structural strength.
Decline	Progressive reduction of health or vigor of a plant.

Decurrent	Referring to crowns which are made up of a system of codominant scaffold branches. Lacking a central leader.
Dieback	Progressive death of buds, twigs and branch tissues, on individual limbs, or throughout the canopy.
Drop-crotch	Reduction cuts meant to shorten a limb or branch by cutting back to an inner branch that can serve as the new end of the limb.
Epicormic	Epi - upon; cormic – stem. Branches that are upon the stem, i.e. sprouting from either dormant buds in the cambial zone, or from buds sprung anew from ray traces. Epicormic shoots are a sign that energy reserves have been lowered.
Grading	Also Regrading. Intentional altering of topography and soil levels, using machinery.
Hazardous condition	The combination of a likely failure of a tree or tree part with the presence of a likely target.
Heading	Pruning techniques where the cut is made to a bud, weak lateral branch or stub.
Included bark	Bark or cortex tissue that is included or trapped between close-growing branches. Usually found in narrow or tight crotches.
Leader	A dominant upright stem, usually the main trunk. There can be several leaders in one tree.
Limb	A large lateral branch growing from the main trunk.
Palm	A tropical or subtropical monocotyledonous tree or shrub, usually having a woody, unbranched trunk and large, evergreen, fan or feather-shaped leaves at the top.
Reduction cut	A pruning cut meant to shorten a limb or branch by cutting it back to an inner branch that will serve as the new end of the limb or branch.
Root plate	The stiff primary roots close to the trunk and able to provide compressive support.
Root system	The portion of the tree containing the root organs, including buttress roots, transport roots, and fine absorbing roots; all underground parts of the tree.
Root zone	The area and volume of soil around the tree in which roots are normally found. May extend to three or more times the branch spread of the tree, or several times the height of the tree.
Scaffold	large, main branches that form the main structure of the crown.
Sprout	Also water sprout. A shoot or stem that grows from the bark of a tree; adventitious or secondary growth.

Stress	"Stress is a potentially injurious, reversible condition, caused by energy drain, disruption, or blockage, or by life processes operating near the limits for which they were genetically programmed." Alex Shigo
Subordination	Pruning to reduce the size and growth rate of a branch or leader in relation to other branches or leaders.
Value	Value is the present worth of future benefits. Value is not necessarily cost.
Wound	Any injury which induces a compartmentalization response.

Disclaimer

Good current information on tree preservation has been applied. However, even when every limb and root is inspected, inspection involves sampling, therefore some areas of decay or weakness may be missed. Weather, winds and the magnitude and direction of storms are not predictable and some failures may still occur despite the best application of high professional standards. Future tree maintenance will also affect the trees health and stability and is not under the supervision or scrutiny of this consultant. Continuing construction activity such as trenching will also affect the health and safety, but are unknown and unsupervised by this consultant. Trees are living, dynamic organisms and their future status cannot be predicted with complete certainty by any expert. This consultant does not assume liability for any tree failures involved with this property.

Certification

I, Gregory W. Applegate, certify to the best of my knowledge and belief:

That the statements of fact contained in this report are true and correct. That the report analysis, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal unbiased professional analysis, opinions and conclusions.

That I have no present or prospective interest in the vegetation that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.

That my compensation is not contingent upon the reporting or a predetermined reporting that favors the cause of the client, the attainment of stipulated result, or the occurrence of a subsequent event.

That my analysis, opinions, and conclusions were developed, and this report has been prepared, in conformity with the standards of arboricultural practice.

That I have made a personal inspection of the plants that are the subject of this report. No one provided significant professional assistance to the person signing this report.

Arborgate Consulting, Inc.
Gregory W. Applegate  Date 04-21-18
Registered Consulting Arborist #365

Appendix 5.4-1 CHRIS Records Search

Appendices

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South Coastal Information Center
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-5320
Office: (619) 594-5682
www.scic.org
nick@scic.org

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM RECORDS SEARCH

Company: Daly & Associates

Company Representative: Pamela Daly

Date Processed: 3/20/2018

Project Identification: Cardiff Elementary School #2018-02

Search Radius: 1/2 mile

Historical Resources: YES

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: YES

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: YES

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: YES

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Summary of SHRC Approved CHRIS IC Records Search Elements	
RSID:	2442
RUSH:	no
Hours:	1
Spatial Features:	23
Address-Mapped Shapes:	yes
Digital Database Records:	2
Quads:	1
Aerial Photos:	0
PDFs:	Yes
PDF Pages:	4

This is not an invoice. Please pay from the monthly billing statement

California Historical Resources Information System

CHRIS Data Request Form

ACCESS AND USE AGREEMENT NO.: 94 **IC FILE NO.:** _____

To: South Coastal Information Center

Print Name: Pamela Daly Date: 01/23/18

Affiliation: Daly & Associates

Address: 2242 El Capitan Drive

City: Riverside State: CA Zip: 92506

Phone: (951) 369-1366 Fax: _____ Email: daly.rvrsde@sbcglobal.net

Billing Address (if different than above): _____

Project Name / Reference: Cardiff Elementary School

Project Street Address: 1888 Montgomery Avenue, Encinitas, CA

County: San Diego

Township/Range/UTMs: T13S, R4W, S.B.B.M. Zone 11; 473531m/E; 3654087m/N

USGS 7.5' Quad(s): Encinitas

PRIORITY RESPONSE (Additional Fee): yes ○ / no ◉

TOTAL FEE NOT TO EXCEED: $ 500.00

Special Instructions:

Information Center Use Only

Date of CHRIS Data Provided for this Request: _____

Confidential Data Included in Response: yes ○ / no ○

Notes: _____

California Historical Resources Information System

CHRIS Data Request Form

Include the following information (mark as necessary) for the records search area(s) shown on the attached map(s) or included in the associated shapefiles. Shapefiles are the current CHRIS standard format for digital spatial data products.

NOTE: All digital data products are subject to availability - check with the appropriate Information Center.

1. **Map Type Desired:** Digital map products will be provided only if they are available at the time of this request. *Regardless of what is requested*, only hard copy hand-drawn maps will be provided for any part of the requested search area for which digital map products are not available at the time of this request.
There is an additional charge for shapefiles, whether they are provided with or without Custom GIS Maps.

Mark one map choice only

Custom GIS Maps ○ Shapefiles ○ Custom GIS Maps **and** Shapefiles ○ Hard Copy Hand-Drawn Maps **only** ◉

Any selection below left unmarked will be considered a "no."

2a.

	Within project area	Within 1/2 mi radius
ARCHAEOLOGICAL Resource Locations+	yes◉/ no○	yes○/ no○
NON-ARCHAEOLOGICAL Resource Locations	yes◉/ no○	yes○/ no○
Report Locations+	yes○/ no○	yes◉/ no○
Resource Database Printout* (list)	yes◉/ no○	yes○/ no○
Resource Database Printout* (detail)	yes◉/ no○	yes○/ no○
Resource Digital Database Records (spreadsheet)+	yes○/ no◉	yes○/ no○
Report Database Printout* (list)	yes◉/ no○	yes○/ no○
Report Database Printout* (detail)	yes◉/ no○	yes○/ no○
Report Digital Database Records (spreadsheet)+	yes○/ no◉	yes○/ no○
ARCHAEOLOGICAL Resource Record copies+*	yes○/ no◉	yes○/ no○
PDF○/ Hard Copy○		
NON-ARCHAEOLOGICAL Resource Record copies*	yes◉/ no○	yes○/ no○
PDF◉/ Hard Copy○		
Report copies+*:	yes○/ no○	yes○/ no○
PDF○/ Hard Copy○		

	Only directory listing	Associated documentation
OHP Historic Properties Directory**		
within project area	yes◉/ no○	yes○/ no○
within _____ mi radius	yes○/ no◉	yes○/ no○
OHP Archaeological Determinations of Eligibility+		
within project area	yes◉/ no○	yes○/ no○
within 1/2 mi radius	yes◉/ no○	yes○/ no○
***California Inventory of Historical Resources* (1976):**		
within project area	yes◉/ no○	yes○/ no○
within _____ mi radius	yes○/ no◉	yes○/ no○

+ In order to receive archaeological information, requestor must meet qualifications as specified in Section III of the current version of the California Historical Resources Information System Information Center Rules of Operation Manual and be identified as an Authorized User under an active CHRIS Access and Use Agreement.

* These documents may be supplied as PDF files, if available

** Includes, but is not limited to, information regarding National Register of Historic Places, California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and historic building surveys.

CHRIS Data Request Form

2b. Listed below are sources of additional information that may be available at the Information Center. Indicate if a review and documentation of any of the following types of information is requested.

Caltrans Bridge Survey	yes ○	no ⊙
Ethnographic Information	yes ○	no ⊙
Historical Literature	yes ○	no ⊙
Historical Maps	yes ○	no ⊙
Local Inventories	yes ⊙	no ○
GLO and/or Rancho Plat Maps	yes ○	no ⊙
Shipwreck Inventory	yes ○	no ⊙
Soil Survey Maps	yes ○	no ⊙

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-00142	NADB-R - 1120142; Voided - BERRYS 23	1976	Berryman, Stanley R.	Archaeological Reconnaissance of: Villa Cardiff Developement.	Berryman Archaeological Cosultants	
SD-00200	NADB-R - 1120200; Voided - BERRYS 37	1971	Berryman, Stanley R.	Results of a 1.5% Test Excavation at the Villa Cardiff Archaeological Site Number W-167	Berryman Archaeological Consultants	
SD-00671	NADB-R - 1120671; Voided - GALLEGOS52	1986	Gallegos, Dennis, Dayle Cheever, and Stephan Van Wormer	A Cultural Resource Overview for the Encinitas Planning Area, Enicinitas, California.	WESTEC Services, Inc.	
SD-01053	NADB-R - 1121053; Voided - GALLEGO 10	1984	Gallegos, Dennis R. and Richard Carrico	Archaeological Survey Cardiff Sea Point	WESTEC Services, Inc.	
SD-01638	NADB-R - 1121638; Voided - WOODWARD04	1985	Woodward, Jim and George Stammerjohan	Resource Inventory Cultural Resources San Diego Coast State Beaches	Department of Parks and Recreation	37-004612, 37-006854, 37-009586, 37-009587, 37-009588, 37-009589, 37-009590, 37-009598
SD-01903	NADB-R - 1121903; Voided - SMITHB 73	1990	Smith, Brian F.	An Archaeological Survey of the Eikel Subdivision Project	Brian F. Smith and Associates	
SD-02141	NADB-R - 1122141; Voided - GRAVES 03	1985	GRAVES ENGINEERING,INC	DRAFT ENVIRONMENTAL IMPACT REPORT CARDIFF SEA POINT CONDOMINIUMS CARDIFF BY THE SEA, CALIFORNIA EAD LOG#84-7-45	GRAVES ENGINEERING,INC	
SD-03028	NADB-R - 1123028; Voided - SMITHB 252	1995	SMITH, BRIAN	RESULTS OF AN ARCHAEOLOGICAL EVALUATION OF CULTURAL RESOURCES WITHIN THE PROPOSED CORRIDOR FOR THE SAN ELIJO WATER RECLAMATION SYSTEM (PROJECT NO. C-06-4155-110)	BRIAN F. SMITH AND ASSOCIATES	37-013925, 37-013926
SD-06629	NADB-R - 1126629; Voided - ROSEN 80	1999	ROSEN, MARTIN	HISTORIC PROPERTY SURVEY REPORT OCEANSIDE TO SAN DIEGO-RAIL TO TRAIL	MARTIN ROSEN	37-004513, 37-004609, 37-005443, 37-006751, 37-012453, 37-013212
SD-07117	NADB-R - 1127117; Voided - CITYSD 728	1974	CITY OF SAN DIEGO	DRAFT EIR SAN ELIJO LAGOON-ACQUISITION	CITY OF SAN DIEGO	
SD-08969	NADB-R - 1128969; Voided - DOLAN15	2004	DOLAN, CHRISTY	HISTORIC PROPERTIES SURVEY REPORT FOR THE MANCHESTER AVENUE/INTERSTATE 5 INTERCHANGE PROJECT SAN DIEGO COUNTY, CALIFORNIA	EDAW, INC.	37-004553
SD-09361	NADB-R - 1129361; Other - 11A0398; Voided - BYRD15	2002	Byrd, Brian F. and Collin O'Neill	Archaeological Survey Report for the Phase I Archaeological Survey along Interstate 5 San Diego County, CA.	ASM, Inc	37-000606, 37-004552, 37-004553, 37-006851, 37-007296, 37-012120, 37-013484
SD-09806	NADB-R - 1129806; Voided - BERRYS 89	1976	Berryman, Stanley R.	Archaeological Reconnaissance of: Sea Crest Estates	Berryman Archaeological Consultants	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-11761	NADB-R - 1131761; Voided - DOMINICI67	2007	DOMINICI, DEB	HISTORIC PROPERTY SURVEY REPORT, I-5 NORTH COAST WIDENING PROJECT	CALTRANS	
SD-11774	NADB-R - 1131774; Voided - ROBBINS245	2006	ROBBINS-WADE, MARY	ARCHAEOLOGICAL SURVEY REPORT, ENCINITAS GRADE-SEPARATED PEDESTRIAN CROSSINGS, ENCINITAS, SAN DIEGO COUNTY, CALIFORNIA	AFFINIS	
SD-13916	NADB-R - 1133916; Voided - CALTRANS88	2012	CALTRANS	INTERSTATE 5 NORTH COAST CORRIDOR PROJECT SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT REPORT/ ENVIRONEMENTAL IMPACT STATEMENT	CALTRANS	
SD-14495	NADB-R - 1134495; Voided - CALTRANS89	2013	CALTRANS	INTERSTATE 5 NORTH COAST CORRIDOR PROJECT FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT AND SECTION 4(F) EVALUATION	CALTRANS	
SD-14615	NADB-R - 1134615; Voided - CALTRANS90	2013	CALTRANS	I-5 NORTH CORRIDOR PROJECT SUPPLEMENTALS	CALTRANS	
SD-15088	NADB-R - 1135088	2013	WAYNE H. BONNER and KATHLEEN A. CRAWFORD	CULTURAL RESOURCES RECORDS SEARCH AND SITE VISIT RESULTS FOR T-MOBILE WEST, LLC, CANDIDATE SD06210A (SD210 GLADSTONE) 2185-2191 SAN ELIJO AVENUE, CARDIFF BY THE SEA, SAN DIEGO COUNTY, CALIFORNIA	ENVIRONMENTAL ASSESSMENT SPECIALISTS, INC.	
SD-15089	NADB-R - 1135089	2014	WAYNE H. BONNER and KATHLEEN A. CRAWFORD	DIRECT APE HISTORIC ARCHITECTURAL ASSESSMENT FOR T-MOBILE WEST, LLC CANDIDATE SD06210A (SD210 GLADSTONE) 2185-2191 SAN ELIJO AVENUE, CARDIFF BY THE SEA, SAN DIEGO COUNTY, CALIFORNIA	ENVIRONMENTAL ASSESSMENT SPECIALISTS, INC.	
SD-16127	NADB-R - 1136127	2008	Deb Dominici and Don Laylander	2007 CULTURAL RESOURCES TREATMENT PLAN NORTH COAST INTERSTATE 5 CORRIDOR	CALTRANS	
SD-16131	NADB-R - 1136131	2013	Michelle Blake	SIXTH SUPPLEMENTAL HISTORIC PROPERTY SURVEY REPORT (HPSR): REVISED AREA OF POTENTIAL EFFECTS (APE) I-5 NORTH COAST CORRIDOR	Caltrans	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SD-16566	NADB-R - 1136566; Submitter - 20210.03	2016	CASTELLS, SHELBY GUNDERMAN, STRINGER-BOWSHER, SARAH, QUACH, TONY, and GHABHLAIN, SINEAD NI	SAN ELIJO LAGOON DOUBLE TRACK PROJECT CULTURAL RESOURCES TECHNICAL REPORT (BETWEEN MILEPOST 239 AND 242; CONTROL POINT CARDIFF TO CONTROL POINT CRAVEN)	ASM Affiliates, inc	

Appendix 5.4-2 Historic Resources Assessment Report

Appendices

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Draft

HISTORIC RESOURCE ASSESSMENT REPORT

Of

Cardiff School
APNs: 260-340-01-00, 260-340-02-00
1888 Montgomery Street
Encinitas, San Diego County, California

Prepared by
Pamela Daly, M.S.H.P.
Daly & Associates
2242 El Capitan Drive
Riverside, CA 92506

Prepared for:
PlaceWorks
3 MacArthur Place, Suite 1100
Santa Ana, CA 92707

August 2018

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Appendix A – Department of Parks and Recreation (DPR) 523 Series Inventory Site forms

I. INTRODUCTION

The Cardiff School District (District) is proposing to construct improvements on a property known as Cardiff School, located at 1888 Montgomery Avenue in the community of Cardiff-by-the-Sea, City of Encinitas, San Diego County, California (Figures 1 and 2). The proposed improvements project (Project) will be situated within the two legal parcels that comprise the Cardiff School property; Assessor Parcel Numbers (APN) 260-340-01-00 and 260-340-02-00.

The Project will address the most critical physical needs of buildings and grounds at the Cardiff School campus through the complete demolition of five of the six pre-1962 buildings, and partial demolition of the remaining pre-1962 building. The portable classrooms will also be removed from the site.

This study was conducted in order to identify any potentially significant built-environment resources over 50-years of age situated in the proposed Project Area that may be adversely affected by the Project. This report develops the historic context of the Projectarea, and provides a historic evaluation of the historic-aged resources located within the subject area associated with the proposed Project.

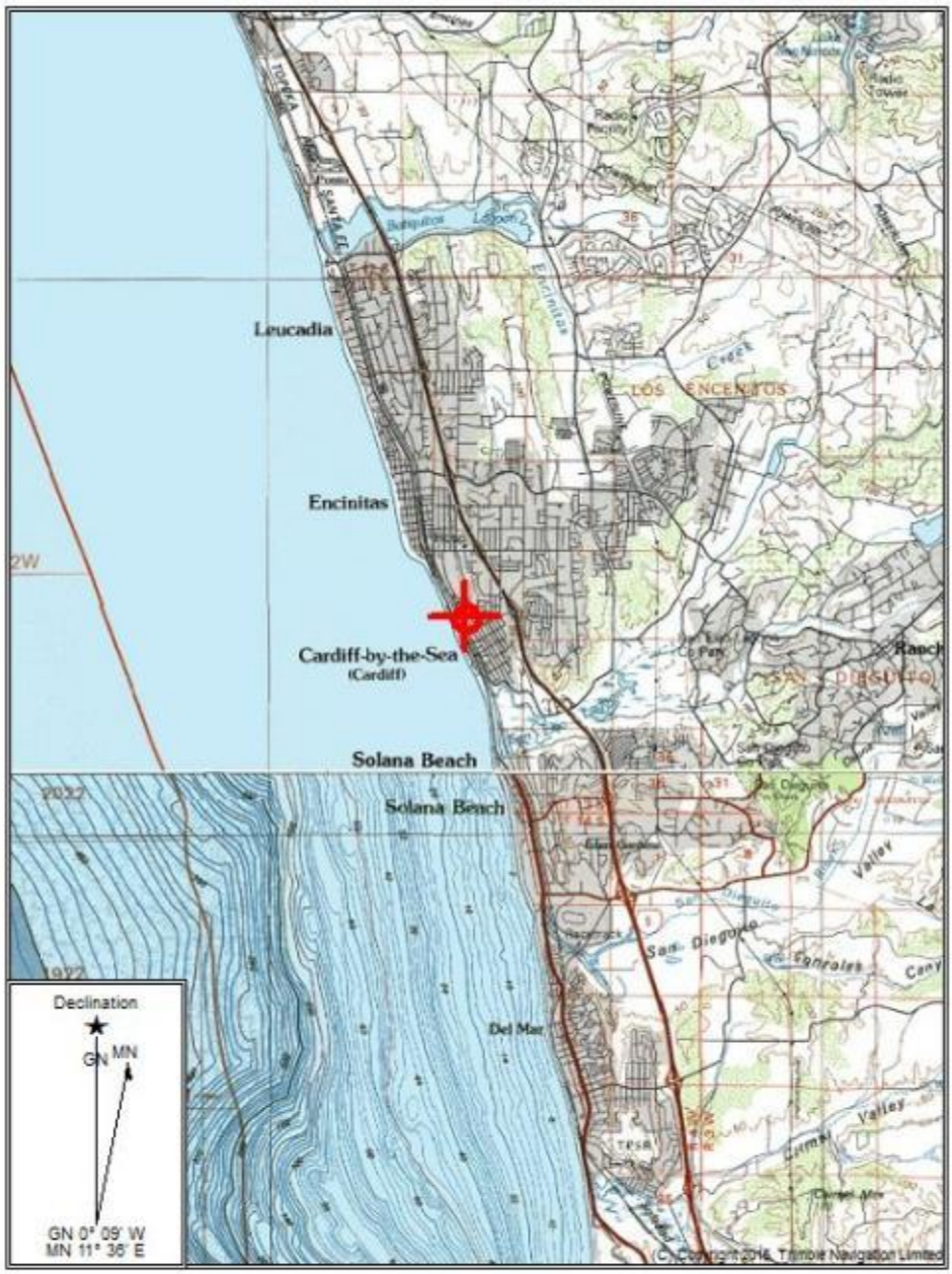
The evaluation of the Project APE located on the grounds of Cardiff School was conducted by Pamela Daly, M.S. a qualified Architectural Historian, under the California Environmental Quality Act (CEQA). Contained within this report is the baseline data used to determine the potential eligibility of the built-environment structures and features located within the Project APE for inclusion in the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), or as a Cultural Resource in the City of Encinitas, CA.

A. PROJECT LOCATION

The subject 8.0± acre site features an elementary school campus with built environment resources over 50 years of age located in the residential tract of Cardiff Vista, in a triangular-shaped parcel bound by San Elijo Avenue to the west, Montgomery Avenue to the east and north, and Mozart Avenue to the south.

The Cardiff School campus buildings are situated in the eastern portion of APN 260-340-02-00, and open space and field areas on the western portion. The campus is comprised of permanent classroom buildings built between 1950 and 1962; a multipurpose building constructed in 1962; portable classrooms installed between 1985 and 1995; playing fields and recreation area (also known as George Berkich Park) constructed in 1993; and an administration building, library/media center, and academic labs/rooms that were constructed in 2001. The playing fields and park are recognized as outdoor recreational space by the National Park Service's Land and Water Conservation Fund .

The built-environment resource known as the “Little Brick Building” is situated in the northern portion of the project area, within APN 260-340-01-00. This parcel is under the jurisdiction of the District (Figure 3).



SCALE 1:125000

0 10000 20000

Feet

Figure 1: Project Vicinity
Cardiff School
1888 Montgomery Avenue
Cardiff-by-the-Sea, San Diego County

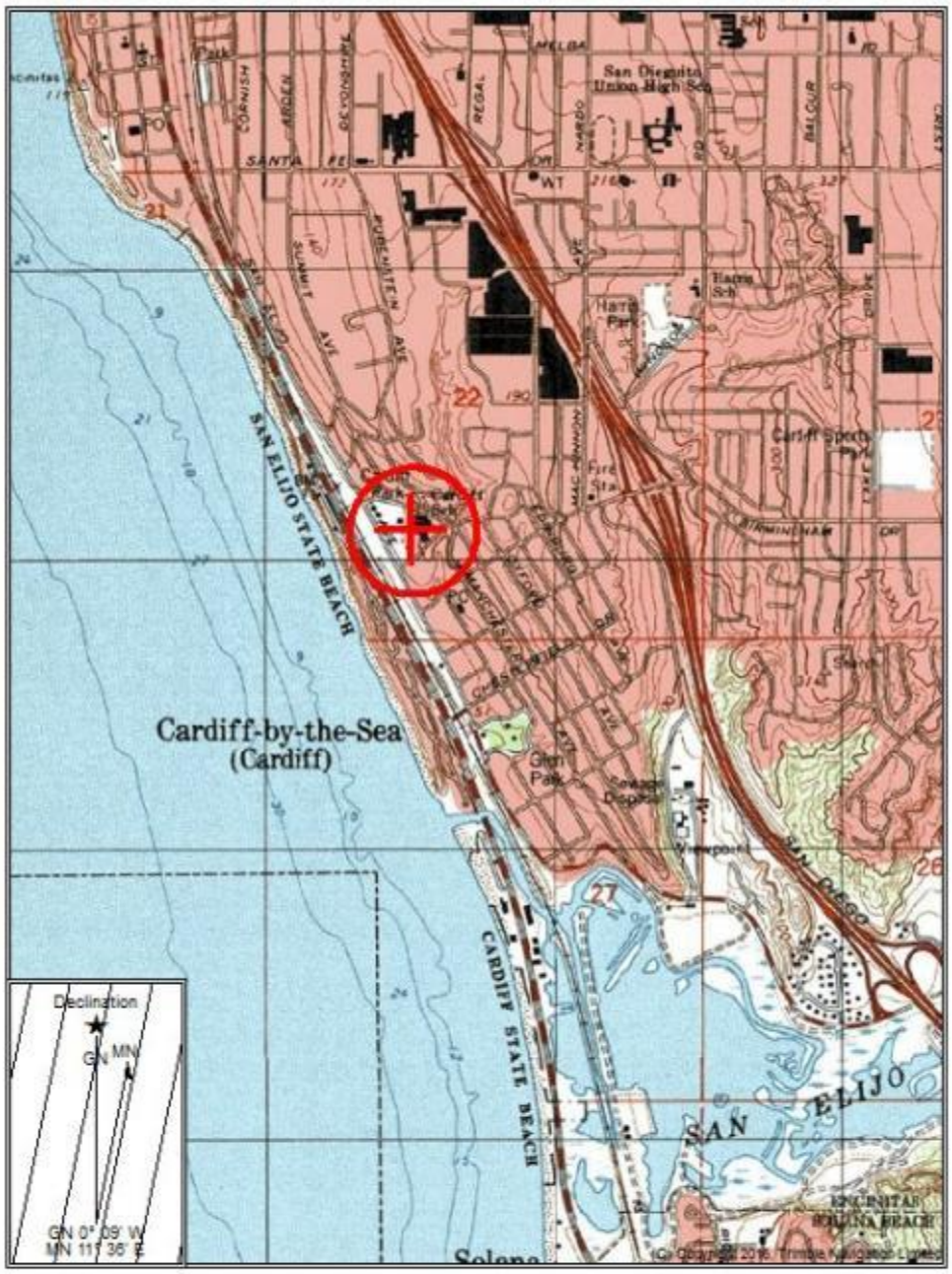


Figure 2: Project Location
Cardiff School
1888 Montgomery Avenue,
Cardiff-by-the-Sea, San Diego County



Figure 3: Aerial view of Cardiff School campus, Berkich Park playing fields, and the "Little Brick Building" in the community of Cardiff-by-the-Sea. (Source: Google Earth, November 2016)

B. BACKGROUND INFORMATION

The Cardiff School campus has not been previously surveyed for the investigation and documentation of cultural resources by a qualified architectural historian, nor has the property been evaluated for eligibility for listing in the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), or as a historical resource in the City of Encinitas.

The current study was performed to determine if the Cardiff School campus buildings qualify as individual historical resources, or if the campus should be considered a potential historic district. Our study includes not only the buildings related to Cardiff School proper, but also the building known as the "Little Brick Building" situated at the corner of Montgomery Avenue and San Elijo Avenue.

C. METHODOLOGY

This historic resource assessment and evaluation was conducted by Pamela Daly, M.S.H.P., Principal Architectural Historian. In order to identify and evaluate the subject property as a potential historical resource, a multi-step methodology was utilized. An inspection of the property and the existing buildings, combined with a review of original drawings of the Cardiff School campus as provided by the District, was performed to document existing conditions, and assist in assessing and evaluating the property for significance. Photographs were taken of the individual buildings on the Cardiff School campus, including photographs of architectural details, surrounding buildings, the "Little Brick Building", or other points of interest, during the intensive-level survey.

The National Register and California Register criteria were employed to evaluate the significance of the property. In addition, the following tasks were performed for the study:

- The National Register and California Register inventories were searched.
- Archival records of the District, including meeting minutes and drawings of buildings were analyzed.
- Site-specific research was conducted on the subject property utilizing historic maps, city directories, historical newspaper articles, historical photographs, and other published sources.
- Background research was performed at the Encinitas Historical Society, and through internet resources.
- Ordinances, statutes, regulations, bulletins, and technical materials relating to federal, state, and local historic preservation, designation assessment processes, and related programs were reviewed and analyzed.

II. REGULATORY FRAMEWORK

Historic resources fall within the jurisdiction of several levels of government. Federal laws provide the framework for the identification, and in certain instances, protection of historic resources. Additionally, states and local jurisdictions have active roles in the identification, documentation, and protection of such resources within their communities. The National Historic Preservation Act (NHPA) of 1966, as amended, and the California Environment Quality Act (CEQA) are the primary federal and state regulations governing the evaluation and significance of historic resources of national, state, regional, and local importance. A description of these relevant regulations is presented below.

In analyzing the historic significance of the subject property, criteria for designation under federal and state landmark programs were considered. Additionally, the California Office of Historic Preservation (OHP) survey methodology was used to survey and rate the relative significance of the property.

A. FEDERAL

1. National Register of Historic Places

First authorized by the Historic Sites Act of 1935, the National Register was established by the NHPA as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[1] The National Register recognizes properties that are significant at the national, state, and local levels.

To be eligible for listing in the National Register as a "historic property," the quality of significance in American history, architecture, archaeology, engineering, or culture must be in a district, site, building, structure, or object that possesses integrity of location, design, setting, materials, workmanship, feeling and association, and:[2]

A. Is associated with events that have made a significant contribution to the broad patterns of our history; or
B. Is associated with the lives of persons significant in our past; or
C. Embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction; or
D. Yields, or may be likely to yield, information important to prehistory or history.

---

1 Code of Federal Regulations (CFR), 36 § 60.2.

2 Guidelines for Completing National Register Forms, *National Register Bulletin 16*, U.S. Department of the Interior, National Park Service, 1997 ("National Register Bulletin 16"). This bulletin contains technical information on comprehensive planning, survey of cultural resources, and registration in the National Register.

A property eligible for listing in the National Register must meet one or more of the four criteria (A-D) defined above. In addition, unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for National Register listing.

In addition to meeting the criteria of significance, a property must have integrity. "Integrity is the ability of a property to convey its significance."[3] According to *National Register Bulletin 15*, within the concept of integrity, the National Register criteria recognize seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of these seven aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance.[4] The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. The following is excerpted from *National Register Bulletin 15,* which provides guidance on the interpretation and application of these factors.

- Location is the place where the historic property was constructed or the place where the historic event occurred.[5]
- Design is the combination of elements that create the form, plan, space, structure, and style of the property.[6]
- Setting is the physical environment of a historic property.[7]
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.[8]
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.[9]
- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.[10]

---

[3] How to Apply the National Register Criteria for Evaluation, *National Register Bulletin 15*, U.S. Department of the Interior, National Park Service, 1997 ("National Register Bulletin 15"), page 44.

[4] Ibid.

[5] "The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved." Ibid.

[6] "A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape." Ibid.

[7] *National Register Bulletin 15*, page 45.

[8] "The choice and combination of materials reveals the preferences of those who created the property and indicate the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place." Ibid.

[9] "Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based on common traditions or innovative period techniques." Ibid.

- Association is the direct link between an important historic event or person and a historic property.[11]

In assessing a property's integrity, the National Register criteria recognize that properties change over time; therefore, it is not necessary for a property to retain all of its historic physical features or characteristics. The property must, however, retain the essential physical features that enable it to convey its historic identity.[12]

For properties that are considered significant under National Register Criteria A and B, *National Register Bulletin 15* states that a property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s).[13]

In assessing the integrity of properties that are considered significant under National Register Criterion C, *National Register Bulletin 15* provides that a property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique.[14]

The primary effects of listing in the National Register on private property owners of historic buildings is the availability of financial and tax incentives.[15] In addition, for projects that receive federal funding, require federal permits, or are located on federal land, the NHPA Section 106 consultation process must be completed (published at 36 CFR Part 800). State and local laws and regulations may apply to properties listed in the National Register. For example, demolition or inappropriate alteration of National Register eligible or listed properties may be subject to CEQA.

B. STATE

The California OHP, as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also carries out the duties

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[10] "It [feeling] results from the presence of physical features that, taken together, convey the property's historic character." Ibid.

[11] "A property retains association if it *is* the place where the event or activity occurred and is sufficiently intact to convey that relationship to the observer. Like feeling, association requires the presence of physical features that convey a property's historic character…. Because feeling and association depend on individual perceptions, their retention *alone* is never sufficient to support eligibility of a property for the National Register." Ibid.

[12] *National Register Bulletin 15*, page 46.

[13] Ibid.

[14] "A property that has lost some historic materials or details can be eligible *if* it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. The property is not eligible, however, if it retains some basic features conveying massing but has lost the majority of the features that once characterized its style." Ibid.

[15] See 36 CFR 60.2(b) and (c).

as set forth in the Public Resources Code (PRC) and maintains the California Historical Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state's jurisdiction.

1. California Register of Historical Resources

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the California Register is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change."[16] The criteria for eligibility for the California Register are based upon National Register criteria.[17] Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.[18]

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the National Register and those formally determined eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward;
- Those California Points of Historical Interest that have been evaluated by OHP and have been recommended by the State Historical Resources Commission for inclusion in the California Register.[19]

Other resources that may be nominated to the California Register include:

- Individual historical resources;
- Historical resources contributing to historic districts;
- Historical resources identified as significant in historical resources surveys with significance ratings of Category 1 through 5;
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as a historic preservation overlay zone.[20]

To be eligible for the California Register as a "historical resource," a historic resource must be significant at the local, state, or national level under one or more of the following four criteria:

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[16] California Public Resources Code § 5024.1(a).
[17] California Public Resources Code § 5024.1(b).
[18] California Public Resources Code § 5024.1(d).
[19] California Public Resources Code § 5024.1(d).
[20] California Public Resources Code § 5024.1(e) and (g).

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Additionally, a historical resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its historic character or appearance to be recognizable as a historical resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing.[21]

Integrity under the California Register is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility. It is possible that a historical resource may not retain sufficient integrity to meet criteria for listing in the National Register, but it may still be eligible for listing in the California Register.[22]

2. California Office of Historic Preservation Survey Methodology

The evaluation instructions and classification system prescribed by the California OHP in its Instructions for Recording Historical Resources provide a three-digit evaluation rating code for use in classifying potential historical resources. The first digit indicates one of the following general evaluation categories for use in conducting cultural resources surveys:

1. Listed in the National Register or the California Register;
2. Determined eligible for listing in the National Register or the California Register;
3. Appears eligible for the National Register or the California Register through survey evaluation;
4. Appears eligible for the National Register or the California Register through other evaluation;
5. Recognized as historically significant by local government;
6. Not eligible for any listing or designation; and
7. Not evaluated for the National Register or California Register or needs re-evaluation.

The second digit of the evaluation status code is a letter code indicating whether the resource is separately eligible (S), eligible as part of a district (D), or both (B). The third digit is a number that is used to further specify significance and refine the relationship of the property to

[21] California Code of Regulations, California Register of Historical Resources (Title 14, Chapter 11.5), Section 4852(c).

[22] Ibid.

the National Register and/or California Register. Under this evaluation system, categories 1 through 4 pertain to various levels of National Register eligibility. The California Register, however, may include surveyed resources with evaluation rating codes through level 5. In addition, properties found ineligible for listing in the National Register, California Register, or for designation under a local ordinance, are given an evaluation status code of 6.

C. LOCAL

The City of Encinitas has within their municipal code Title 30: Zoning; Chapter 30.34 Special Purpose Overlay Zones; Subsection 30.34.050 Cultural/Natural Resources Overlay Zone that states:

> Applicability. The Cultural/Natural Resources Overlay Zone regulations shall apply to all areas within the Special Study Overlay Zone where site-specific analysis of a parcel of land indicates the presence of important man-made cultural and historic resources, and ecologically sensitive plant and animal habitats.
>
> Cultural Resources. For proposed projects which involve parcels containing an archaeological site(s), a survey by a qualified professional archaeologist shall be submitted by the project applicant to determine the site's significance and the need for project impact mitigation by preservation (open space easement), further study (excavation/salvage), or other methods.
>
> For proposed projects which involve parcels containing historical sites and/or structures, a survey by a qualified professional historian shall be submitted by the project applicant to determine the site/structure's significance and the need for project impact mitigation by preservation, relocation, or other methods.[23]

[23] The California Coastal Commission's coastal zone generally extends 1,000 yards inland from the mean high tide line. In significant coastal estuarine habitat and recreational areas it extends inland to the first major ridgeline or five miles from the mean high tide line, whichever is less. In developed urban areas, the boundary is generally less than 1,000 yards. For federal consistency reviews under the Coastal Zone Management Act (CZMA), the Coastal Commission reviews activities that affect the coastal zone, regardless of their location. The Federal Consistency Unit of the California Coastal Commission implements the federal Coastal Zone Management Act (CZMA) of 1972 as it applies to federal activities, development projects, permits and licenses, and support to state and local governments. Upon certification of a state's coastal management program, all federal agency activities (including federal development projects, permits and licenses, and assistance to state and local governments) affecting the coastal zone must be consistent with the enforceable policies of the state's certified program. The federal government certified the California Coastal Management Program (CCMP) in 1977. The enforceable policies of that document are Chapter 3 of the California Coastal Act of 1976. All consistency documents are reviewed for consistency with these policies. The Commission's goal is to use the federal consistency process to provide open communication and coordination with federal agencies and applicants and provide the public with an opportunity to participate in the process.

III. EVALUATION

A. HISTORIC CONTEXT

1. Cardiff-by-the-Sea

Cardiff-by-the-Sea, usually referred to simply as "Cardiff", is a beach community located in the City of Encinitas (City) in San Diego County, California. The City proper is to the north and east of the community of Cardiff-by-the Sea, the Pacific Ocean is to the west, and the San Elijo Lagoon provides the southern boundary of the community.

In 1769, due to threats from outside foreign countries making excursions into the Spanish territory of Alta California, King Carlos III of Spain ordered the Governor of Baja California, Gaspar de Portolá, to protect the territory under the realm of Spain. Gaspar de Portolá and Don José de Gálvez made a request to Father Junipero Serra and his Franciscan Padres, to commence an expedition through Alta California so as to convert the indigenous people there to Christianity. Once converted, these loyal subjects of the Spanish Crown would, hopefully, settle around the newly established missions and protect Spanish territory.[24] Soldiers would escort and protect the Friars on their journey. Father Junipero Serra was chosen Superior of the Franciscan missionaries and Gaspar de Portolá, Governor of Baja California, was designated the leader in charge of the expeditions.[25]

Five expeditions were dispatched from New Spain (Mexico). Three came by ship in the San Carlos, the San Antonio, and the San Jose, and two expeditions came by land. The San Carlos and the San Antonio set sail in January and February of 1769. After rough seas and many hardships, they anchored in San Diego Bay later that spring. The supply ship, the San Jose, which left New Spain in June, was lost at sea. Departing Baja California during March 1769, the land expeditions did not suffer the high casualty rate of the ocean voyages, but having to travel by foot and horse was difficult as well. Of the 219 who comprised the first four expeditions, slightly more than half survived.[26]

Father Junipero Serra accompanied the second land expedition sent from Mexico, which arrived in San Diego on July 1, 1769. Shortly after arriving, Father Serra established Mission San Diego, and the first of the twenty-one missions that would span from San Diego north to Mission San Francisco Solano, as established. The road that ran north from San Diego, connecting all the missions as it headed north, was known as the "El Camino Real" or The Royal Road.

[24]Mission Basilica San Diego de Acalá. http://www.missionsandiego.org/visit/history/
[25] Ibid.
[26] Ibid.

Before the Atchison Topeka and Santa Fe Railroad (ATSF) established a rail system between San Diego and Los Angeles in 1881, the El Camino Real was the main transportation corridor for the wagons and stagecoaches that travelled between Los Angeles and San Diego. (There were other wagon roads that went east from San Diego and northward towards San Bernardino and Riverside.)

Wayside stops to refresh horses and travelers would have been established along the El Camino Real for the pedestrian and wagon traffic along the road, particularly in places where fresh water was available. When the ATSF line was built parallel to the historic road, those small stops built railroad stations and hospitality facilities to attract visitors to their communities, such as the station that was built in Encinitas in 1888.



Figure 4: Excerpt from U.S. Surveyor General's plat map of the area north of San Elijo Lagoon, 1881. (Source: Bureau of Land Management, GLO plat map.)

Hector MacKinnon is the first western-European credited by Cardiff historians with settling in the area of Cardiff-by-the Sea in 1875 on a 600-acre homestead north of San Elijo Lagoon.[27] An official survey (plat) map of the Encinitas/Cardiff area was created by the United States Surveyor General's Office in April 1881, in advance of the ATSF building their rail line

[27] Tucker, Wehtahnah and Gus Bujkovsky. *Images of America: Cardiff-by-the-Sea.* Charleston, South Carolina: Arcadia Publishing; 2009. Page 7.

through the area of Township 13 South, Range 04 West, Sections 22, 26, and 27. The map does not show any property owned by MacKinnon (Figure 4), instead, the map presents notations that land on the northern shore of San Elijo Lagoon had been cultivated by a settler named Frank Peterson.

The community of Cardiff-by-the-Sea would come to be established on land that was recorded by the General Land Office under two land patents. The land in the northeast one-quarter of the southwest quarter of Section 22 was issued to Wesley D. Gibbs in 1883 (Accession No. CACAAA083884), and the land south of Gibbs' in Tract 4 (of Section 22) was issued to Hattie A. Tallant in 1890 (Accession No. CACAAA083932).[28]

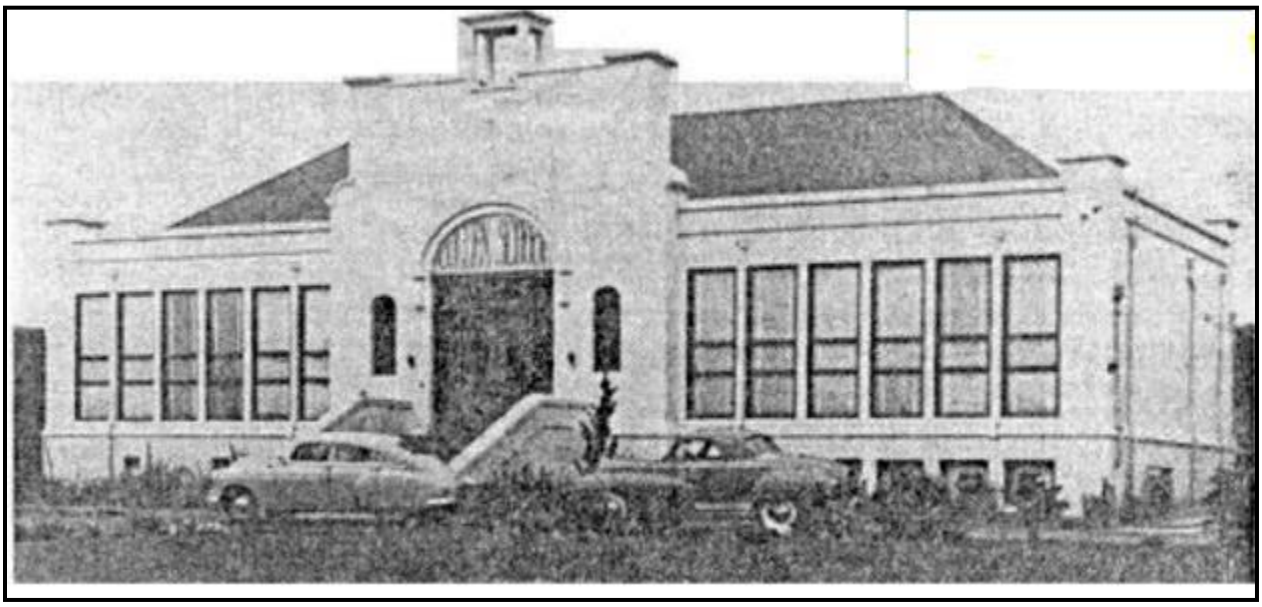


Figure 5: Front elevation of Cullen School, constructed in 1914.

J. Frank Cullen was a real estate agent from San Diego, who had moved west from Massachusetts between 1900 and 1910, and appears to have either consolidated much of the patent lands in Sections 22 and 26 under his ownership, or acted as the agent to develop the land in the rural settlement in 1912.[29] It is said that Cullen, with his wife's assistance, named the new community Cardiff-by-the-Sea, and streets after places in Great Britain.[30]/[31]

[28] Please note that many persons who purchased patent lands had no intention of ever living on the land, or personally improving it. They usually purchased the land as an investment, and would lease the land and/or any improvements, if they didn't sell it as soon as possible for profit.

[29] United States Census of 1900, 1910, 1920, 1930. "J. Frank Cullen". Ancestry.com

[30] Tucker, page 7.

[31] According to United States Census records of 1910, 1920, and 1930 for J. Frank Cullen and Esther M. Cullen, Mrs. Cullen had been born in the state of Maine in 1875, and her parents had been born in Maine and New Hampshire. Mr. Cullen had been born in Massachusetts, and his parents had been born in Massachusetts and New Hampshire. Contrary to local lore, both Mr. and Mrs. Cullen had been born in the United States, and not in Cardiff, Wales. The Cullen's permanent residence between 1910 and 1930 was at 2042 F Street, in San Diego (according to U.S. Census data).

Within a few years the Cardiff community was established with the construction of a hotel and fishing pier built on the ocean front, and a new elementary school building located within the Cardiff Vista Tract (Figure 5). With El Camino Real, now called State Highway 1, and the railroad line bringing visitors to the area, Cardiff-by-the-Sea became known as a summer vacation spot, and the surrounding area was developed for light agricultural use. The community of Cardiff-by-the-Sea would retain its rural, beachside bungalow aura into the late 1960s when it became a "bedroom" suburb of San Diego.

The Ada Harris School, named after the beloved principal of the Cullen and Cardiff Schools, would be constructed by Cardiff School District in 1958. Cardiff School serves students from kindergarten to grade 3, and Ada Harris School is for students in grades 3 through 6. Students promoted to upper grades attended middle and high schools in the San Dieguito Union High School District.

2. Cardiff School

When J. Frank Cullen donated the land of lots A, B, L, M, N of Block 72 of the Cardiff Vista Tract for the construction of a new school building in 1914, the deed for the transfer stated that a school building was already on the property.[32] An additional schoolhouse building was raised on the site shortly after, and both buildings comprised the Cullen School.

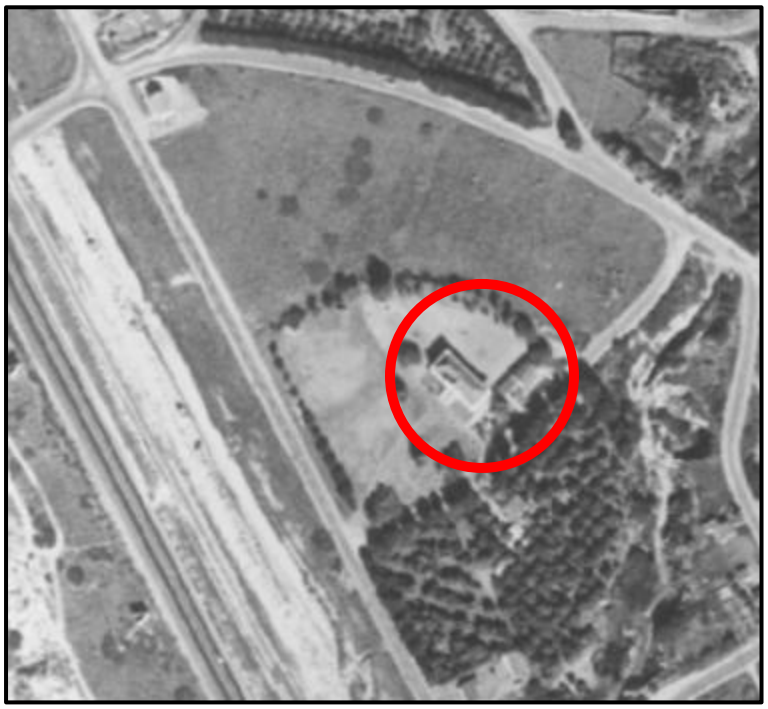


Figure 6: Aerial view of the Cullen School buildings in 1947 (in red circle). The roof of the "Little Brick Building" is visible, to the northwest, at the intersection of Montgomery Avenue and San Elijo Avenue. (Source: NETR Historic Aerials)

[32] Deed grant from J. Frank and Esther M. Cullen to the School Trustees of the Cardiff School District, March 9, 1914.

The Cullen School building had been designed by John S. Siebert, a well-respected architect from San Diego, who was instrumental in the growth of San Diego from the late 1890s, and into the early twentieth-century (Figure 6).[33] In 1924, the District Trustees heard that an iron bell from a steam locomotive retired from the ATSF system was available for sale, in Santa Ana, for $20.[34] The Trustees purchased the 250 pound bell, and installed it at Cullen School to call students to classes.[35]

As happened in so many communities in California after World War II, the existing Cullen School property was found not adequate to support the growing number of students needing to enroll, and to meet other concerns for facility safety and maintenance.[36] When the decision was made to replace the Cullen School, the Cardiff School District issued an advertisement for architectural services to design a new campus to replace the older buildings.

Samuel Wood Hamill was hired by the Cardiff School District to design the new Cardiff School campus in 1949.[37] Hamill had moved as a young lad with his parents and siblings from Globe, Arizona to San Diego in 1909. Hamill attended local schools, and in 1915 he attended the Panama-California Exposition in Balboa Park. The exposition and its architecture was a life altering experience for young Hamill, and after graduating San Diego High School with some coursework in architectural drafting, he enrolled at University of California in Los Angeles, but had to interrupt his education due to financial troubles. He took a job as a draftsman at the firm of Requa and Jackson (Richard S. Requa and Herbert. L. Jackson) until he had earned enough money, and gained valuable experience, to attend the school of architecture at University of California at Berkeley in 1922.[38]

After Hamill graduated from Berkeley, he was asked to join the firm of Requa and Jackson full-time. Requa was the Master Architect of the Panama-California Exposition, so Hamill was able to work at the knee of a master of Mediterranean and Mission Revival architecture. Hamill was made a partner of the firm in 1929, and became part of the team that designed and managed the construction of the San Diego Civic Center project under the Work Progress Administration (WPA) authority, that was completed in 1938. Prior to the outbreak of World War II (WWII), Hamill worked on a number of residential and commercial projects in San Diego designed in classic Spanish, Mediterranean, or Mission Revival architectural styles. These projects included the Del Mar Racetrack and Tower, the Veterans War Memorial, and the East and West Exhibit buildings in Balboa Park. Hamill also worked on the design and construction

[33] *San Diego Union*. "John S. Siebert, Architect, Former Councilman, Passes", September 17, 1948.
[34] Information about the Cullen Schoolhouse bell from Irene Kratzer, Encinitas Historical Society; June 14, 2018.
[35] Ibid.
[36] As a result of the Long Beach Earthquake of 1933, school buildings designed after that date were required to be approved by the State of California's Architecture Office before they could be constructed.
[37] Cardiff School site plans by Samuel W. Hamill, September 21, 1949.
[38] Young, Laura F. "The Silent Sentinel: Samuel Wood Hamill, FAIA". Master of Arts thesis, University of San Diego, 1984; page 10.

of a number of schools constructed with WPA funding.[39] At the time that he was hired by Cardiff School District to construct a new elementary campus in 1948, Hamill was working on designing a new Veterans War Memorial for the City of San Diego, with John Siebert, the architect of the Cullen School building constructed in 1914.

The end of WWII brought radical changes to the style of architecture used for all types of buildings, including schools. Many school buildings before WWII were designed in Classical or Revival styles of architecture, whereas after the war, school buildings were designed using sleek, minimalist, Modern design attributes that had been started in Germany in the 1920s and brought to this country by architects Rudolph Schindler and Richard Neutra.

The school buildings with aspects of early Modernism presented character-defining features such as a horizontal emphasis, use of simple, geometric massings, unadorned walls usually clad with stucco or concrete, steel-framed windows set flush with the wall surface with minimal trim, and continuous bands of windows to emphasize the horizontal massing (Figure 7).[40]

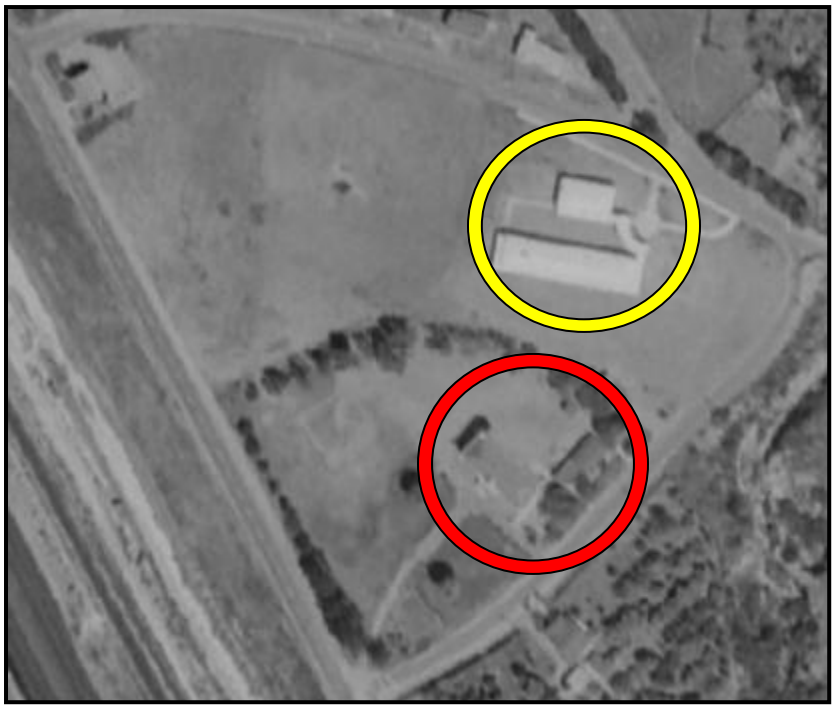


Figure 7: Aerial view in 1953 of Cullen School (in red circle) and new buildings of Cardiff School "Original Project" (in yellow circle) that had been designed in 1949, and constructed in 1950. The roof of the "Little Brick Building" is visible to the northwest, at the intersection of Montgomery Avenue and San Elijo Avenue. (Source: NETR Historic Aerials)

[39] San Diego History Center. "Samuel Wood Hamill"; https://www.sandiegohistory.org/archives/biographysubject/hamill/

[40] Sapphos Environmental, Inc. "Los Angeles Unified School District Historic Context Statement 1870-1969." Prepared for Los Angeles Unified School District Office of Environmental Health and Safety; March 2014.Page 125.

School buildings designed after the end of WWII would reference the basic modern geometric designs of pre-war buildings, by actuating the basic minimalist modern features, with the addition of wide overhanging eaves extending from the roofs, the cantilevered canopies over walkways supported by spider-leg or post supports, and subtle exterior brick or stucco worked to emphasize horizontal or vertical interest to the building's façades.[41] The covered walkways would be used to connect the individual campus buildings into "finger-like" wings of a central plan.[42]

The new Cardiff School campus was designed to be built in stages with the first, 3-classroom building, entrance arcade, and administrative unit being constructed for $91,604, in time for the fall session of 1950.[43]/[44] The larger kindergarten classes continued to be held in the old Cullen School buildings, and the upper classes were moved to the new school buildings (Figure 8.)[45]

The kindergarten classes were finally moved to the Cardiff School campus in 1955 after the construction of an additional four-classroom unit, and separate kindergarten building, being added to the site.[46] Future additions would include a three-classroom unit and walkway arcades in 1956, and an additional classroom, kindergarten room, "remedial" room, and multi-purpose room with kitchen facilities, all in 1962.[47] Based on aerial photographs, the 1914 Cullen School and the building pre-dating the Cullen School were demolished between 1953 and 1964. The Cardiff School campus had remained relatively unchanged (except for the introduction of portable classroom buildings) until 2002 when new administration buildings were constructed on the campus.

[41] Ibid, page 127.
[42] Ibid, page 141.
[43] *San Diego Union*. "Cardiff elementary School Addition O.K.'d", February 4, 1950.
[44] Cardiff School District Board of Trustee documents for Cardiff School Project #1575/259-1, "Original Project".
[45] *San Diego Union*. "Tax Boost Voted for Kindergarten", May 22, 1950.
[46] Cardiff School District Board of Trustee documents for Cardiff School Project #A-12142, "Addition #1".
[47] Cardiff School District Board of Trustee documents for Cardiff School Project #19/27201"Addition #2", and Project #19/27208 "Addition #3".



Figure 8: Aerial view of Cardiff School campus in 1964 with its "finger" campus plan. The "Little Brick Building" is visible to the northwest, and the Cullen School buildings have been removed from the property. (Source: NETR Historic Aerials)

3. "Little Brick Building" (Cardiff-by-the-Sea repeater hut)

In 2001, the District purchased the "Little Brick Building" and property from Robert C. and Jacqueline Sinclair of San Diego (Figure 9).



Figure 9: "Little Brick Building". View looking north. (The original wood shutters which were set in the recessed rectangular areas on the exterior facades, and gave the impression of a little house, were removed at some point in time.)

Bob Sinclair arrived in La Jolla in the late 1970s, and opened a little store on Prospect Street selling gourmet cooking supplies and equipment. He turned an old peanut roaster into an oven for roasting his own special selection of beans, and soon opened a custom-grind coffee shop called "Pannikin".[48] Sinclair then tied his growth of coffee shops to his interest of preserving old and unique historic buildings. He would go on to buy the old train station in Encinitas, and the old Wonder Bread factory building in San Diego. Bob "would buy buildings because he thought they were unique and special and sort of fell in love with them".[49] For whatever reason, Sinclair found that the "Little Brick Building" was not suitable with his future plans, and sold it to the Cardiff School District. Bob Sinclair was killed in a motorcycle accident in 2016.[50]

Prior to the Sinclairs owning the "Little Brick Building", the property was most probably under the control of the Pacific Bell Telephone Company (PacBell) who operated the telephone systems in California. PacBell was one of the many "baby" Bell Companies across the United States and Canada that had formed under the parent Bell Telephone Company (Ma Bell) established in 1877.

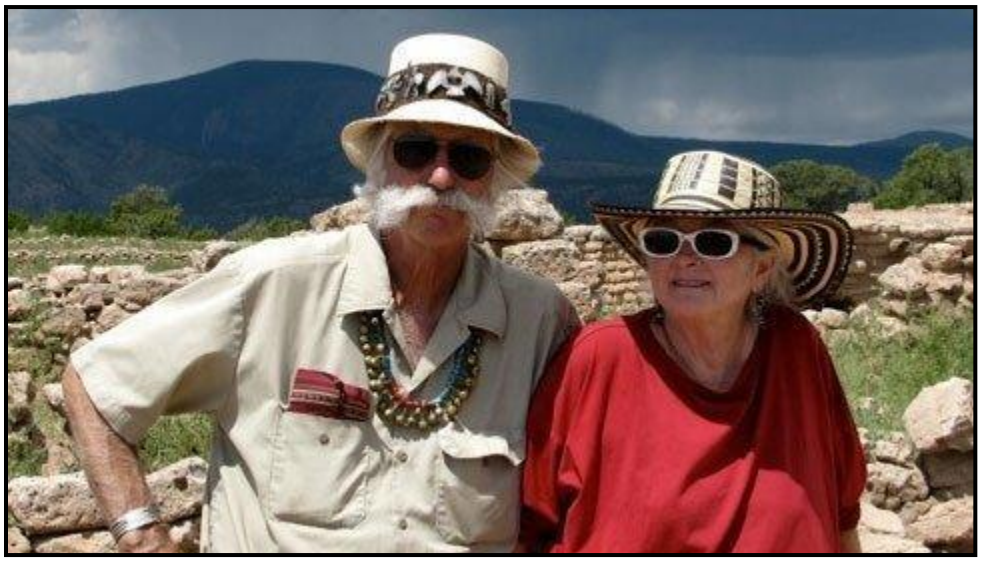


Figure 10: Bob and Gay Sinclair, owners of the "Little Brick House" until 2001, when it was sold to the Cardiff School District (Photograph courtesy of *The San Diego Union-Tribune*, all rights reserved.)

In 1885, American Telephone and Telegraph Company (AT&T) was formed by Bell Telephone Company, and reorganized to have local service providers in the Bell Telephone Company system, and long distance communication systems under the AT&T banner. The Pacific Bell Telephone Company managed the Bell Telephone operations in California under the AT&T umbrella. AT&T was forced to divest its monopoly of telephone communications and manufacturing organization in 1984 as the result of an antitrust suit brought by the U.S.

[48] Hall, Matthew T. "Coffee pioneer recalled as colorful, creative"; *The San Diego Times-Union*, August 11, 2011.
[49] Ibid.
[50] Ibid.

Government.[51] It was most probably at this time that the "Little Brick Building" was permanently taken out of service and mothballed by PacBell.

The "Little Brick Building" is thought to have been constructed in the late 1930s for the purpose of holding telephone repeater equipment.[52] A repeater is an electronic device that receives a signal and retransmits it. Repeaters are used to extend transmissions so that the signal can cover longer distances and were put in use in the 1920s.[53] When a telephone call passes through a wire telephone line, some of the power in the electric current that represents the audio signal is dissipated as heat in the resistance of the copper transmission wire. The longer the wire is between stations, the more power is lost, and so the call will not be heard on the receiving end. A repeater is a relay device in a communication channel that increases the power of a signal and retransmits it, allowing it to travel further. Repeaters were most frequently used in trunklines that carry long distance calls.[54]

Repeater stations, or huts, were built as part of all the Bell Telephone Systems across the United States, and even Bell Canada. The buildings were designed in the national headquarters in New York, and they most probably issued standard building plans (as had the railroad companies and electric utilities for buildings in their systems) to the regional Bell Telephone Companies as to how to construct these specialized facilities.

Because the nearest buildings of distinction to the Cardiff-by-the-Sea repeater hut in 1938 were the Cullen School buildings, situated just slightly up the hill, a Colonial Revival style of architecture may have been chosen for the exterior of the "Little Brick Building" by Bell Telephone in order to complement the Cullen School buildings' classical design.

B. HISTORIC RESOURCES IDENTIFIED

Pamela Daly, Principal Architectural Historian, conducted a pedestrian-level survey of the Cardiff School campus on January 31, 2018, and of the "Little Brick Building" on March 23, 2018. Evaluation of the buildings were based on review of the original drawings by Samuel Wood Hamill for Cardiff School, documents provided from Board of Trustees records for the construction of Cardiff School buildings, and other archival resources.

1. Cardiff School campus buildings (1950 – 1962)

The original blueprints for the Cardiff School present the information that the District intentionally planned to construct additional buildings and increase the student population it could serve, over the course of six years, from 1950 to 1956, with the last campus project of the

[51] AT&T. "A Brief History: The Bell System", accessed June 12, 2018. https://www.corp.att.com/history/history3.html

[52] Information from the Encinitas Historical Society.

[53] American Telephone and Telegraph Company. "Typical Repeater Station Building", *Bell Telephone Magazine*; 1922.

[54] Wikipedia. "Telephone Repeater".

post WWII era constructed in 1962. In 2002, new administrative offices were constructed, along with new support space.

Table 1: Construction history of Cardiff School (1950-2002)

Date	Project I.D.	Description	Architect	Contractor
1950	Original project #1575	3 classroom bldg., Administration and nurses office with attached classroom	S. W. Hamill	Smith Construction Co.
1955	Addition #1: A-12142	4-classroom bldg., one kindergarten building	S.W. Hamill	Larsen Construction Co.
1956	Addition #2: A-14236	2-classroom bldg., one classroom added to Admin. Bldg.	S.W. Hamill	Larsen Construction Co.
1962	Addition #3: A-21878	1 classroom added to Admin. Bldg., 2nd kindergarten classroom added to existing, multi-purpose bldg. with kitchen facilities.	S.W. Hamill	Thornburg Construction Co.
2002	A-51059	New Administration bldgs., 1 classroom added to old Admin. Bldg.		

All the buildings constructed on the Cardiff School campus from 1950 to 1962 were designed by Samuel Wood Hamill in a very modest, International style of Modern architecture. Most probably due to the concern for construction costs, and from the population data available to the Cardiff School administration, Hamill presented a plan of a campus that could accommodate increases in enrollment, by the addition of individual classrooms or the construction of a "pod" of classrooms (much like Lego's.) By keeping the design of each classroom building as simple as possible, new additions over the years would not be that noticeable and the campus could retain the semblance of a cohesive architectural design.

Major buildings, constructed before 1963, from east (front of the property along Montgomery Avenue) to the west:

A. Administrative building is currently 146 feet long by 34 feet wide. When first constructed this rectangular-massed building was comprised of one classroom, and the administration and nurse's office. The building had a low-pitched hip roof, and the exterior walls have a stucco finish. The "Original" portion of the building was fenestrated with a wide band of multiple sash windows units with three large, single lights on the east elevation, and one-over-one, and two-over-two individual double sash windows on west elevation (Figure 11). Single classrooms were added to the north end of the original building in 1956 and 1962, and one room to the south end of the building in 2002. The newer rooms have a single band of metal frame windows with three narrow lights in each unit across the west façade, and metal frame window units with six narrow lights in groupings of six wide across the east facade. The original hip roof was replaced with a low-pitch gable roof in 2002.

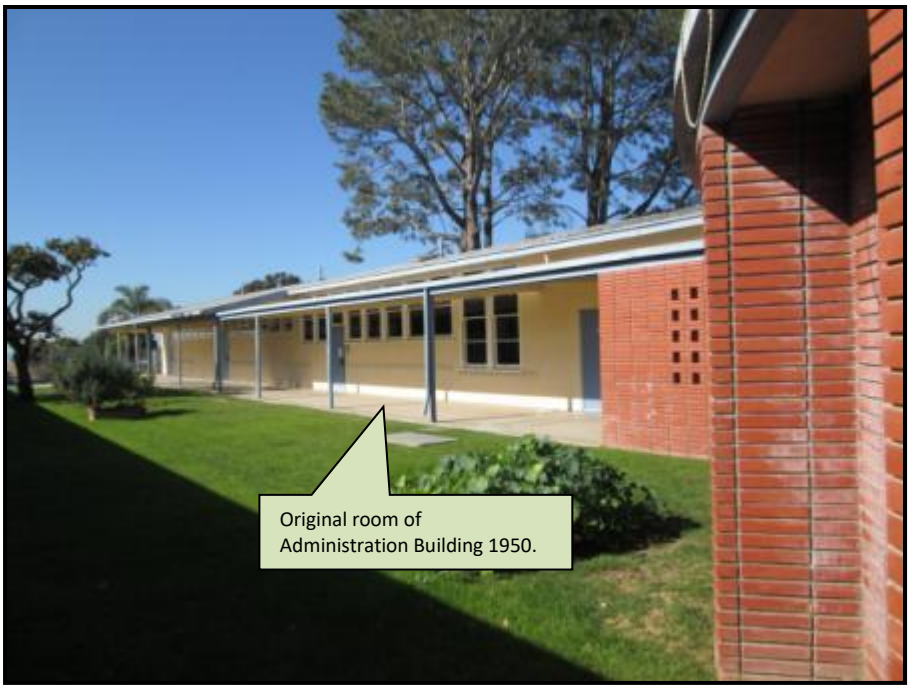


Figure 11: West elevation of the "Original" Administration building, with the two added classrooms to the left under the extended roof slope. View looking northwest.

B. Part of the "Original" plan, this 3-classroom rectangular-massed building constructed in 1950 is 150 feet long by 34 feet wide, and is covered with a low-pitch hip roof. This building also presents a large band of three-light window units on the east elevation, and one-over-one units set in the upper portion of the stucco clad exterior walls of the west elevation (Figures 12 and 13).



Figure 12: North elevation of original classroom unit. View looking southeast.



Figure 13: West elevation of the original four-classroom building from 1950 to the left, north elevation of four-classroom building of 1955 to the right.

C. The Kindergarten building measures 108 feet long by 34 feet wide, and is covered by a low-pitch shed roof. The rectangular-massed building is comprised of two separate classrooms that were constructed in 1955 and 1962. The Kindergarten building presents a reverse of the usual fenestration plan compared to the other classroom buildings. The Kindergarten rooms each have large expanses of metal-frame window units comprised of six-light tall windows on their west elevation, contained within oversized cant bay windows, and this may be so that the larger windows can overlook the kindergarten play area located immediately to the west of the building (Figure 14). The east elevation has metal-frame window units of four narrow lights, set in a band high in the façade (Figure 15.) Because of the bay windows, the entrances to the classrooms appear to be recessed under the covered walkway. The exterior walls are clad with a stucco finish.



Figure 14: Kindergarten building constructed in 1955 to the left, Kindergarten room added in 1962 to the right. View looking east.



Figure 15: East elevation of both rooms of the Kindergarten building.

D. The 4-classroom building was constructed as part of Addition #1 in 1955. The rectangular-massed building measures 150 feet long and 34 feet wide, and is covered by a low-pitch shed roof. This building appears to be intact from its original construction with the east elevation fenestrated with metal-frame window units with seven narrow lights in each unit. On the west elevation, there are metal-frame window units with three narrow lights, set in a band set high on the wall. The building also appears to have had one-over-one window units over each doorway as well. The west elevation is shaded by an extension of the roof slope (Figures 16 and 17.)



Figure16: West elevation of four-classroom building added in 1955. View looking south.



Figure 17: East elevation of four-classroom building added in 1955. View looking south.

E. This 2-classroom building was constructed as part of Addition #2 in 1956. The rectangular-massed building measures 114 feet long by 34 feet wide, and is covered with a low-pitch shed roof. The building presents a wide band of metal-frame, six light window units on its east elevation, and a set of three light window units lining the upper portion of the west elevation (Figure 18.)



Figure 18: North elevation of two classrooms from Addition #2 in 1956. View looking west.

F. The multi-purpose room, with attached kitchen facilities, was added to the campus in 1962. The building measures approximately 91 feet long by 50 feet wide, but is comprised of multiple rectangular-massed units that account for its overall size. The one-story building holds the school auditorium, and is used for a variety of functions. The fenestration presents a minimal design element for the building, and in accordance with subtle aspects of International style architecture, this building is set apart from the classroom buildings by setting the fenestration in a vertically aligned formation of five light window units along the north elevation (Figure 19.)



Figure 19: North elevation of multi-purpose room.

2. "Little Brick Building" (Cardiff-by-the-Sea repeater hut)

This utility building is thought to have been constructed circa 1938 on a small, legal parcel owned or leased by Pacific Bell Telephone Company. It is a one-story building designed as a Colonial Revival style side-gabled house, with a rectangular massing that measures

approximately 35 feet long by 26 feet wide. It has a moderate-pitch gable roof with boxed eaves, fascia trim and cornice returns, and is set on a north-northwest to south-southeast axis. A (false) square brick chimney projects from the north end of the gable ridge (Figure 20).

The building sits upon a poured concrete foundation pad approximately 18 inches thick, and the interior and exterior walls are constructed of brick and hard mortar.[55] The exterior of the building is decorative Roman brick veneer, of a range of red and clay colors, set over the structural brick walls, and the veneer exhibits a high degree of masonry workmanship. The expanse of the exterior walls is stretchers set in a running bond with headers used as quoins on alternating courses to achieve the necessary offset. Each "window" opening has a projecting sill course set with headers, and a lintel of brick three-quarter and one-half brick voussoirs inclined to create a flat arch.



Figure 20: rear (east) elevation. Both the door on the east (utility door) and north (pedestrian door) elevations provide the only entrances into the room within the north end of the building.

At the each gable end, there are vent openings in the brick work to allow for ventilation under the roof. Running under each eave, is a row of dentil modillions upon a slightly raised frieze. Lower down the eave façades, a panel of one row of stretchers over two rows of headers projects slightly from the wall to give the false impression of where the ceiling of an

[55] Reinforcement bars set horizontally in the window openings were observed during out inspection. It is unknown at this time if the building had been reinforced for structural strength.

interior one-story room would be situated. The decorative elements on both eave façades wrap around the gable ends of the building to parallel the cornice returns.

Within the building are two separate rooms, divided between the north and south ends of the structure, entirely separated from each other by a solid brick wall. The building has pedestrian doors situated on its west and north elevations, and each door is the only pedestrian entrance into the room within. The door on the west elevation, facing the street and highway, was trimmed with flat molding around the doorway to make it appear to be the formal entrance to the building. The door on the north elevation sits within the brick façade with no surrounding trim. Both pedestrian doors are painted metal, six-panel "cross-and-bible" style doors, and the hardware is a utilitarian pull handle with a lock cylinder set above the pull to allow access into the "south" or "north" room within. A smaller, solid metal utility door is situated on the east elevation, and measures approximately 66 inches tall by 40 inches wide.

There are no true windows in the building. False window openings were created by leaving recessed spaces in the exterior façade to be filled in with historically authentic wood shutters set in a "closed" position. The shutters were removed at some point in time due to their deteriorating condition. There are two ventilation openings on the west elevation, and one on the east elevations, and these were used to regulate the temperature in the separate equipment rooms. The electrical supply to the building was located at the north end as is evidenced by the large metal junction boxes still attached to the exterior wall.

The interior of the building is currently used for storage, but appears to be fairly straightforward open space that was used to house the repeater equipment. The south room is the larger of the two, and contains a small bathroom for maintenance staff to use when working on the communications equipment. The north room may have been used to house the electrical supply systems, and based upon the small, metal utility door on the east wall; there may have been a bank of batteries used as emergency backup system to keep the telephone lines open during electrical outages. Overall, the building was designed to look like it was a small house, so as to blend into the area, but was constructed to protect the internal equipment from any damage from outside interruptions, and also to protect the neighborhood if the electrical equipment should explode or catch fire.

C. SIGNIFICANCE

The subject property consists of the Cardiff School campus and the "Little Brick Building". The first buildings of the new Cardiff School campus were constructed in 1950 to supplement, and then replace, the Cullen School buildings. Public schools of all grade levels were either being enlarged, or constructed anew in the Post-WWII-era to accommodate "Baby Boom" children coming into school systems throughout the United States, and particularly in Southern California. The "Little Brick Building" was constructed circa 1938 to house Bell Telephone repeater equipment.

1. Cardiff School campus buildings (1950 – 1962)

The Cardiff School campus buildings constructed before 1962 represent a set of modestly-designed elementary school buildings united by an organic campus plan that was first developed in 1949 by the architect Samuel Wood Hamill. While related by function and used as school buildings, the structures were designed using an unremarkable version of International style architecture, and it appears that due to cost considerations each phase of construction had to be designed around the available budget. The classroom buildings were constructed using different types and styles of fenestration to create the bands of windows on the east and west façades, to embrace the horizontal emphasis of the International design aspect. While not so visible, the buildings had low-pitched gable, shed, and hip roof styles installed, depending on the dates of that building's construction. The original Administration and Kindergarten buildings were enlarged with the addition of classrooms, and the original pedestrian entrance of the school was abandoned when the new Administration buildings were constructed in 2002. The playing fields (Berkich Park) were constructed in 1993.

The addition of rooms to existing buildings, buildings constructed over an extended period of time with subtle differences between the buildings, addition of new administration buildings in 2002, and relocation of the formal entrance to the campus, have resulted in a campus that does not present a cohesive collection of buildings.

The Cardiff School campus does not appear to be eligible for listing in the National Register or California Register under Criterion A/1 for its association with significant educational events or trends. According to the deed recording the transfer of land from J. Frank Cullen for the construction of a school in the Cardiff Vista Tract, there already existed a schoolhouse on the property. Cullen School was constructed in 1914, and it was followed by the construction of Cardiff School in 1950. Cardiff School was built to address the growing student population as a result of the "Baby Boom", and to replace the outdated Cullen School. Cardiff School was not the first, nor second, school constructed in Cardiff-by-the-Sea, nor does it appear to have made a significant contribution to the education of children during its existence above what would be expected of a neighborhood elementary school. We were unable to find any evidence that Cardiff School made an unprecedented or exceptional contribution to the quality of grammar school education in Cardiff-by-the-Sea, or to the instructional needs of its students. It does not

appear that Cardiff School played a significant role in the history of the educational community of Cardiff-by-the-Sea, Encinitas, or in the history of California.

Under the criterion for evaluating properties for listing in the National Register or California Register for their *direct* association with the lives of persons important to the history of Cardiff-by-the-Sea, Encinitas, or California, we did not find that the Cardiff School's campus or buildings could be considered eligible for listing under Criterion B/2. Our research did not reveal that any educators of importance had taught at Cardiff School, or that innovative methods of education were developed by teachers or administrators while employed at Cardiff School. We could find no direct links presenting evidence that persons important to the history of Cardiff-by-the-Sea, or Encinitas, were influenced by the Cardiff School campus and its operations during the productive or innovative periods of their lives.

The classroom and multi-purpose buildings constructed as part of Cardiff School campus between 1950 and 1962, do not appear to be eligible for listing in the National Register or California Register as significant examples of classroom buildings designed in the International style of Modern architecture under Criterion C/3. It appears the International style may have been chosen for the new Cardiff School buildings because of the style's minimalist exterior that would aid in reducing the cost of the buildings' construction. The International style of architecture was widely used in the 1950s and 1960s for the design of residential, commercial, and institutional buildings, as the structural design of these modest buildings allowed for floor plans that needed large, open, interior spaces. The buildings on the Cardiff School campus are not significant examples of "finger" plan school building architecture built in California during the post-WWII era, and they have not been found to be important examples of the work of Samuel Wood Hamill.

When Samuel Hamill was interviewed by Laura F. Young for her Master's thesis at San Diego University in 1984, Hamill told Ms. Young that he was not a fan of the stripped down minimalism of the Bauhaus school of architecture that came out of Germany in the 1930s and widely adopted in the United States after the end of WWII.

> *Ornamentation, in Sam's opinion, gives the structure a finesse which reflects that the architect has put something of himself into the building. Sam feels that basic elements of design, in the arrangement of geometric form in space, can be enhanced by a classic and traditional type or ornamentation.*[56]

While Hamill and his team had created drawings for many elementary schools in the San Diego area to address the urgent need for classrooms after WWII, Hamill felt that one of his most significant contributions had been the diligent pursuit of preserving what existed of the past.[57] He was speaking of his activities to preserve those buildings, dating from before WWII in San Diego, that were designed using classic architecture, including his beloved Balboa Park.

[56] Young, page 107.
[57] Young, page 110.

The Cardiff School campus does not appear to have the capacity to yield information important to the history of education in Cardiff-by-the-Sea, Encinitas, or California. The school campus does not appear to be eligible for listing in the National Register or California Register under Criterion D/4.

The Cardiff School buildings constructed between 1950 and 1962 have retained the levels of integrity of location, setting, materials, workmanship, and feeling necessary to convey them as elementary school buildings.

2. "Little Brick Building"

The "Little Brick Building" (Cardiff-by-the-Sea repeater hut) is believed by local sources to have been constructed on San Elijo Avenue circa 1938. The hut would have served the purpose of energizing telephone signals sent between San Diego and Los Angeles along the long stretch of telephone lines built parallel to the ATSF rail line. Our research revealed that once plentiful across the United States, Canada, and even Australia, the number of remaining repeater huts appears to be very small. Photographs of remaining huts bear a close and familiar resemblance to the hut in Cardiff-by-the-Sea (Figures 21 and 22). The "Little Brick Building" appears to be significant for its contribution to the history of telephone technology from 1930 to 1965.[58]



Figure 21: A repeater hut in Pontoon Beach, Illinois, with aspects of Colonial Revival design.

[58] Dates of significance span from the building's presumed date of construction to when modern telephone technology no longer required the telephone signals to be boosted along the trunk lines in the area of San Diego County.

(Source: Long Lines Net. http://long-lines.net/places-routes/PontoonBeachIL/index.html)



Figure 22: A repeater hut located on Bickerton Road at Egerton Green, Cheshire, Great Britain.
(Source: Geograph: https://www.geograph.org.uk/tagged/BT+telephone+exchange#photo=5325708)

The "Little Brick Building" appears eligible for listing in the National Register and/or California Register individually as an example of a building associated with the theme of telephone communications dating from the 1930s to 1960s under Criterion A/1. The building was constructed, and used by the Pacific Bell Telephone Company, for the transmission of telephone calls carried over trunk lines stretched between San Diego and Los Angeles. These small buildings were called "repeater huts." Where once frequently found situated between large cities and rural communities, they have now largely disappeared due to the growth of suburban populations and being redundant to modern communication systems. While not quite as mundane as a wood telephone pole, they were none-the-less crucial to the communication networks of the early twentieth century phone lines and are the historic equivalent of today's cell towers.

Under the criterion for evaluating properties for listing in the National Register or California Register for their *direct* association with the lives of persons important to the history of Encinitas, San Diego County, California, or the nation, we did not find that the "Little Brick Building" is eligible for listing under Criterion B/2. While the building had been owned by San Diego coffee-shop entrepreneur Robert Sinclair for a period of time in the 2000s, our research did not reveal any local or regionally important person directly associated with the building during its period of significance from circa 1938 to circa 1965.

The "Little Brick Building" appears eligible for listing in the National Register or California Register under Criterion C/3 as a rare example of an early twentieth-century telephone system repeater hut designed in Colonial Revival style architecture. Not only is the building significant for its functional architecture, but it is also an excellent example of Colonial Revival architecture

as interpreted in the late 1930s. The workmanship of the brick mason who applied his skills to the building is remarkable for its artistic and imaginative use of Roman brick veneer to create a modern interpretation of a classic building design. The mason achieved his design by setting bricks in horizontal and vertical alignments, by slightly projecting or recessing the bricks, and by using full, half, header, and stretcher bricks to achieve the cohesive design. The building's overall design is also rather remarkable, in that if the shutters were once again put in place on the structure, most passersby would not know that this was historically used as a telephone utility building, and not a private residence.

The "Little Brick Building" does not appear to have the capacity to yield information important to the history of Cardiff-by-the-Sea, Encinitas, or San Diego County. The subject building does not appear eligible for listing in the National Register or California Register under Criterion D/4.

The "Little Brick Building" has been found to meet the criteria to be determined historic resources, and the building has retained high levels of integrity to convey its original appearance. The building has retained the levels of integrity of location, materials, setting, design, workmanship, and feeling.

3. Future Recommendations

The District has proposed the protection and rehabilitation of the "Little Brick Building" for future use on the Cardiff School property as a historic resource. To retain its historic status, the following recommendations are made in accordance with the treatment of cultural resources under CEQA.

Protect in Place

It is recommended that the District prepare a plan to protect the"Little Brick Building" from any direct adverse physical changes to the building (demolition or substantial alterations), or indirect adverse changes (such as continued deterioration of the building caused by deferred maintenance) in advance of proposed project activities.

The National Park Service, division of Technical Preservation Services, has prepared Preservation Briefs Numbers 1-50 at https://www.nps.gov/tps/how-to-preserve/briefs.htm. Preservation Briefs provide guidance on preserving, rehabilitating, and restoring historic buildings. These National Park Service publications help historic building owners recognize and resolve common problems prior to work and they recommend methods and approaches for rehabilitating historic buildings that are consistent with their historic character. Rehabilitation of the "Little Brick Building" should be undertaken with the assistance of a qualified Historic Architect or Architectural Historian with extensive training in methods of historic building conservation.

Secretary of the Interior's Guidelines for the Treatment of Historic Properties

If the District should decide to rehabilitate and/or reuse the "Little Brick Building", under CEQA they are required to follow *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings* (Kay D. Weeks and Anne E. Grimmer, revised 2017.) It is recommended that project proponents retain the services of a qualified Historic Architect or Architectural Historian (with experience in preparing rehabilitation plans) to assist in the future use and function of the building.

California Historic Building Code

Once a building, structure, object, feature, or landscape has been determined eligible for listing in the National Register or California Register, a project that proposes repairs, alterations and/or additions necessary for the preservation, restoration, rehabilitation, moving or continued use of an historical building or structure" falls under the regulations of the California 2016 Historical Building Code (CHBC), California Code of Regulations Title 24, Part 8 (January 1, 2017). The regulations of the CHBC have the same authority as state law and are to be considered as such. The intent of the CHBC is to facilitate the preservation and continuing use of qualified historical buildings while providing reasonable safety for the building occupants and access for persons with disabilities.[59] It is recommended that project proponents retain the services of a qualified Historic Architect or Architectural Historian (with experience in preparing rehabilitation plans) to assist in the future use and function of the building.

4. Summary

In summation, the Cardiff School buildings do not appear to meet the criteria for being determined significant resources, individually or collectively, on a local, statewide or national level, and therefore are ineligible for listing in the National Register or California Register, and do not quality as historic properties or historical resources.

The "Little Brick Building" has been determined eligible by this study for listing in the National Register and/or California Register under Criteria A/1 and C/3 as a rare example of a telephone repeater hut constructed circa 1938 to boost telephone signals between San Diego and Los Angeles, and as a rare example of a repeater hut designed in the Colonial Revival style of architecture.

[59] California Historical Building Code – 2016. The document can be found at: http://ohp.parks.ca.gov/pages/1074/files/2016%20CA%20CHBC.pdf

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APPENDIX A – Department of Parks and Recreation (DPR) Site Forms

DPR forms will be completed and attached to Final edition of HRER.

Appendix 5.4-3 Paleontological Records Search

Appendices

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8 May 2018

Mr. Michael Paul
PlaceWorks
750 B Street, Suite 1620
San Diego, CA 92101

RE: Paleontological Records Search – Cardiff School Modernization and Reconstruction Project

Dear Mr. Paul:

This letter presents the results of a paleontological records search conducted for the Cardiff School Modernization and Reconstruction project, located at 1888 Montgomery Avenue in the southwestern portion of the City of Encinitas, San Diego County, CA. The project site is bordered to the northeast to Montgomery Avenue, to the southeast by Mozart Avenue, and to the west by San Elijo Avenue.

A review of published geological maps covering the project site and surrounding area was conducted to determine the specific geologic units underlying the project. Each geologic unit was subsequently assigned a paleontological resource sensitivity following County of San Diego guidelines (Deméré and Walsh, 1993; Stephenson et al., 2009). Published geological reports covering the project area (e.g., Kennedy and Tan, 2007) indicate that the proposed project has the potential to impact the Pleistocene-age Bay Point Formation, as well as the underlying Delmar Formation. These geologic units and their paleontological sensitivity are summarized in detail in the following section.

In addition, a search of the paleontological collection records housed at the San Diego Natural History Museum (SDNHM) was conducted in order to determine if any documented fossil collection localities occur at the project site or within the immediately surrounding area (Figure 1). The SDNHM has three recorded fossil localities within 1 mile of the project site, all from the Eocene-age Delmar Formation, which could be impacted by construction if earthwork exceeds the depth of the contact between it and the overlying Bay Point Formation. The fossil content of these localities is described in greater detail below.

Geologic Rock Units Underlying the Project Area

Bay Point Formation – The nearshore marine deposits of the Pleistocene-age (approximately 750,000 to 10,000 years old) Bay Point Formation underlie the entire project site at the surface. The SDNHM does not have any recorded fossil localities from the Bay Point Formation within a 1-mile radius of the project site. Elsewhere in western San Diego County, the Pay Point Formation has yielded large and diverse assemblages of marine invertebrate fossils, as well as less common fossilized remains of marine invertebrates (e.g., sharks, ray, and bony fish). The Bay Point Formation has been assigned a high paleontological sensitivity for the diverse and well-preserved fossils of marine invertebrates and marine vertebrates that have been recovered from these deposits.

Delmar Formation – Lagoonal to estuarine deposits of the late early to early middle Eocene-age (approximately 50 to 49 million years old) Delmar Formation underlie the Bay Point Formation at

unknown depths within the project site. The SDNHM has three recorded fossil localities from the Delmar Formation within a 1-mile radius of the project site. These localities produced internal molds of marine mollusks; fossilized teeth and postcrania of skates and bony fish; lizard osteoderms and a partial crocodile skeleton; and partial skulls of the bear-sized tillodont *Trogosus* and the ancestral rhino *Hyrachyus*. The Delmar Formation is assigned a high paleontological sensitivity for the important terrestrial vertebrate fossils that have been recovered from its deposits.

Summary and Recommendations

The high paleontological sensitivity of the Bay Point Formation and the underlying Delmar Formation in San Diego County (Deméré and Walsh, 1993; Stephenson et al., 2009), as well as the presence of fossil localities nearby, suggest the potential for construction of the proposed project to result in impacts to paleontological resources. Any proposed excavation activities that extend deep enough to encounter previously undisturbed deposits of these geologic units have the potential to impact the paleontological resources preserved therein. For these reasons, implementation of a complete paleontological resource mitigation program during ground-disturbing activities is recommended.

The fossil collection locality information contained within this paleontological records search should be considered private and is the sole property of the San Diego Natural History Museum. Any use or reprocessing of the locality information contained within this document beyond the scope of the Cardiff School Modernization and Reconstruction project is prohibited.

If you have any questions concerning these findings please feel free to contact me at 619-255-0321 or kmccomas@sdnhm.org.

Sincerely,



Katie McComas
Paleontology Collections Assistant
San Diego Natural History Museum

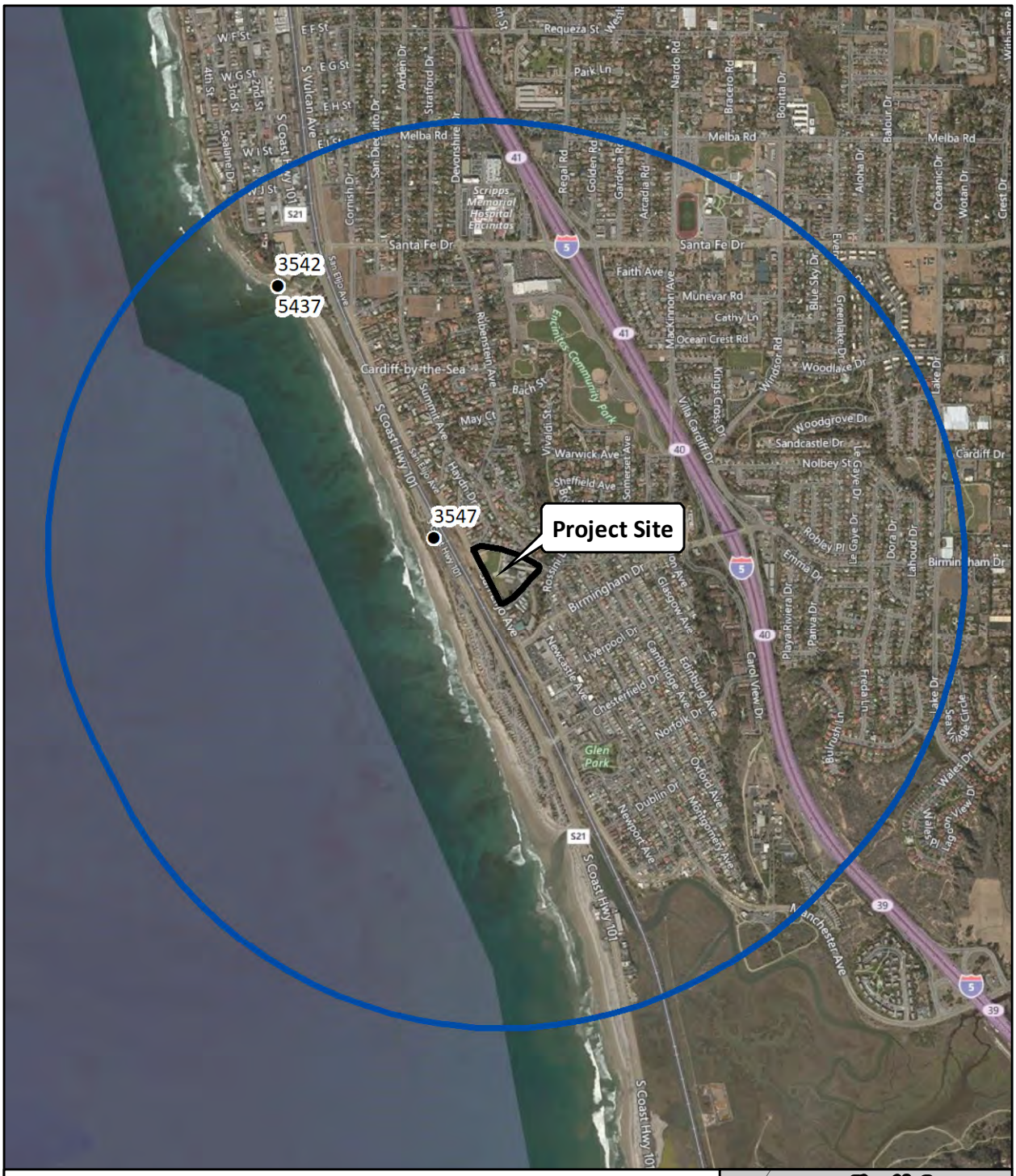
Enc: Figure 1: Project map
Appendix: List of SDNHM fossil localities in the vicinity of the project

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PALEOSERVICES
SAN DIEGO NATURAL HISTORY MUSEUM

FIGURE 1

Project Map
Cardiff School Modernization and Reconstruction Project
City of Encinitas, San Diego County, California

Appendix: Locality List

San Diego Natural History Museum
Department of Paleontology

Locality Number	Locality Name	Location	Elevation (feet)	Geologic Unit	Era	Period	Epoch
3542	Swami's Point	City of Encinitas, San Diego County, CA	0	Delmar Formation	Cenozoic	Paleogene	early? Eocene
3547	Pipe's Beach	City of Encinitas, San Diego County, CA	15	Delmar Formation	Cenozoic	Paleogene	Eocene
5437	Swami's Point	City of Encinitas, San Diego County, CA	0	Delmar Formation	Cenozoic	Paleogene	Eocene

Appendix 5.5-1 Geotechnical Investigation

Appendices

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GEOTECHNICAL INVESTIGATION
PROPOSED IMPROVEMENTS TO CARDIFF SCHOOL
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CALIFORNIA

Prepared for:

CARDIFF SCHOOL DISTRICT
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CTE JOB NO.: 10-14226G

MAY 25, 2018

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FIGURE 5	RETAINING WALL DRAINAGE DETAIL

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APPENDIX B	FIELD EXPLORATION METHODS LOGS
APPENDIX C	LABORATORY METHODS AND RESULTS
APPENDIX D	STANDARD GRADING SPECIFICATIONS
APPENDIX E	PERCOLATION TEST METHODS AND CALCULATED INFILTRATION RATES

1.0 INTRODUCTION AND SCOPE OF SERVICES

1.1 Introduction

This report presents the results of the geotechnical investigation, performed by Construction Testing and Engineering, Inc. (CTE), and provides preliminary conclusions and recommendations for the proposed improvements at the existing Cardiff School campus in Cardiff-by-the-Sea, California. The geotechnical investigation was performed in general accordance with the terms of CTE proposal G-4198A, dated September 21, 2017, revised March 11, 2018.

Based on a review of the project plans, CTE understands that the proposed improvements include demolishing some of the existing classrooms and associated campus structures, and construction of new classroom and school facility structures. New driveways, parking areas, playgrounds, field areas, flatwork, landscaping, and ancillary improvements are also proposed. CTE should review any changes in project plans as they become available in order to make changes to the recommendations herein, as necessary. Preliminary geotechnical recommendations for excavations, site preparation, fill placement, and foundation design for the proposed improvements are presented herein. References reviewed for this report are provided in Appendix A. Site location is shown on the attached Figure 1, Site Index Map.

1.2 Scope of Services

The scope of services provided included:

- Review of referenced geologic and soils reports.
- Coordination of utility mark-out and location through USA DigAlert services and an independent utility locater.

- Excavation of exploratory borings and soil sampling with a truck-mounted drill rig, limited access track-mounted drill rig, and manually advanced augers.
- Obtaining a boring permit from the County of San Diego.
- Laboratory testing of selected soil samples.
- Description of the geology and evaluation of potential geologic hazards.
- Engineering and geologic analysis.
- Percolation testing and infiltration feasibility analysis.
- Preparation of this summary report.

2.0 SITE DESCRIPTION

The Cardiff School is located at 1888 Montgomery Avenue in Cardiff-by-the-Sea, California (Figure 1). The school campus is triangular shaped and is bounded by San Elijo Avenue to the west, Montgomery Avenue to the north/northeast, and Mozart Avenue to the south/southeast. Train tracks running approximately north to south are located across San Elijo Avenue to the west of the site, with Highway 1 and the bluff overlooking the Pacific Ocean just beyond. The general layout of the subject site is shown on Figure 2, Exploration Location Map.

The campus is generally flat and slopes downward to the west at a low surface gradient. Current campus elevations range from approximately 98 feet above mean sea level (msl) in the eastern portion of the campus to approximately 78 feet above msl in the western area of the site.

3.0 FIELD INVESTIGATION AND LABORATORY TESTING

3.1 Field Investigation

CTE conducted a field investigation on April 9 and 10, 2017 that included visual reconnaissance and the excavation of 26 exploratory borings and six percolation test holes. The borings were placed at locations of proposed improvements and to satisfy California Geological Survey (CGS) minimum

boring requirements for school sites. Boring locations were adjusted based on the presence of existing improvements and underground utilities as surveyed by others. Borings were advanced with a truck mounted as well as a limited access, CME 75 drill rig. CTE also advanced manual auger explorations in areas where truck or track mounted drilling equipment was unable to access. Truck mounted rigs were equipped with eight-inch-diameter, hollow-stem augers. Borings extended to a maximum explored depth of up to approximately 31.5 feet below the ground surface (bgs) in Boring, B-24. Bulk and relatively undisturbed samples were collected from the cuttings and by driving Standard Penetration Test, and California Modified samplers, respectively.

The soils were logged in the field by a CTE Certified Engineering Geologist, and were visually classified in general accordance with the Unified Soil Classification System. The field descriptions have been modified, where appropriate, to reflect laboratory test results. Boring logs, including descriptions of the soils encountered, are included in Appendix B. Approximate locations of the borings are shown on Figure 2.

3.2 Laboratory Testing

Laboratory tests were conducted on selected soil samples for classification purposes, and to evaluate physical properties and engineering characteristics. Laboratory tests conducted include: Gradation, Expansion Index (EI), R-Value, Atterberg Limits, Consolidation, Moisture Content, In-Place Moisture and Density, and Chemical Characteristics. Test descriptions and laboratory test results for the selected soils are included in Appendix C.

4.0 GEOLOGY

4.1 General Setting

The San Diego region is located within the Peninsular Ranges physiographic province that is characterized by northwest-trending mountain ranges, intervening valleys, and predominantly northwest trending regional faults. The San Diego region can be further subdivided into the coastal plain area, a central mountain–valley area, and the eastern mountain valley area. The project site is located within the coastal plain area, which is generally underlain by Cretaceous and Tertiary sedimentary deposits that onlap an eroded basement surface consisting of Jurassic and Cretaceous crystalline rocks.

4.2 Geologic Conditions

Based on the regional geologic map prepared by Kennedy and Tan (2007), the near surface geologic unit underlying the site consists of Quaternary Older Paralic Deposits, Units 2-4 along the eastern portion of the site and Units 6-7 along the western portion. Based on recent site explorations, Quaternary Previously Placed Fill was encountered across the surface of the site and was underlain by the Paralic Deposits. Descriptions of the geologic units encountered during the investigation are presented below. Geologic cross sections are presented in Figures 2A and 2B. A regional fault and seismicity map is attached as Figure 3. A geologic map of the site area as excerpted from Kennedy and Tan (2007) is attached as Figure 4.

4.2.1 Quaternary Previously Placed Fill

Quaternary Previously Placed Fill was generally encountered from two to four feet below ground surface (bgs) in the explorations and was observed to a maximum depth of approximately seven feet below ground surface bgs in Boring, B-9. The fill soils observed generally consisted of loose to medium dense, slightly moist to moist, variably brown, orange brown, and dark brown, silty to clayey, fine grained sand. Localized depths of fill soils may be greater than encountered during the explorations. Fill soils should be overexcavated as recommended herein prior to support of structural improvements or additional fill.

4.2.2 Quaternary Older Paralic Deposits, Units 2-4

Quaternary Older Paralic Deposits, Units 2-4 were encountered beneath the surficial fill in the borings advanced on the approximate eastern half of the site. These units were encountered as deep as 14.5 feet bgs, as observed in Boring, B-18 and are underlain by Older Paralic Deposits, Units 6-7 (discussed in Section 4.2.3). Older Paralic Deposits Units 2-4 observed in the explorations generally consist of medium dense to dense, slightly moist to moist, brown to red brown, silty fine sands. Locally scattered gravels and cobbles were encountered in the paralic deposits during drilling.

4.2.3 Quaternary Older Paralic Deposits, Units 6-7

Quaternary Older Paralic Deposits, Units 6-7 were encountered beneath the surficial fill and younger paralic deposits at the site. These units were encountered to the maximum explored

depth of 31.5 feet bgs, in Boring, B-24. Units 6-7 observed in the explorations generally consist of medium dense to dense, slightly moist to moist, variably brown to orange and gray brown, silty and clayey, fine grained sands as well as very stiff, fine sandy clays.

4.3 Groundwater Conditions

Stabilized groundwater was not encountered at the site to the maximum explored depth of 31.5 feet bgs. Some seepage was observed in Boring B-15, likely due to irrigation infiltrate in the ball field perching upon less permeable underlying soils. Groundwater conditions are anticipated to vary and seepage may be observed at the site during grading, especially during and after periods of sustained precipitation or irrigation. Subsurface water could seasonally impact excavations or earthwork during the proposed development and moisture conditioning of site soils may be necessary during grading.

4.4 Geologic Hazards

Geologic hazards that were considered to have potential impacts to site development were evaluated based on field observations, literature review, and laboratory test results. It appears that the geologic hazards at the site are primarily limited to those caused by shaking from earthquake-generated ground motions. The following paragraphs discuss the geologic hazards considered and their potential risk to the site.

4.4.1 Surface Fault Rupture

Based on the site reconnaissance and review of referenced literature, the site is not within a State of California-designated Alquist-Priolo Earthquake Fault Studies Zone and no known

active fault traces underlie, or project toward the site. According to the California Division of Mines and Geology, a fault is active if it displays evidence of activity in the last 11,000 years (Hart and Bryant, revised 2007). Therefore, the potential for surface rupture from displacement or fault movement beneath the proposed improvements is considered to be low.

4.4.2 Local and Regional Faulting

The California Geological Survey (CGS) and the United States Geological Survey (USGS) broadly group faults as "Class A" or "Class B" (Cao, 2003; Frankel et al., 2002). Class A faults are generally identified based upon relatively well-defined paleoseismic activity, and a fault-slip rate of more than 5 millimeters per year (mm/yr). In contrast, Class B faults have comparatively less defined paleoseismic activity, and are considered to have a fault-slip rate less than 5 mm/yr. The controlling faults in the region are generally strike –slip. The nearest known Class B fault is the Rose Canyon Fault that is approximately 4.8 kilometers northwest of the site (Blake, T.F., 2000). The nearest known Class A fault is the Julian segment of the Elsinore Fault that is located approximately 46.5 kilometers northeast of the site. The following Table 4.4.2 presents the known faults nearest to the site, including estimated magnitude and fault classification. Attached Figure 3 shows regional faults and seismicity with respect to the site.

TABLE 4.4.2
NEAR-SITE FAULT PARAMETERS

FAULT NAME	APPROXIMATE DISTANCE FROM SITE (KM)	MAXIMUM ESTIMATED EARTHQUAKE MAGNITUDE	CLASSIFICATION
Rose Canyon	4.8	7.2	B
Newport-Inglewood	20.1	7.1	B
Coronado Bank	27.6	7.6	B
Elsinore-Julian	46.5	7.1	A
Elsinore-Temecula	46.7	6.8	A
Palos Verdes	67.5	7.3	B

The site could be subjected to significant shaking in the event of a major earthquake on any of the faults listed above or other faults in the southern California or northern Baja California area.

4.4.3 Historic Seismicity

The level of seismicity within recent history (last 50 years) of the San Diego area is relatively low compared to other areas of southern California and northwestern Baja California. Only a few small to moderate earthquakes have been reported in the San Diego area during the period of instrumental recordings, which began in the early 1900s. Most of the high seismic activity in the region is associated with the Elsinore Fault Zone and the San Jacinto Fault Zone, located approximately 47 and 83 kilometers northeast of the site respectively. In the western portion of San Diego County a series of small-to-moderate

earthquakes in July 1985 were reportedly associated with the Rose Canyon Fault Zone (Reichle, 1985). The largest event in that series was M4.7, which was centered within San Diego Bay. A similar series of earthquakes in coastal San Diego occurred in 1964 (Simons, 1979).

Review of the USGS Earthquake Archives (http://earthquake.usgs. gov/earthquakes/search/) for significant earthquakes within 100 kilometers of the site with magnitudes greater than M5.5 are provided in Table 4.4.3.

TABLE 4.4.3
Regional Earthquake History

EARTHQUAKE DATE (yr-mo-day)	EARTHQUAKE TIME (UTC)	MAGNITUDE	ESTIMATED DEPTH (km)	GENERAL LOCATION
1918-04-21	22:32:29	6.7	10.0	Southern California
1937-03-25	16:49:02	6.0	6.0	Southern California
1949-11-04	20:42:38	5.7	6.0	Northern Baja California
1954-03-19	09:54:27	6.4	6.0	Southern California
1968-04-09	02:28:58	6.6	10.0	Southern California
1987-11-24	01:54:14	6.2	10.9	Southern California

The site could be subjected to significant shaking in the event of a major earthquake on any of the faults discussed above or other faults in the southern California or northern Baja California area.

4.4.4 Liquefaction and Seismic Settlement Evaluation

Liquefaction occurs when saturated fine-grained sands or silts lose their physical strengths during earthquake-induced shaking and behave as a liquid. This is due to loss of point-to-point grain contact and transfer of normal stress to the pore water. Liquefaction potential varies with water level, soil type, material gradation, relative density, and probable intensity and duration of ground shaking. Seismic settlement can occur with or without liquefaction; it results from densification of loose soils.

Due to the lack of shallow groundwater and the presence of dense formational paralic deposits beneath the site, liquefaction, seismic settlement, and/or associated secondary effects are not anticipated to be significant at the subject site.

4.4.5 Tsunamis, Flooding, and Seiche Evaluation

According to Federal Emergency Management Agency flood hazard mapping (FEMA, 2012), the site is mapped in Zone X which represents an area of minimal flood hazard. California Emergency Management Agency mapping (2009) indicates that the site is not within a tsunami inundation area. Therefore, the risk of flooding or tsunami inundation at the site is considered negligible.

Damage resulting from oscillatory waves (seiches) is considered unlikely due to the absence of nearby confined bodies of water.

4.4.6 Landsliding

According to mapping by Tan (1995), the site is considered "Marginally Susceptible" to landsliding. Landslides are not mapped in the site area, and evidence of landsliding was not encountered during the recent field exploration. Based on the low surface gradient and lack of physical features, landsliding is not considered to be a significant geologic hazard at the subject site.

4.4.7 Compressible and Expansive Soils

Based on recent observations and testing, the Previously Placed Fill and highly weathered paralic deposits encountered at the site are generally considered to be compressible under the proposed loading conditions. Surficial soils were also found to be locally disturbed and weathered. Therefore, it is recommended that the Previously Placed Fill and highly weathered paralic deposits be overexcavated, processed and compacted beneath structural improvement areas and locations of fill placement as recommended herein. Based on the investigation data, underlying medium dense to dense Paralic deposits are not considered to be subject to significant compressibility under the proposed loads.

Based on geologic observation and laboratory testing, the near-surface materials at the site are anticipated to exhibit a very low to low expansion potential (Expansion Index of less than 51). Therefore, the recommendations provided herein are based upon the anticipated expansion potential of the site soils encountered. Additional evaluation of soils expansion potential should be conducted during grading and upon completion of rough grading

4.4.8 Corrosive Soils

Chemical testing was performed to evaluate the potential effects that site soils may have on concrete foundations and various types of buried metallic utilities. Soil environments detrimental to concrete generally have elevated levels of soluble sulfates and/or pH levels less than 5.5. According to American Concrete Institute (ACI) Table 318 4.3.1, specific guidelines have been provided for concrete where concentrations of soluble sulfate (SO_4) in soil exceed 0.1 percent by weight. These guidelines include low water: cement ratios, increased compressive strength, and specific cement type requirements. Based on the results of the sulfate and pH testing performed, onsite soils are anticipated to generally have a negligible corrosion potential to Portland cement concrete improvements (ACI Exposure Category S0).

A minimum resistivity value less than approximately 5,000 ohm-cm, and/or soluble chloride levels in excess of 200 ppm generally indicate a corrosive environment to buried metallic utilities and untreated conduits. Based on the obtained minimum resistivity and soluble chloride levels, onsite soils are anticipated to have a moderate corrosion potential for buried uncoated/unprotected metallic conduits. Based on these results, at a minimum, the use of buried plastic piping or conduits would appear logical, where feasible.

The results of the chemical tests performed are presented in the attached Appendix C. CTE does not practice corrosion engineering. Therefore, a corrosion engineer or other qualified

consultant could be contacted if site specific corrosivity issues are of more significant concern.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 General

Based on the investigation findings the proposed improvements at the site are considered feasible from a geotechnical standpoint, provided the recommendations in this report are incorporated into the design and construction of the project. Recommendations for the proposed earthwork and improvements are included in the following sections and Appendix D. However, recommendations in the text of this report supersede those presented in Appendix D should variations exist. These recommendations should either be evaluated as appropriate or updated during plan review and rough grading at the site.

5.2 Site Preparation

Prior to grading, the site should be cleared of any existing building materials or improvements that are not to remain, as well as debris and deleterious materials. Objectionable materials, such as construction debris and vegetation, not suitable for structural backfill should be properly disposed of offsite. Within the footprint for any proposed structures, existing soils should be excavated to competent Paralic Deposits, a minimum depth of four feet below existing or proposed grades, or to a depth of 24 inches below the bottom of proposed foundations, whichever is greatest. Overexcavation bottom should be at a uniform depth beneath and five feet beyond the building footprint, where feasible.

Natural turf athletic fields are proposed at the site. However, if artificial turf field areas are incorporated into the design, the following recommendations should apply. The existing surface material, organic materials, and existing improvements that are not to remain should be at minimum overexcavated to a minimum of two feet below grade. Compacted fill should be placed, as recommended herein, to the proposed subgrade elevation. The processed uniform compacted fills should have a low to very low expansion potential. Overexcavation and design of the artificial turf ballfield area should be per the manufacturer's requirements, especially if more stringent than the recommendations herein for geotechnical purposes.

Earthwork in existing ball field areas may be assisted by discontinuing irrigation as long as practical prior to commencement of grading, in order to minimize the potential for local soft and saturated soils. Such soft and saturated soils could require special grading and moisture control for subgrade and placement as compacted fill. Stabilization of soft and saturated subgrade may be affected by placement of a biaxial or triaxial geogrid and a minimum CalTrans Class 2 Aggregate Base, Class 2 Permeable Material, or select granular backfill on top of the yielding area. Suitability of all excavation bottoms should be observed prior to fill placement by CTE personnel during site grading.

Existing site soils are considered suitable for reuse at the site as compacted engineered fill though moisture conditioning may be necessary. Onsite soils encountered during site grading may locally be clayey and expansive. Therefore, select grading may be recommended during grading in order to place low expansion soils (EI of 50 or less) within the upper four feet below proposed structural

subgrade. Additionally, select grading may be necessary as required by the artificial turf manufacturer, if applicable.

For other proposed improvement areas, such as pavement and hardscape, existing soils should be excavated to the depth of competent materials, or to a minimum of 18 inches below proposed or existing subgrade elevation, whichever depth is greatest. Fill soil placed in the overexcavation should possess an Expansion Index of 50 or less (low expansion potential) for these ancillary improvement areas.

Overexcavations adjacent to existing structures should generally not extend below a 1:1 plane extended down from the bottom of the existing footings or as recommended during grading based on the exposed conditions. Depending on the depth and proximity of the existing building footings to remain, alternating slot excavations could be recommended during earthwork. Such recommendations would be presented during grading as required.

Existing below-ground utilities should be redirected around proposed structures. Existing utilities at an elevation to extend through the proposed footings should generally be sleeved and caulked to minimize the potential for moisture migration below the building slabs. Abandoned pipes exposed by grading should be securely capped to prevent moisture from migrating beneath foundation and slab soils or should be filled with minimum two-sack cement/sand slurry.

A CTE representative should observe the exposed bottom of excavations prior to placement of

compacted fill or improvements. If localized areas of loose or unsuitable materials are encountered at the base of the overexcavations, deeper overexcavation to the depth of competent soil would likely be recommended.

5.3 Site Excavation

Based on site observations and anticipated subsurface conditions, shallow excavations at the site should generally be feasible using well-maintained heavy-duty construction equipment run by experienced operators. Deeper excavations may encounter seepage that could potentially require dewatering, soil moisture conditioning, and stabilization.

5.4 Fill Placement and Compaction

Following recommended overexcavation of loose or disturbed soils, the areas to receive fills or improvements should be scarified a minimum of 8 inches, moisture conditioned and properly compacted. Granular fill and backfill should be compacted to a minimum relative compaction of 90 percent at a moisture content of at least three percent above optimum, as evaluated by ASTM D 1557. Fill soil placed beneath and five feet beyond structures should possess a low expansion potential (EI of 50 or less). The optimum lift thickness for fill soil depends on the type of compaction equipment used. Generally, backfill should be placed in uniform, horizontal lifts not exceeding eight inches in loose thickness. Fill placement and compaction should be conducted in conformance with local ordinances.

5.5 Fill Materials

Properly moisture-conditioned very low to low expansion potential (EI of 50 less) soils derived from the on-site excavations are considered suitable for reuse on the site as compacted fill. Medium

expansion materials, if encountered (EI between 51 and 90) may be utilized outside building envelopes and ancillary improvement areas and/or may be placed at depths greater than four feet below proposed or existing grades, whichever is deeper. If used, these materials should be screened of organics and materials generally greater than three inches in maximum dimension. Irreducible materials greater than three inches in maximum dimension generally should not be used in shallow fills (within four feet of proposed grades). In utility trenches, adequate bedding should surround pipes.

If necessary, imported fill beneath structures and walks should have an Expansion Index of 20 or less (ASTM D 4829) with less than 30 percent passing the No. 200 sieve to a depth of two feet below flatwork. Depending on placement location, a minimum percentage of fines may also be beneficial in order to avoid the presence of cohesionless soils that may not effectively maintain vertical footing or utility trench excavations. Imported fill soils for use in structural or slope areas should be evaluated by CTE before being imported to the site. Section 5.14 discusses recommendations for Controlled Low-Strength Material (CLSM).

Although this report is not intended to address environmental conditions at the subject site, it is anticipated that imported soils will be screened, sampled, and tested in accordance with the Department of Toxic Substances Control's (2001) advisory for clean imported fill soils for public school sites. CTE can provide those services as additional scope.

Retaining wall backfill located within a 45-degree wedge extending up from the heel of the wall should consist of soil having an Expansion Index of 20 or less (ASTM D 4829) with less than 30 percent passing the No. 200 sieve. Onsite soils may not be suitable for use as wall backfill. The upper 12 to 18 inches of wall backfill could consist of lower permeability soils, in order to reduce surface water infiltration behind walls. The project structural engineer and/or architect should detail proper wall backdrains, including gravel drain zones, fills, filter fabric and perforated drain pipes. However, a conceptual wall backdrain detail (which may be appropriate for the subject site) is provided in Figure 5.

5.6 Temporary Construction Slopes

The following recommended temporary slopes should be relatively stable against deep-seated failure, but may experience localized sloughing. On-site soils are considered Type B and Type C soils with recommended slope ratios as set forth in Table 5.6.

TABLE 5.6
RECOMMENDED TEMPORARY SLOPE RATIOS

SOIL TYPE	SLOPE RATIO (Horizontal: vertical)	MAXIMUM HEIGHT
B (Quaternary Old Paralic Deposits)	1:1 (OR FLATTER)	10 Feet
C (Previously Placed Fill)	1.5:1 (OR FLATTER)	10 Feet

Actual field conditions and soil type designations must be verified by a "competent person" while excavations exist, according to Cal-OSHA regulations. In addition, the above sloping recommendations do not allow for surcharge loading at the top of slopes by vehicular traffic, equipment or materials. Appropriate surcharge setbacks must be maintained from the top of all unshored slopes.

5.7 Foundations and Slab Recommendations

The following recommendations are for preliminary design purposes only. These foundation recommendations should be further evaluated after review of the project grading and foundation plans, and after completion of rough grading of the building pad areas. Upon completion of rough grading, Expansion Index of near surface soils should be further evaluated and recommendations provided herein updated, as necessary. Additional corrosivity testing of soils may also be performed following rough grading, if necessary. Lightly loaded upright structures such as flagpoles and other supports may be designed in accordance with current California Building Code or applicable standards assuming code minimum design values, or as per the recommendations provided herein.

5.7.1 Shallow Spread Foundations

Foundation recommendations presented herein are based on the anticipated very low to low expansion potential of site soils (Expansion Index of 50 or less). Although generally not anticipated, moderately or highly expansive soils, if encountered during grading, should be exported from the site, placed in non-structural areas, or placed at least four feet below proposed or existing grades, whichever is deeper. Moderately to highly expansive soils should not be placed below building envelopes.

Following the recommended preparatory grading, continuous and isolated spread footings are anticipated to be suitable for use at this site. It is anticipated that the proposed footings will be founded entirely in properly compacted fill placed as recommended herein. Footings should not straddle cut-fill interfaces. If deeper footings are proposed, additional overexcavation and compaction may be required in order to provide a minimum of 24 inches of fill beneath all foundation elements.

Foundation dimensions and reinforcement should be based on an allowable bearing value of 2,500 pounds per square foot for footings founded in suitable fill materials and embedded a minimum of 24 inches below the lowest adjacent rough subgrade elevation. If utilized, continuous footings should be at least 15 inches wide; isolated footings should be at least 24 inches in least dimension. The above bearing value may be increased by one third for short duration loading which includes the effects of wind or seismic forces. If elastic foundation design is utilized, an uncorrected modulus of subgrade reaction of 150 pci is anticipated to be appropriate.

Minimum footing reinforcement for continuous footings should consist of four No. 5 reinforcing bars; two placed near the top and two placed near the bottom, or as per the project structural engineer. The structural engineer should design isolated footing reinforcement. Footing excavations should be maintained at, or be brought to, a minimum moisture content of at least two percent above optimum, just prior to concrete placement.

5.7.2 Foundation Settlement

The maximum total settlement for foundations embedded in properly compacted fill is expected to be on the order of one inch; the maximum differential settlement is expected to be on the order of 0.5 inch over a distance of approximately 50 feet.

5.7.3 Foundation Setback

Footings for structures should be designed such that the horizontal distance from the face of adjacent slopes to the outer edge of the footing is at least 10 feet. In addition, footings should bear beneath a 1:1 plane extended up from the nearest bottom edge of adjacent trenches and/or excavations. Deepening of affected footings may be a suitable means of attaining the prescribed setbacks.

5.7.4 Interior Concrete Slabs-On-Grade

Concrete slabs should be designed based on the anticipated loading, but measure at least 4.5 inches in thickness. Slab reinforcement should at least consist of No. 4 reinforcing bars, placed on maximum 18-inch centers, each way, at or above mid-slab height, but with proper concrete cover.

Slabs subjected to heavier loads may require thicker slab sections and/or increased reinforcement. A 125-pci subgrade modulus is considered suitable for elastic design of minimally embedded improvements such as slabs-on-grade. Slabs on grade areas should be maintained at a minimum two percent above optimum moisture content or be brought to two

percent above optimum moisture content just prior to placement of underlayments or concrete.

In moisture-sensitive floor areas, a suitable vapor retarder of at least 15-mil thickness (with all laps or penetrations sealed or taped) overlying a four-inch layer of consolidated crushed aggregate or gravel (with SE of 30 or more) should be installed, as per the CBC/Green Building Code. An optional maximum two-inch layer of similar material may be placed above the vapor retarder to help protect the membrane during steel and concrete placement. This recommended protection is generally considered typical in the industry. If proposed floor areas or coverings are considered especially sensitive to moisture emissions, additional recommendations from a specialty consultant could be obtained. CTE is not an expert at preventing moisture penetration through slabs. A qualified architect or other experienced professional should be contacted if moisture penetration is a more significant concern.

5.8 Seismic Design Criteria

The seismic ground motion values listed in the table below were derived in accordance with the ASCE 7-10 Standard and 2016 CBC. This was accomplished by establishing the Site Class based on the soil properties at the site, and calculating the site coefficients and parameters using the United States Geological Survey Seismic Design Maps application and site coordinates of 33.0251 degrees latitude and -117.2839 degrees longitude. These values are intended for the design of structures to resist the effects of earthquake ground motions.

TABLE 5.8
SEISMIC GROUND MOTION VALUES

PARAMETER	VALUE	CBC REFERENCE (2016)
Site Class	D	ASCE 7, Chapter 20
Mapped Spectral Response Acceleration Parameter, S_S	1.198	Figure 1613.3.1 (1)
Mapped Spectral Response Acceleration Parameter, S_1	0.464	Figure 1613.3.1 (2)
Seismic Coefficient, F_a	1.021	Table 1613.3.3 (1)
Seismic Coefficient, F_v	1.536	Table 1613.3.3 (2)
MCE Spectral Response Acceleration Parameter, S_{MS}	1.223	Section 1613.3.3
MCE Spectral Response Acceleration Parameter, S_{M1}	0.713	Section 1613.3.3
Design Spectral Response Acceleration, Parameter S_{DS}	0.815	Section 1613.3.4
Design Spectral Response Acceleration, Parameter S_{D1}	0.475	Section 1613.3.4
PGA_M	0.504	ASCE 7, Equation 11.8-1

5.9 Lateral Resistance and Earth Pressures

Lateral loads acting against structures may be resisted by friction between the footings and the supporting compacted fill soil or passive pressure acting against structures. If frictional resistance is used, an allowable coefficient of friction of 0.30 (total frictional resistance equals the coefficient of friction multiplied by the dead load) is recommended for concrete cast directly against compacted fill. A design passive resistance value of 250 pounds per square foot per foot of depth (with a maximum value of 2,000 pounds per square foot) may be used. The allowable lateral resistance can be taken as the sum of the frictional resistance and the passive resistance, provided the passive resistance does not exceed two-thirds of the total allowable resistance.

Retaining walls up to approximately eight feet high and backfilled using granular soils may be designed using the equivalent fluid weights given below.

TABLE 5.9
EQUIVALENT FLUID UNIT WEIGHTS
(pounds per cubic foot)

WALL TYPE	LEVEL BACKFILL	SLOPE BACKFILL 2:1 (HORIZONTAL: VERTICAL)
CANTILEVER WALL (YIELDING)	30	48
RESTRAINED WALL	60	75

Lateral pressures on cantilever retaining walls (yielding walls) due to earthquake motions may be calculated based on work by Seed and Whitman (1970). The total lateral thrust against a properly drained and backfilled cantilever retaining wall above the groundwater level can be expressed as:

$$P_{AE} = P_A + \Delta P_{AE}$$

For non-yielding (or "restrained") walls, the total lateral thrust may be similarly calculated based on work by Wood (1973):

$$P_{KE} = P_K + \Delta P_{KE}$$

Where P_A = Static Active Thrust (given previously Table 5.9)
P_K = Static Restrained Wall Thrust (given previously Table 5.9)
ΔP_{AE} = Dynamic Active Thrust Increment = $(3/8)\ k_h\ \gamma H^2$
ΔP_{KE} = Dynamic Restrained Thrust Increment = $k_h\ \gamma H^2$
k_h = 2/3 Peak Ground Acceleration = 2/3 (PGA_M)
H = Total Height of the Wall
γ = Total Unit Weight of Soil ≈ 130 pounds per cubic foot

The increment of dynamic thrust in both cases should be distributed triangularly, with a line of action located at H/3 above the bottom of the wall (SEAOC, 2013). These values assume non-expansive backfill and free-draining conditions. Measures should be taken to prevent moisture buildup behind all retaining walls. Drainage measures should include free-draining backfill materials and sloped, perforated drains. These drains should discharge to an appropriate off-site location. A general or conceptual detail for Retaining Wall Drainage, which may be appropriate for the subject site based on the review of the project structural engineer and architect, is shown on Figure 5. Waterproofing should be as specified by the project architect or waterproofing consultant.

5.10 Exterior Flatwork

To reduce the potential for cracking in exterior flatwork caused by minor movement of subgrade soils and typical concrete shrinkage, it is recommended that such flatwork be installed with crack-control joints at appropriate spacing as designed by the project architect, and measure a minimum 4.5 inches in thickness. Additionally, it is recommended that flatwork be installed with at least number 4 reinforcing bars on maximum 18-inch centers, each way, at above mid-height of slab but with proper concrete cover, or other reinforcement per the project consultants. Flatwork, which should be installed with crack control joints, includes driveways, sidewalks, and architectural features. Doweling of flatwork joints at critical pathways or similar could also be beneficial in resisting minor subgrade movements.

All subgrades should be prepared according to the earthwork recommendations previously given before placing concrete. Positive drainage should be established and maintained next to all flatwork.

Subgrade materials shall be maintained at, or be elevated to, above optimum moisture content prior to concrete placement.

5.11 Vehicular Pavements

The proposed improvements may include paved vehicle drive and parking areas. Presented in Table 5.11 are preliminary pavement sections utilizing preliminary "R"-Value and Traffic Index Values. The upper 12 inches of subgrade and base materials beneath pavement areas should be compacted to 95% relative compaction in accordance with ASTM D1557, at no lower than two percent above the optimum moisture content.

TABLE 5.11
RECOMMENDED PAVEMENT THICKNESS

Traffic Area	Assumed Traffic Index	Preliminary Subgrade "R"-Value	Asphalt Pavements		Portland Cement Concrete Pavements On Subgrade Soils (inches)
			AC Thickness (inches)	Aggregate Base Thickness (inches)	
Light Drive Areas (Including Infrequently Used Fire Lanes)	6.0	25+	4.0	8.0	7.0
Parking Only Areas	4.5	25+	3.0	5.0	6.0

* Caltrans class 2 aggregate base or "Greenbook" Processed Miscellaneous Base
** Concrete should have a modulus of rupture of at least 600 psi

Following rough site grading, CTE recommends laboratory testing of representative at-grade soils for as-graded "R"-Value, and adjusting the proposed pavement sections, as necessary.

Asphalt paved areas should be designed, constructed and maintained in accordance with the recommendations of the Asphalt Institute or other widely recognized authority. Concrete paved areas should be designed and constructed in accordance with the recommendations of the American Concrete Institute or other widely recognized authority, particularly with regard to thickened edges, joints, and drainage. Typically, concrete pavements can be unreinforced provided expansion/contraction/construction joints are spaced no more than 24 times the pavement thickness, both ways, in nearly square patterns. However, doweling of pavement joints at critical pathways or similar could be beneficial in resisting minor subgrade movements. The Standard Specifications for Public Works construction ("Greenbook") or Caltrans Standard Specifications may be referenced for pavement materials specifications.

5.12 Drainage

Surface runoff should be collected and directed away from improvements by means of appropriate erosion-reducing devices and positive drainage that should be established around the proposed improvements. Positive drainage should be directed away from improvements and slope areas at a minimum gradient of two percent for a distance of at least five feet. However, the project civil engineer should evaluate the on-site drainage, and make necessary provisions to keep surface water from affecting the site.

Generally, CTE recommends against allowing water to infiltrate building pads or adjacent to slopes and improvements. However, it is understood that some agencies are encouraging the use of storm-water cleansing devices. Appendix E discusses percolation testing performed by CTE and recommended design infiltration rates for the site.

5.13 Slopes

Based on anticipated soil strength characteristics, minor fill slopes should be constructed at slope ratios of 2:1 (horizontal: vertical) or flatter. These fill slope inclinations should exhibit factors of safety greater than 1.5.

Although properly constructed slopes on this site should be grossly stable, the soils will be somewhat erodible. Therefore, runoff water should not be permitted to drain over the edges of slopes unless that water is confined to properly designed and constructed drainage facilities. Erosion-resistant vegetation should be maintained on the face of all slopes. Typically, soils along the top portion of a fill slope face will creep laterally. CTE recommends against building distress-sensitive hardscape improvements within five feet of slope crests. Existing site slopes are generally considered to be stable provided site drainage is implemented as described herein, and is constructed and maintained in accordance with the recommendations of the project Civil Engineer.

5.14 Controlled Low Strength Materials (CLSM)

Controlled Low Strength Materials (CLSM) may be used in lieu of compacted soils below foundations, within building pads, and/or adjacent to retaining walls or other structures, provided the appropriate geotechnical recommendations are also incorporated. Minimum overexcavation depths recommended herein beneath bottom of footings, slabs, flatwork, and other areas may be applicable beneath CLSM if/where CLSM is to be used, and excavation bottoms should be observed by CTE prior to placement of CLSM. Prior to CLSM placement, the excavation should be free of debris, loose soil materials, and water. Once specific areas to utilize CLSM have been determined, CTE should review the locations to determine if additional recommendations are appropriate.

CLSM should consist of a minimum three-sack cement/sand slurry with a minimum 28-day compressive strength of 100 psi (or equal to or greater than the maximum allowable short term soil bearing pressure provided herein, whichever is higher) as determined by ASTM D4832. If re-excavation is anticipated, the compressive strength of CLSM should generally be limited to a maximum of 150 psi per ACI 229R-99. Where re-excavation is required, two-sack cement/sand slurry may generally be used to help limit the compressive strength. The allowable soils bearing pressure and coefficient of friction provided herein should still govern foundation design. CLSM may not be used in lieu of structural concrete where required by the structural engineer.

5.14 Plan Review

CTE should be authorized to review the project grading and foundation plans, and/or earthwork specifications as applicable, prior to commencement of earthwork to check for potential variations with the intent of the geotechnical recommendations.

5.15 Construction Observation

The recommendations provided in this report are based on preliminary design information for the proposed construction and the subsurface conditions observed in the explorations performed. The interpolated subsurface conditions should be checked in the field during construction to evaluate that conditions are as anticipated. Foundation recommendations may be revised upon completion of grading and as-built laboratory test results.

Recommendations provided in this report are based on the understanding and assumption that CTE will provide the observation and testing services for the project. Such services by any other party are at their sole risk. All earthwork should be observed and tested to check that grading activities have been performed according to the recommendations contained within this report. The project geotechnical engineer should evaluate all footing trenches before reinforcing steel and concrete placement.

6.0 LIMITATIONS OF INVESTIGATION

The field evaluation, laboratory testing, and geotechnical analysis presented in this report have been conducted according to current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No other warranty, expressed or implied, is made regarding the conclusions, recommendations and opinions expressed in this report. Variations may exist and conditions not observed or described in this report may be encountered during construction. The recommendations presented herein have been developed in order to reduce the potential adverse effects of soil settlement. However, even with the design and construction precautions provided, some post-construction movement and associated distress may occur.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years. CTE's conclusions and recommendations are based on an analysis of the observed conditions. If conditions different from those described in this report are encountered, this office should be notified and additional recommendations, if required, will be provided.

The opportunity to be of service on this project is appreciated. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Respectfully submitted,
CONSTRUCTION TESTING & ENGINEERING, INC.

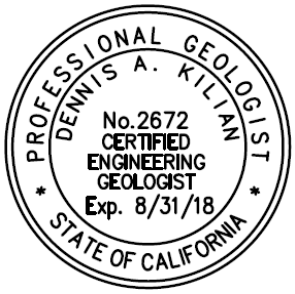




Dan T. Math, GE #2665
Principal Engineer

Jay F. Lynch, CEG #1890
Principal Engineering Geologist

Dennis Kilian, CEG #2672
Project Engineering Geologist



DAK/JFL/DTM:nri



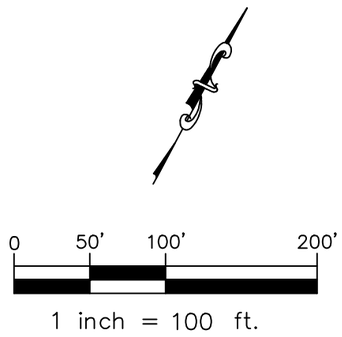
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SITE INDEX MAP

PROPOSED IMPROVEMENTS AT CARDIFF SCHOOL
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CALIFORNIA

5.5-1-36

CTE JOB NO:	10-14226G
SCALE:	NONE
DATE: 05/18	FIGURE: 1



EXPLANATION

B-1 ⊕ APPROXIMATE BORING LOCATION

P-1 ⊕ APPROXIMATE PERCOLATION TEST LOCATION

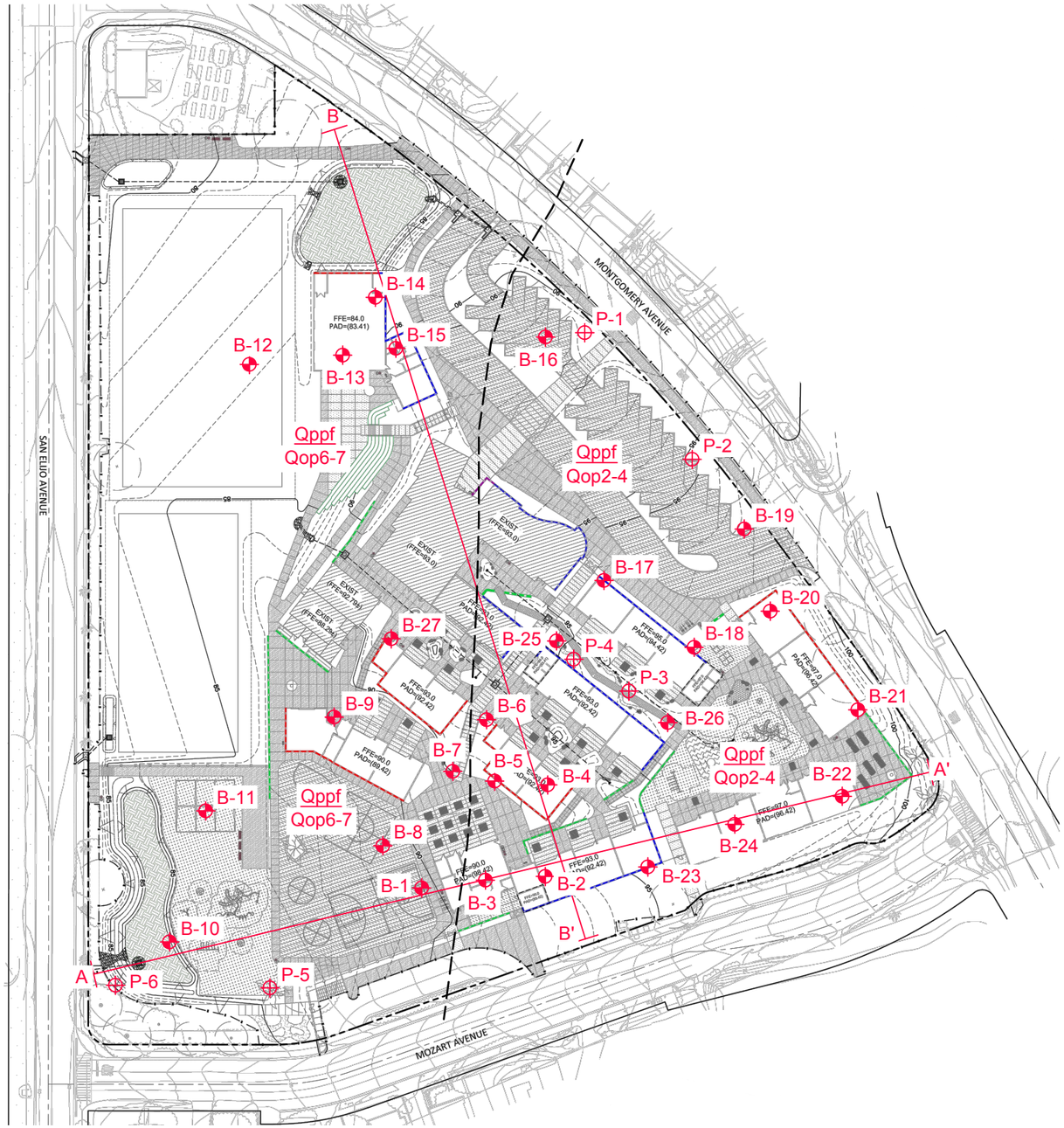
A A' GEOLOGIC CROSS SECTION

Qppf QUATERNARY PREVIOUSLY PLACED FILL

Qop2-4 QUATERNARY OLD PARALIC DEPOSITS, UNITS 2-4

Qop6-7 QUATERNARY OLD PARALIC DEPOSITS, UNITS 6-7

APPROXIMATE GEOLOGIC CONTACT

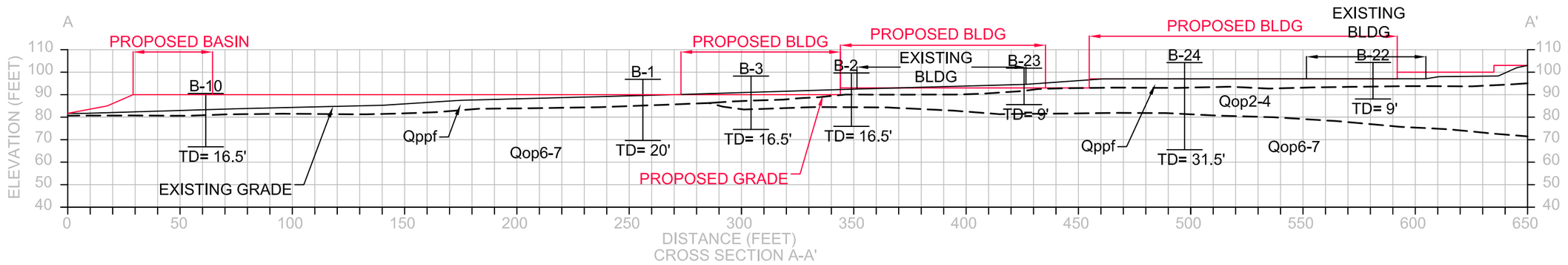


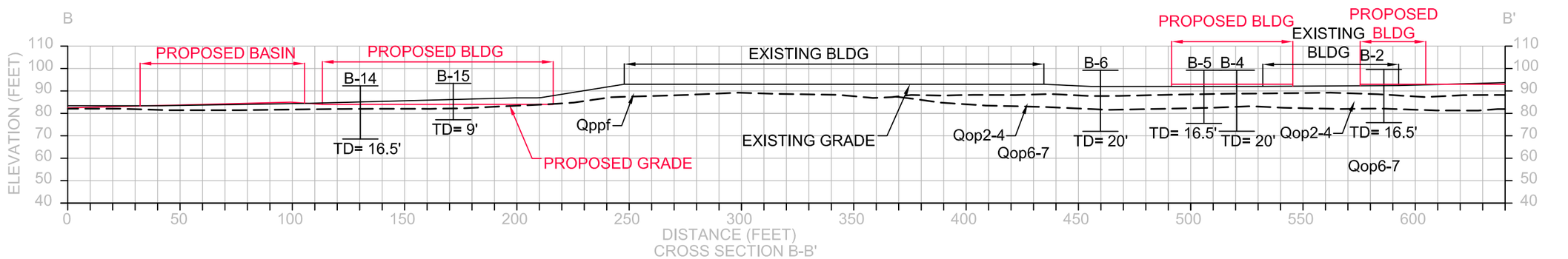
\\ESC_SERVER\Projects\10-14226G\Fig 2 (Explor Map).dwg

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EXPLORATION LOCATION MAP
PROPOSED IMPROVEMENTS TO CARDIFF SCHOOL
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CALIFORNIA

CTE JOB NO: 10-14226G
SCALE: 1" ~ 100'
DATE: 5/18
FIGURE: 2





EXPLANATION

B-1 APPROXIMATE BORING LOCATION

A A' GEOLOGIC CROSS SECTION

Qppf QUATERNARY PREVIOUSLY PLACED FILL

Qop2-4 QUATERNARY OLD PARALIC DEPOSITS, UNITS 2-4

Qop6-7 QUATERNARY OLD PARALIC DEPOSITS, UNITS 6-7

APPROXIMATE GEOLOGIC CONTACT

0 25' 50' 100'

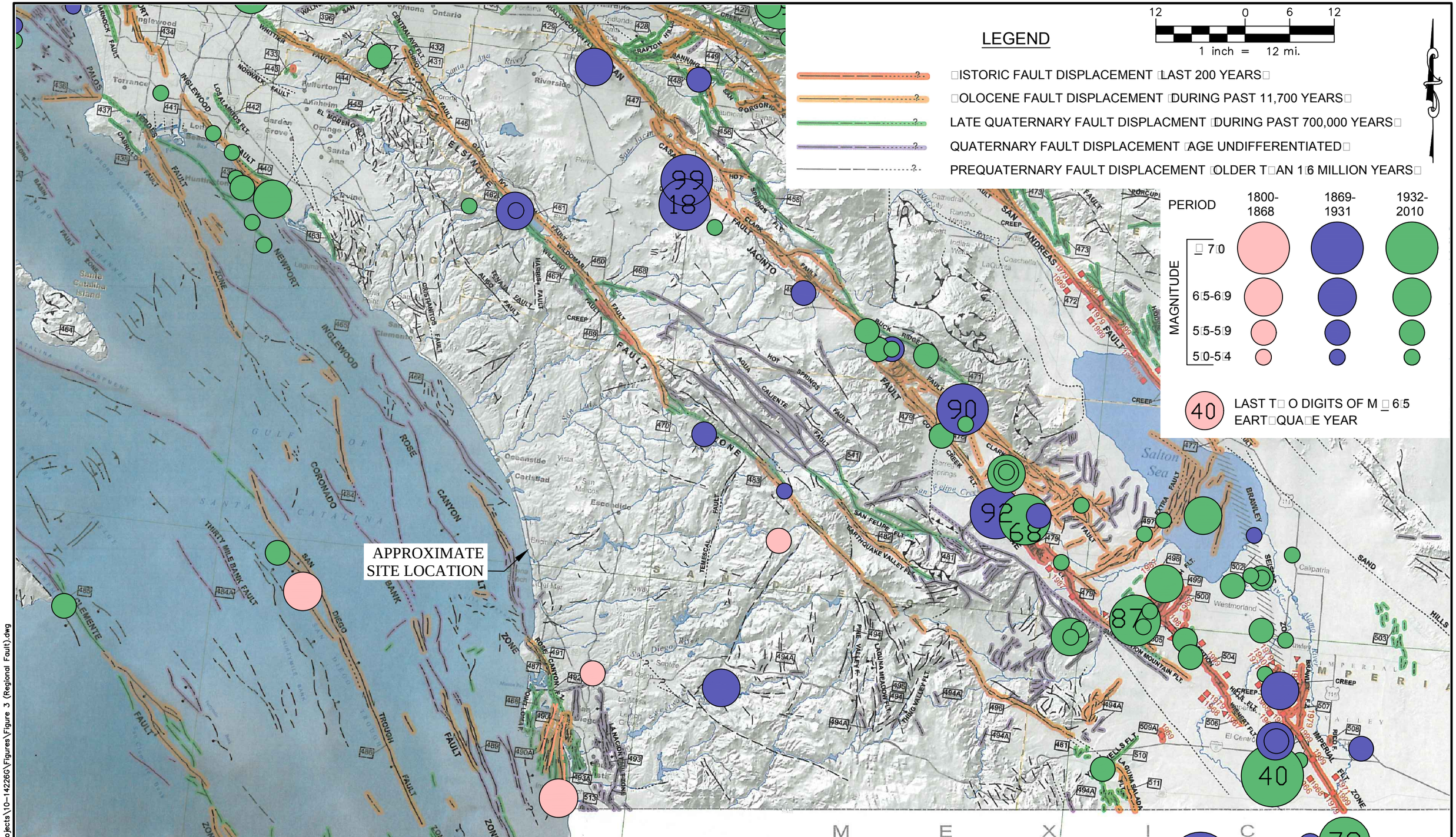
1 inch = 50' ft.

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GEOLOGIC CROSS SECTIONS
PROPOSED IMPROVEMENTS TO CARDIFF SCHOOL
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CALIFORNIA

CTE JOB NO: 10-14226G
SCALE: 1" = 50'
DATE: 5/18
FIGURE: 2A

\\Esc_server\projects\10-14226G\Fig 2 (Explor Map).dwg



NOTES: FAULT ACTIVITY MAP OF CALIFORNIA, 2010, CALIFORNIA GEOLOGIC DATA MAP SERIES MAP NO. 6;
EPICENTERS OF AND AREAS DAMAGED BY M≥5 CALIFORNIA EARTHQUAKES, 1800-1999 ADAPTED AFTER TOPPOZADA, BRANUM, PETERSEN, HALLSTORM, CRAMER, AND REICHLE, 2000, CDMG MAP SHEET 49
REFERENCE FOR ADDITIONAL EXPLANATION; MODIFIED WITH CISN AND USGS SEISMIC MAPS

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REGIONAL FAULT AND SEISMICITY MAP

PROPOSED IMPROVEMENTS TO CARDIFF SCHOOL
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CALIFORNIA

CTE JOB NO: 10-14226G
SCALE: 1 inch = 12 miles
DATE: 05/18
FIGURE: 3

\\ESC_SERVER\Projects\10-14226G\Figures\Figure 3 (Regional Fault).dwg



LEGEND

Qop_{2-4} QUATERNARY OLD PARALIC DEPOSITS, UNITS 2-4

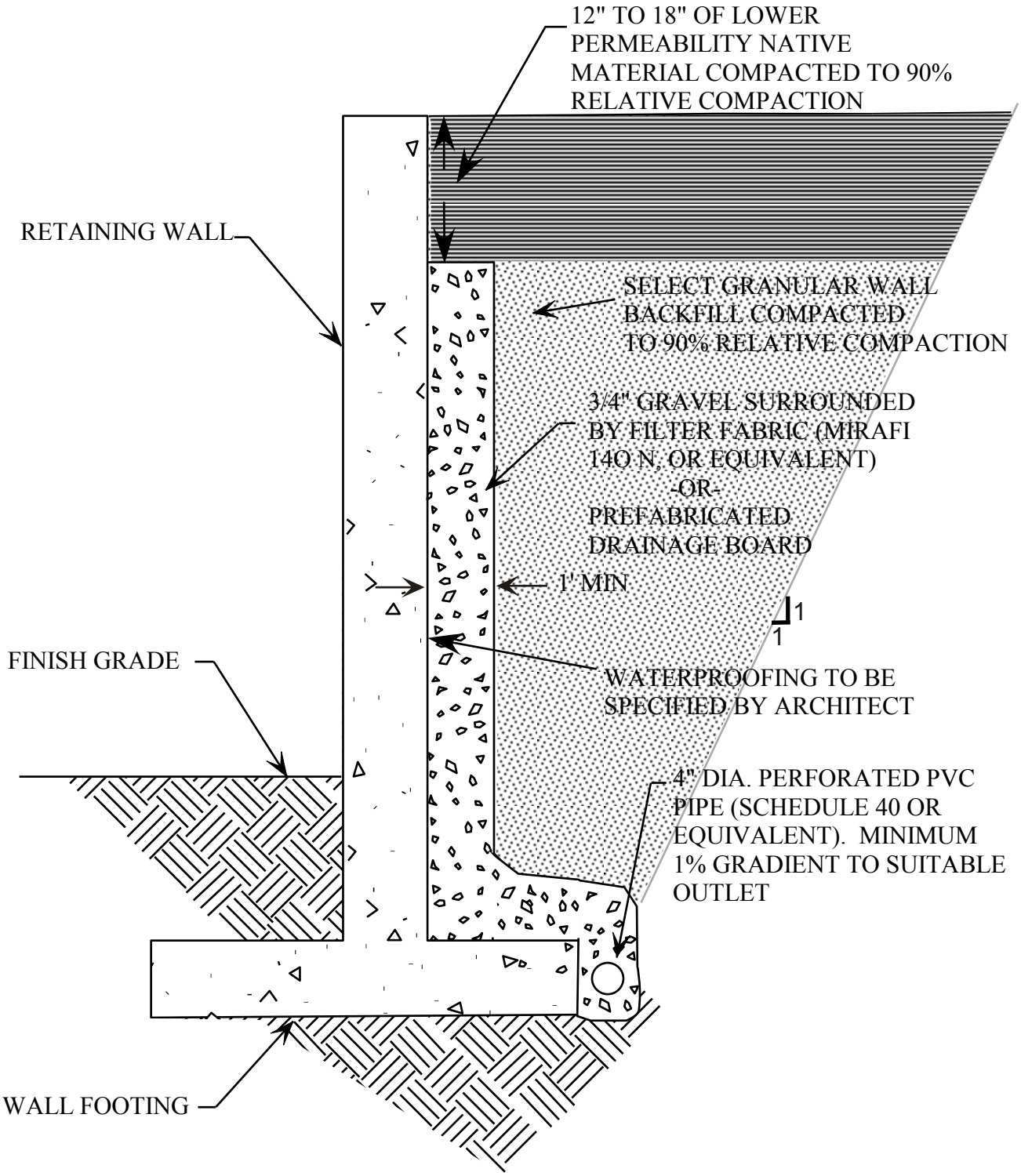
Qop_{6-7} QUATERNARY OLD PARALIC DEPOSITS, UNITS 6-7

AFTER: TAN, S.S., 2007, GEOLOGIC MAP OF THE OCEANSIDE 30X60 MINUTE QUADRANGLE, SAN DIEGO COUNTY, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY REGIONAL GEOLOGIC MAP NO. 2, 1:100,000 SCALE.

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REGIONAL GEOLOGIC MAP
PROPOSED IMPROVEMENTS AT CARDIFF SCHOOL
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CALIFORNIA

CTE JOB NO:	10-14226G
SCALE:	NONE
DATE: 05/18	FIGURE: 4



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RETAINING WALL DRAINAGE DETAIL

5.5-1-41

CTE JOB NO:	10-14226G
SCALE:	NO SCALE
DATE: 05/18	FIGURE: 5

APPENDIX A

REFERENCES

REFERENCES

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APPENDIX B

EXPLORATION LOGS

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DEFINITION OF TERMS

PRIMARY DIVISIONS			SYMBOLS	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS < 5% FINES	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS OR GRAVEL SAND MIXTURES, LITTLE OF NO FINES
		GRAVELS WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, NON-PLASTIC FINES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, PLASTIC FINES
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS < 5% FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES	SM	SILTY SANDS, SAND-SILT MIXTURES, NON-PLASTIC FINES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES, PLASTIC FINES
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50		ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SLIGHTLY PLASTIC CLAYEY SILTS
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY, SANDY, SILTS OR LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTY CLAYS
HIGHLY ORGANIC SOILS			PT	PEAT AND OTHER HIGHLY ORGANIC SOILS

GRAIN SIZES

BOULDERS	COBBLES	GRAVEL		SAND			SILTS AND CLAYS
		COARSE	FINE	COARSE	MEDIUM	FINE	

12" 3" 3/4" 4 10 40 200

CLEAR SQUARE SIEVE OPENING U.S. STANDARD SIEVE SIZE

ADDITIONAL TESTS

(OTHER THAN TEST PIT AND BORING LOG COLUMN HEADINGS)

MAX- Maximum Dry Density
GS- Grain Size Distribution
SE- Sand Equivalent
EI- Expansion Index
CHM- Sulfate and Chloride Content , pH, Resistivity
COR - Corrosivity
SD- Sample Disturbed
PM- Permeability
SG- Specific Gravity
HA- Hydrometer Analysis
AL- Atterberg Limits
RV- R-Value
CN- Consolidation
CP- Collapse Potential
HC- Hydrocollapse
REM- Remolded
PP- Pocket Penetrometer
WA- Wash Analysis
DS- Direct Shear
UC- Unconfined Compression
MD- Moisture/Density
M- Moisture
SC- Swell Compression
OI- Organic Impurities

FIGURE: BL1

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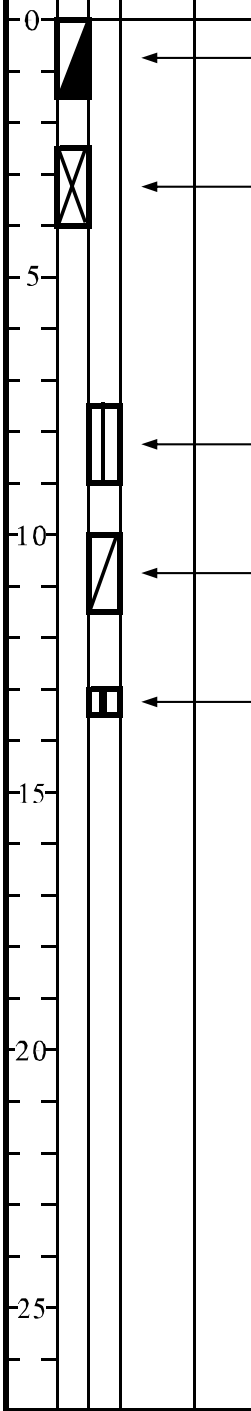
PROJECT: | DRILLER: | SHEET: of
CTE JOB NO: | DRILL METHOD: | DRILLING DATE:
LOGGED BY: | SAMPLE METHOD: | ELEVATION:

BORING LEGEND

Depth (Feet) | Bulk Sample | Driven Type | Blows/Foot | Dry Density (pcf) | Moisture (%) | U.S.C.S. Symbol | Graphic Log

DESCRIPTION

Laboratory Tests



Block or Chunk Sample

Bulk Sample

Standard Penetration Test

Modified Split-Barrel Drive Sampler (Cal Sampler)

Thin Walled Army Corp. of Engineers Sample

Groundwater Table

Soil Type or Classification Change

? — ? — ? — ? — ? — ? — ? —

Formation Change [(Approximate boundaries queried (?)]

"SM"

Quotes are placed around classifications where the soils exist in situ as bedrock

FIGURE: BL2

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PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~90'

BORING: B-1

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								AC 4" Base 4" QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Medium dense, slightly moist, brown to red brown, silty fine with gravel, cobble, and terracotta debris.	
			14 19 50/3"			SM			EI
5			5 6 7			SM		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, slightly moist, light brown, silty fine SAND.	
10			5 11 16						
15			6 11 13			SC/SM		Medium dense, moist, orange to light brown, clayey to silty fine SAND.	
			6 4 5		17.8			Increasingly clayey.	M, AL
20								Total Depth 20' No Groundwater Backfilled on April 9, 2018	
25									

B-1

Construction Testing & Engineering, Inc.
1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~91'

BORING: B-2

Depth (Feet)	Bulk Sample	Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								AC 4" Base 4" QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Medium dense, slightly moist, dark brown, silty fine SAND.	
		■	7 8 10						GS
								QUATERNARY OLD PARALIC DEPOSITS, Units 2-4:	
5		■	6 9 8			SM		Medium dense, slightly moist, red brown, silty fine SAND, trace clay.	
								QUATERNARY OLD PARALIC DEPOSITS, Units 6-7:	
10		■	9 10 10			SC		Medium dense, slightly moist, brown and red brown, clayey fine SAND.	
15		■	8 10 14					With gray brown mottling.	
								Total Depth 16.5' No Groundwater Backfilled on April 9, 2018	
20									
25									

B-2

Construction Testing & Engineering, Inc.
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PROJECT:	Cardiff Elementary School			DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~90'

BORING: B-3

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								AC 4" Base 4" QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Medium dense, slightly moist, dark brown, silty fine SAND.	
						SM			
						SC		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, slightly moist, brown to orange brown clayey fine SAND.	MD
5			10 21 23	127.0	7.2				
								QUATERNARY OLD PARALIC DEPOSITS, Units 6-7:	
10			6 11 8			SC		Interbedded (4") silty sands.	
						SC/SM		Medium dense, moist, mottled red and gray brown, clayey to silty fine SAND.	
15			8 10 13						
								Total Depth 16.5' No Groundwater Backfilled on April 9, 2018	
20									
25									

Construction Testing & Engineering, Inc.
1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~92'

BORING: B-4

Depth (Feet)	Bulk Sample	Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								AC 3.5" Base 4.5" QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Medium dense, slightly moist, dark brown, silty fine SAND.	
								QUATERNARY OLD PARALIC DEPOSITS, Units 2-4:	
5			12 15 21			SM		Medium dense, slightly moist, red brown, silty fine SAND, trace CLAY.	
								QUATERNARY OLD PARALIC DEPOSITS, Units 6-7:	
10			8 8 7			SC		Medium dense, moist, brown to red brown, silty to clayey fine SAND.	
15			3 4 5			SC/CL		Stiff, moist, brown and gray brown, fine sandy CLAY to clayey fine SAND.	
			4 6 8		11.9				AL, M
20								Total Depth 20' No Groundwater Backfilled on April 9, 2018	
25									

Construction Testing & Engineering, Inc.
1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School		DRILLER:	Baja Exploration	SHEET:	1 of 1	
CTE JOB NO:	10-14226G		DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018	
LOGGED BY:	DK		SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~92'	

BORING: B-5

Depth (Feet)	Bulk Sample	Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								AC 3.5" Base 4.5"	
						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf):	
						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, slightly moist, brown to red brown, silty fine SAND.	CHEM
5			4 6 6						
								QUATERNARY OLD PARALIC DEPOSITS, Units 6-7:	
10			10 9 8			SC		Medium dense, slightly moist to moist, brown to orange brown, clayey fine SAND.	
						SC/CL		Stiff, moist, brown and gray brown, fine sandy CLAY to clayey fine SAND.	
15			4 10 12						
								Total Depth 16.5' No Groundwater Backfilled on April 9, 2018	
20									
25									

Construction Testing & Engineering, Inc.
1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School			DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~92'

BORING: B-6

Depth (Feet)	Bulk Sample	Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								AC Base QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Medium dense, slightly moist, brown to dark brown, silty fine SAND.	
						SM			
5			7 8 9			SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, slightly moist, brown to orange brown, silty fine SAND.	
10			21 35 50			SC/SM		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Dense to very dense, slightly moist, orange brown, clayey to silty fine SAND.	
						CL		Very stiff, mottled gray and brown, fine SAND.	
15			5 8 13			SC/SM		Medium dense, slightly moist, brown, clayey to silty fine SAND.	
			4 8 10						
20								Total Depth 20' No Groundwater Backfilled on April 9, 2018	
25									

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1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School			DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~90'

BORING: B-7

Depth (Feet)	Sample Bulk	Sample Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								AC 2.5" Base 4"	
						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Medium dense, slightly moist, dark gray brown, silty fine SAND.	
						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, slightly moist, brown to orange brown, silty fine SAND.	
5			7 9 10						
10			7 10 11			SC/SM		Medium dense, slightly moist, orange brown, clayey to silty fine to medium SAND.	
15			7 10 10						
								Total Depth 16.5' No Groundwater Backfilled on April 9, 2018	
20									
25									

B-7

Construction Testing & Engineering, Inc.
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PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~89'

BORING: B-8

Depth (Feet)	Bulk Sample	Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		AC 3.5" Base 6" QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Medium dense, slightly moist, brown to dark brown, silty fine SAND with gravel and concrete.	
5			7 8 7			SM		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, slightly moist, brown to orange brown, silty fine SAND.	
10			5 8 9					Trace clay.	
15								Total Depth 11.5' No Groundwater Backfilled on April 9, 2018	
20									
25									

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1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School			DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~89'

BORING: B-9

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								AC 4" Base 4" QUATERNARY PREVIOUSLY PLACED FILL (Qppf):	
5			5 7 8	113.8	13.5	SC		Loose, moist, orange brown, clayey fine SAND.	EI, MD
						SC		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, slightly moist, mottled orange brown and gray brown, clayey fine SAND.	
10			5 10 13						
15			16 17 18					Dense.	
			9 9 10					Medium dense.	
20								Total Depth 20' No Groundwater Backfilled on April 9, 2018	
25									

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PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	CME 45	DRILLING DATE:	4/9/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~83'

BORING: B-10

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM/SC		Turf QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Medium dense, moist, dark brown, silty to clayey fine to medium graded SAND.	
						CL		Stiff, moist, dark brown, fine to medium grained sandy CLAY.	
5			4 5 6			SC		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, moist, reddish brown, clayey fine to medium grained SAND, ox, massive.	
10			4 6 9			SC/CL		Interbedded medium dense, moist, clayey fine to medium grained SAND and sandy CLAY.	
15			2 3 5						
								Total Depth 16.5' No Groundwater Encountered Backfilled on April 9, 2018	
20									
25									

B-10

Construction Testing & Engineering, Inc.
1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School			DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	CME 45	DRILLING DATE:	4/9/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~84'

BORING: B-11

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SC		Turf QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, clayey fine to medium grained.	EI
						SC		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, moist, reddish brown, clayey fine to medium grained SAND, oxidized, residual.	
5			3 4 8			CL		Stiff, moist, reddish brown, fine to medium grained sandy CLAY, ox, clayey sand interbeds.	
10			8 11 7						
								Total Depth 11.5' No Groundwater Encountered Backfilled on April 9, 2018	
15									
20									
25									

Construction Testing & Engineering, Inc.
1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	CME 45	DRILLING DATE:	4/9/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~83'

BORING: B-12

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SC/SM		Turf QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine to medium grained SAND.	
						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, moist, reddish brown, silty fine to medium grained SAND, oxidized, residual.	
5			4 5 11			CL		Becomes very moist. Very stiff, moist, reddish olive, fine to medium grained sandy CLAYSTONE.	
								Becomes hard with clayey sand interbeds.	
10			11 16 17						
								Total Depth 11.5' No Groundwater Encountered Backfilled on April 9, 2018	
15									
20									
25									

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1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School			DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	CME 45	DRILLING DATE:	4/9/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~85'

BORING: B-13

Depth (Feet)	Bulk Sample	Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		Turf QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine to medium grained SAND.	
						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, moist, reddish brown silty fine to medium grained SANDS, oxidized, residual.	
5			7 13 18			CL		Very stiff, moist, reddish olive, fine to medium grained sandy CLAY, ox mottling with clayey sand interbeds.	
10			8 8 10					Less clay and few silty sand interbeds.	
15			7 10 10		10.2	CL-ML		Very stiff, moist, reddish olive, silty CLAY with fine to medium grained sands, ox mottling with clayey sand interbeds.	AL, M
						SM		Medium dense, very moist, reddish gray, silty fine to medium grained SAND, oxidized.	
			7 10 13						
20								Total Depth 20' No Groundwater Encountered Backfilled on April 9, 2018	
25									

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PROJECT:	Cardiff Elementary School		DRILLER:	Baja Exploration	SHEET:	1 of	1
CTE JOB NO:	10-14226G		DRILL METHOD:	CME 45	DRILLING DATE:		4/9/2018
LOGGED BY:	DK		SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:		~85'

BORING: B-14

Depth (Feet)	Sample Bulk	Sample Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								Turf	
						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine to medium grained SAND.	
						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Loose to medium dense, moist, reddish brown, silty fine to medium grained SAND, oxidized, residual.	
5			3 3 6			CL		Stiff, moist, reddish olive, fine to medium grained sandy CLAY.	AL
10			7 18 23			SM		Medium dense, moist, reddish brown, silty fine to medium grained SAND.	
15			6 8 12					Total Depth 16.5' No Groundwater Encountered Backfilled on April 9, 2018	
20									
25									

Construction Testing & Engineering, Inc.
1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

PROJECT:	Cardiff Elementary School	DRILLER:	AJB	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	Hand Auger	DRILLING DATE:	4/10/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~86'

BORING: B-15

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0	X	X				SM		Turf QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist to very moist, slightly fine to medium grained SAND, fine gravel in upper 6".	
						CL		Stiff, moist, dark brown, fine to medium grained sandy CLAY. Seepage.	
5						CL		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Very stiff, moist, reddish olive, fine to medium grained sandy CLAY, oxidation mottling.	
						SC		Medium dense, moist, reddish brown, clayey fine to medium grained SAND, moderately cemented.	
						CL			
						SC		Medium dense, moist, reddish brown, clayey fine to medium grained SAND, moderately cemented.	
10								Total Depth 9' Seepage Encountered at 5' Backfilled on April 10, 2018	
15									
20									
25									

Construction Testing & Engineering, Inc.
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PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	CME 75	DRILLING DATE:	4/9/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~91'

BORING: B-16

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								AC 4" Base 4" FILL: Medium dense, slightly moist, dark brown, silty fine SAND.	RV
						SC		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, moist, brown to red brown, clayey fine SAND.	
5			8 6 7						
								QUATERNARY OLD PARALIC DEPOSITS, Units 6-7:	
10			8 10 12			SC		Medium dense, slightly moist, mottled gray and brown, clayey fine SAND.	
15			16 17 18					Dense.	
								Total Depth 16.5' No Groundwater Backfilled on April 10, 2018	
20									
25									

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PROJECT:	Cardiff Elementary School			DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	LAR 75	DRILLING DATE:	4/10/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~97'

BORING: B-17

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								Grass surface	
						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, slightly moist, dark brown, silty fine SAND.	
			3 4 3			SM		RESIDUAL SOIL: Loose, slightly moist, brown and dark brown, silty fine SAND.	
5			4 7 10	111.9	8.8	SC/SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, slightly moist, orange brown, clayey to silty fine SAND.	MD
10			2 5 7			SC		Clayey sand	
								QUATERNARY OLD PARALIC DEPOSITS, Units 6-7:	
15			5 14 15			SC		Medium dense, slightly moist, mottled brown, red brown and gray brown, clayey fine SAND, trace gravel.	
			6 6 8		13.4			Moist.	AL, M
20								Total Depth 20' No Groundwater Backfilled on April 10, 2018	
25									

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PROJECT:	Cardiff Elementary School			DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	LAR 75	DRILLING DATE:	4/10/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~97'

BORING: B-18

Depth (Feet)	Sample Bulk	Sample Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		Grass QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose, slightly moist, brown to dark brown, silty fine SAND.	CHEM
5			11 16 17			SC/SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, moist, brown, silty to clayey fine SAND.	
10			13 50/6"			SC		Dense to very dense, slightly moist, light brown, clayey fine SAND.	
15			3 4 5			SC		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, slightly moist, gray brown, clayey fine SAND.	
			8 14 13						
20								Total Depth 20' No Groundwater Backfilled on April 10, 2018	
25									

B-18

Construction Testing & Engineering, Inc.
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PROJECT:	Cardiff Elementary School	DRILLER:	AJB	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	Hand Auger	DRILLING DATE:	4/10/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~98'

BORING: B-19

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		Grass QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, brown, silty fine to medium grained SAND.	
								Loose to medium dense, moist, dark brown, silty fine grained SAND.	
5						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, moist, reddish brown, silty fine to medium grained SAND, oxidized, massive, friable.	
						CL		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Very stiff, moist, reddish olive, fine to medium grained sandy CLAY, oxidation mottling.	
10								Total Depth 9' No Groundwater Encountered Backfilled on April 10, 2018	
15									
20									
25									

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PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	LAR 75	DRILLING DATE:	4/10/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~98'

BORING: B-20

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0								QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, slightly moist, brown, silty fine SAND.	
						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, slightly moist, red brown, silty fine SAND, trace clay.	
5			9 12 11						
10			5 12 16					Light brown to orange brown.	
15			5 27 38	120.6	6.8	SC		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Dense, slightly moist, mottled brown and gray brown, clayey fine SAND.	MD
20			3 14 21					Difficult drilling	
25			6 10 12		10.6			Medium dense to dense.	AL, M
								Total Depth 26.5' No Groundwater Encountered Backfilled on April 10, 2018	

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PROJECT:	Cardiff Elementary School			DRILLER:	AJB	SHEET: 1	of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	Hand Auger	DRILLING DATE:	4/10/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~98'

BORING: B-21

Depth (Feet)	Bulk Sample	Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SC		0-0.9' Mulch QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, reddish brown, clayey fine to medium grained SAND.	
5						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, moist, reddish brown, silty fine to medium grained SAND, oxidized, masive.	
						SC		Medium dense, moist, reddish brown, clayey fine to medium grained SAND, oxidized, massive.	
						CL		Clayey fine to medium grained clayey sand interbeds.	
10								Total Depth 9' No Groundwater Encountered Backfilled on April 10, 2018	
15									
20									
25									

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PROJECT:	Cardiff Elementary School			DRILLER:	AJB	SHEET: 1	of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	Hand Auger	DRILLING DATE:	4/10/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~98'

BORING: B-22

Depth (Feet)	Sample Bulk	Sample Driven	Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0							SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, dry to moist, dark brown, silty fine to medium grained SAND, roots.	
							SC		Medium dense, moist, dark brown, clayey fine to medium grained SAND.	
							SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium denes, moist, reddish brown, silty fine to medium grained SANDSTONE.	
5							SC		Medium dense, moist, reddish brown, clayey fine to medium grained SANDSTONE, ox.	
							SM		Medium dense, moist, reddish brown, silty fine to medium grained SANDSTONE, ox.	
							SM		Medium dense, moist, reddish brown, clayey fine to medium grained SANDSTONE, ox.	
10									Total Depth 9' No Groundwater Encountered Backfilled on April 10, 2018	
15										
20										
25										

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PROJECT:	Cardiff Elementary School			DRILLER:	AJB	SHEET: 1	of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	Hand Auger	DRILLING DATE:	4/10/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~97'

BORING: B-23

Depth (Feet)	Bulk Sample	Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine to medium grained SAND, vents throughout.	
5						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, moist, reddish brown silty fine to medium grained SANDSTONE, ox, massive.	
						CL/SC		Very stiff, moist, reddish brown, fine to medium grained sandy CLAYSTONE/clayey SANDSTONE, ox.	
						SC		Medium dense, moist, reddish brown, clayey fine to medium grained SANDSTONE with clay interbeds.	
10								Total Depth 9' No Groundwater Encountered Backfilled on April 10, 2018	
15									
20									
25									

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PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	1 of 2
CTE JOB NO:	10-14226G	DRILL METHOD:	LAR 75	DRILLING DATE:	4/10/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~97'

BORING: B-24

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose, dry to slightly moist, brown to gray brown, silty fine SAND.	
5			11 19 21			SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Dense, slightly moist, brown to red brown, silty fine SAND, trace gravel. Roots	
10			13 47 50/5"	111.0	7.8			Dense to very dense.	MD
15			13 18 12			SC		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, slightly moist, mottled brown, gray brown, and orange brown, clayey fine SAND with silt.	
20			8 15 11						
25								Increasingly silty.	

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PROJECT:	Cardiff Elementary School	DRILLER:	Baja Exploration	SHEET:	2 of 2
CTE JOB NO:	10-14226G	DRILL METHOD:	LAR 75	DRILLING DATE:	4/10/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~97'

BORING: B-24

Depth (Feet)	Sample Bulk	Sample Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
25			5 7 3		9.2				AL, M
30			13 30						
								Total Depth 31.5' No Groundwater Backfilled on April 10, 2018	
35									
40									
45									
50									

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PROJECT:	Cardiff Elementary School	DRILLER:	AJB	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	Hand Auger	DRILLING DATE:	4/10/2018
LOGGED BY:	DK	SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~97'

BORING: B-25

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		Turf QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine to medium grained SAND.	
5						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, moist, reddish brown, silty fine to medium grained SANDSTONE, oxidized, massive.	
						SC		Medium dense, moist, reddish brown, clayey fine to medium grained SANDSTONE, ox.	
						CL		Becomes very moist. QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Very stiff, moist, reddish olive, fine to medium grained sandy CLAYSTONE, ox mottling.	
10								Total Depth 9' No Groundwater Encountered Backfilled on April 10, 2018	
15									
20									
25									

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PROJECT:	Cardiff Elementary School			DRILLER:	Baja Exploration	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	LAR 75	DRILLING DATE:	4/10/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~97'

BORING: B-26

Depth (Feet)	Bulk Sample	Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		Grass QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine SAND.	
5			6 7 8			SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4: Medium dense, moist, red brown, silty fine SAND with clay.	
10			25 21 23			SC		Medium dense, slightly moist to moist, brown and orange brown, clayey fine SAND with silt.	
15			3 3 3					QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Loose to medium dense, moist to very moist, gray brown and brown, clayey fine SAND	
20			6 7 8					Total Depth 20' No Groundwater Backfilled on April 10, 2018	
25									

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PROJECT:	Cardiff Elementary School			DRILLER:	DK	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	Hand Auger	DRILLING DATE:	4/10/2018
LOGGED BY:	DK			SAMPLE METHOD:	Bulk, CAL, SPT	ELEVATION:	~90'

BORING: B-27

Depth (Feet)	Sample Bulk	Sample Driven	Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0							SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, brown to olive brown, silty fine SAND.	
							SC/SM		QUATERNARY OLD PARALIC DEPOSITS, Units 6-7: Medium dense, moist, orange brown, clayey to silty fine SAND.	
5									Total Depth 5' No Groundwater Backfilled on April 10, 2018	
10										
15										
20										
25										

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PROJECT:	Cardiff Elementary School	DRILLER:	AB	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	Hand Auger	DRILLING DATE:	4/9/2018
LOGGED BY:	AB	SAMPLE METHOD:		ELEVATION:	~91'

BORING: P-1

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Medium dense, slightly moist, brown to red brown, silty fine with gravel, cobble.	
						SC		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4 (Qop_{2-4}): Medium dense, moist, brown to red brown, clayey fine SAND.	
5								Total Depth 43'" No Groundwater Backfilled on April 10, 2018	
10									
15									
20									
25									

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PROJECT:	Cardiff Elementary School	DRILLER:	AB	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	Hand Auger	DRILLING DATE:	4/9/2018
LOGGED BY:	AB	SAMPLE METHOD:		ELEVATION:	~97'

BORING: P-2

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, brown, silty, fine to medium grained SAND.	
						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4 (Qop_{2-4}): Medium dense, moist, reddish brown, silty, fine to medium grained SAND, ox, massive, friable.	
5								Total Depth: 65" No Groundwater Backfilled on April 10, 2018	
10									
15									
20									
25									

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PROJECT:	Cardiff Elementary School			DRILLER:	AB	SHEET:	1 of 1
CTE JOB NO:	10-14226G			DRILL METHOD:	Hand Auger	DRILLING DATE:	4/9/2018
LOGGED BY:	AB			SAMPLE METHOD:		ELEVATION:	~97'

BORING: P-3

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine SAND.	
5								Total Depth 41" No Groundwater Backfilled on April 10, 2018	
10									
15									
20									
25									

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PROJECT:	Cardiff Elementary School	DRILLER:	AB	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	Hand Auger	DRILLING DATE:	4/9/2018
LOGGED BY:	AB	SAMPLE METHOD:		ELEVATION:	~97'

BORING: P-4

Depth (Feet)	Sample: Bulk	Sample: Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine to medium grained SAND.	
5						SM		QUATERNARY OLD PARALIC DEPOSITS, Units 2-4 (Qop_{2-4}): Medium dense, moist, reddish brown, silty fine to medium grained SAND, oxidized, massive.	
10								Total Depth: 65" No Groundwater Backfilled on April 10, 2018	
15									
20									
25									

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PROJECT:	Cardiff Elementary School	DRILLER:	AB	SHEET:	1 of 1
CTE JOB NO:	10-14226G	DRILL METHOD:	Hand Auger	DRILLING DATE:	4/9/2018
LOGGED BY:	AB	SAMPLE METHOD:		ELEVATION:	~83'

BORING: P-5

Depth (Feet)	Sample Bulk	Sample Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0						SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine to medium grained SAND.	
						SM		QUATERNARY OLD PARALIC DEPOSITS, UNITS 6-7 (Qop_{6-7}): Medium dense, moist, reddish brown, silty fine to medium grained SAND, oxidized, massive.	
5								Total Depth: 58" No Groundwater Backfilled on April 10, 2018	
10									
15									
20									
25									

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PROJECT:	Cardiff Elementary School		DRILLER:	AB	SHEET:	1 of	1
CTE JOB NO:	10-14226G		DRILL METHOD:	Hand Auger	DRILLING DATE:		4/9/2018
LOGGED BY:	AB		SAMPLE METHOD:		ELEVATION:		~83'

BORING: P-6

Depth (Feet)	Sample: Bulk	Sample: Driven	Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0										
							SM		QUATERNARY PREVIOUSLY PLACED FILL (Qppf): Loose to medium dense, moist, dark brown, silty fine to medium grained SAND.	
							SM		QUATERNARY OLD PARALIC DEPOSITS, UNITS 6-7 (Qop_{6-7}): Medium dense, moist, reddish brown, silty fine to medium grained SAND, oxidized, massive.	
5									Total Depth: 40" No Groundwater Backfilled on April 10, 2018	
10										
15										
20										
25										

APPENDIX C

LABORATORY METHODS AND RESULTS

APPENDIX C
LABORATORY METHODS AND RESULTS

Laboratory Testing Program

Laboratory tests were performed on representative soil samples to detect their relative engineering properties. Tests were performed following test methods of the American Society for Testing Materials or other accepted standards. The following presents a brief description of the various test methods used.

Classification

Soils were classified visually according to the Unified Soil Classification System. Visual classifications were supplemented by laboratory testing of selected samples according to ASTM D2487. The soil classifications are shown on the Exploration Logs in Appendix B.

In-Place Moisture and Density

To determine the moisture and density of in-place site soils, a representative sample was tested for the moisture and density at time of sampling.

Expansion Index

Expansion testing was performed on selected samples of the matrix of the on-site soils according to ASTM D 4829.

Particle-Size Analysis

Particle-size analyses were performed on selected representative samples according to ASTM D 422.

Chemical Analysis

Soil materials were collected with sterile sampling equipment and tested for Sulfate and Chloride content, pH, Corrosivity, and Resistivity.

Resistance "R"-Value

The resistance "R"-value was determined by the California Materials Method No. 301 for representative subbase soils. Samples were prepared and exudation pressure and "R"-value determined. The graphically determined "R"- value at exudation pressure of 300 psi is the value used for pavement section calculation

Consolidation

To assess their compressibility and volume change behavior when loaded and wetted, relatively undisturbed samples of representative samples from the investigation were subject to consolidation tests (ASTM D2435).

Atterberg Limits

The procedure of ASTM D4518-84 was used to measure the liquid limit, plastic limit and plasticity index of representative samples.

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EXPANSION INDEX TEST

ASTM D 4829

LOCATION	DEPTH (feet)	EXPANSION INDEX	EXPANSION POTENTIAL
B-1	0-5	0	VERY LOW
B-6	10	5	VERY LOW
B-9	5	0	VERY LOW
B-11	0-5	0	VERY LOW
B-18	5	0	VERY LOW
B-20	0-5	0	VERY LOW
B-26	5	1	VERY LOW

IN-PLACE MOISTURE AND DENSITY

LOCATION	DEPTH (feet)	% MOISTURE	DRY DENSITY
B-3	5	7.2	127.0
B-9	5	13.5	113.8
B-17	5	8.8	111.9
B-20	15	6.8	120.6
B-24	10	7.8	111.0

SULFATE

LOCATION	DEPTH (feet)	RESULTS ppm
B-5	0-5	4.2
B-18	0-5	490

CHLORIDE

LOCATION	DEPTH (feet)	RESULTS ppm
B-5	0-5	193.5
B-18	0-5	204

p.H.

LOCATION	DEPTH (feet)	RESULTS
B-5	0-5	8.09
B-18	0-5	7.05

RESISTIVITY

CALIFORNIA TEST 424

LOCATION	DEPTH (feet)	RESULTS ohms-cm
B-5	0-5	4746
B-18	0-5	3588

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ATTERBERG LIMITS

LOCATION	DEPTH (feet)	LIQUID LIMIT	PLASTICITY INDEX	CLASSIFICATION
B-1	18.5	21	5	CL-ML
B-4	18	23	15	CL
B-13	15	17	4	CL-ML
B-14	5	21	11	CL
B-17	18.5	23	14	CL
B-20	25	30	19	CL
B-24	25	-	-	NON PLASTIC

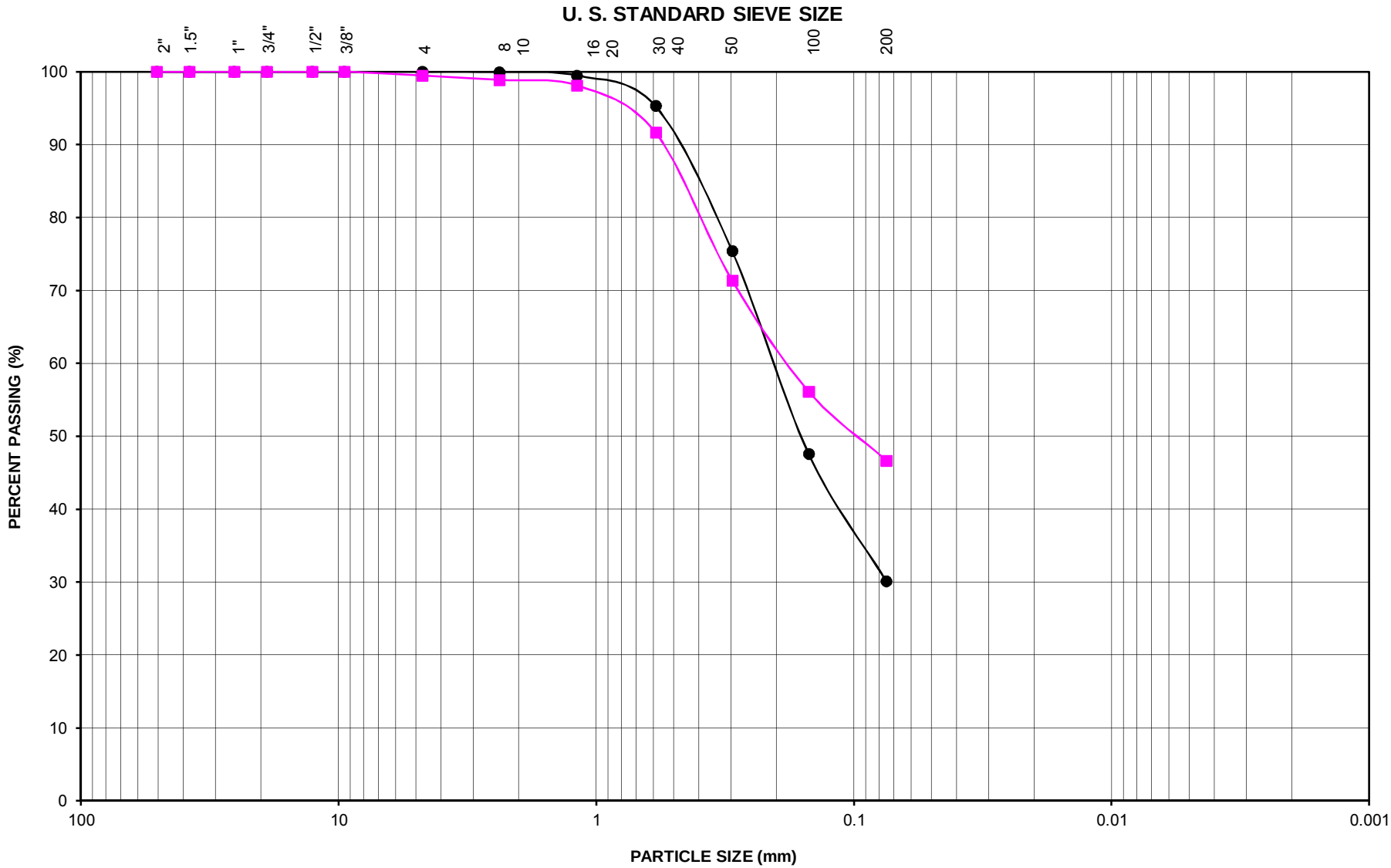
RESISTANCE "R"-VALUE

CALTEST 301

LOCATION	DEPTH (feet)	R-VALUE
B-16	0-5	40

UNDISTURBED FIELD MOISTURE

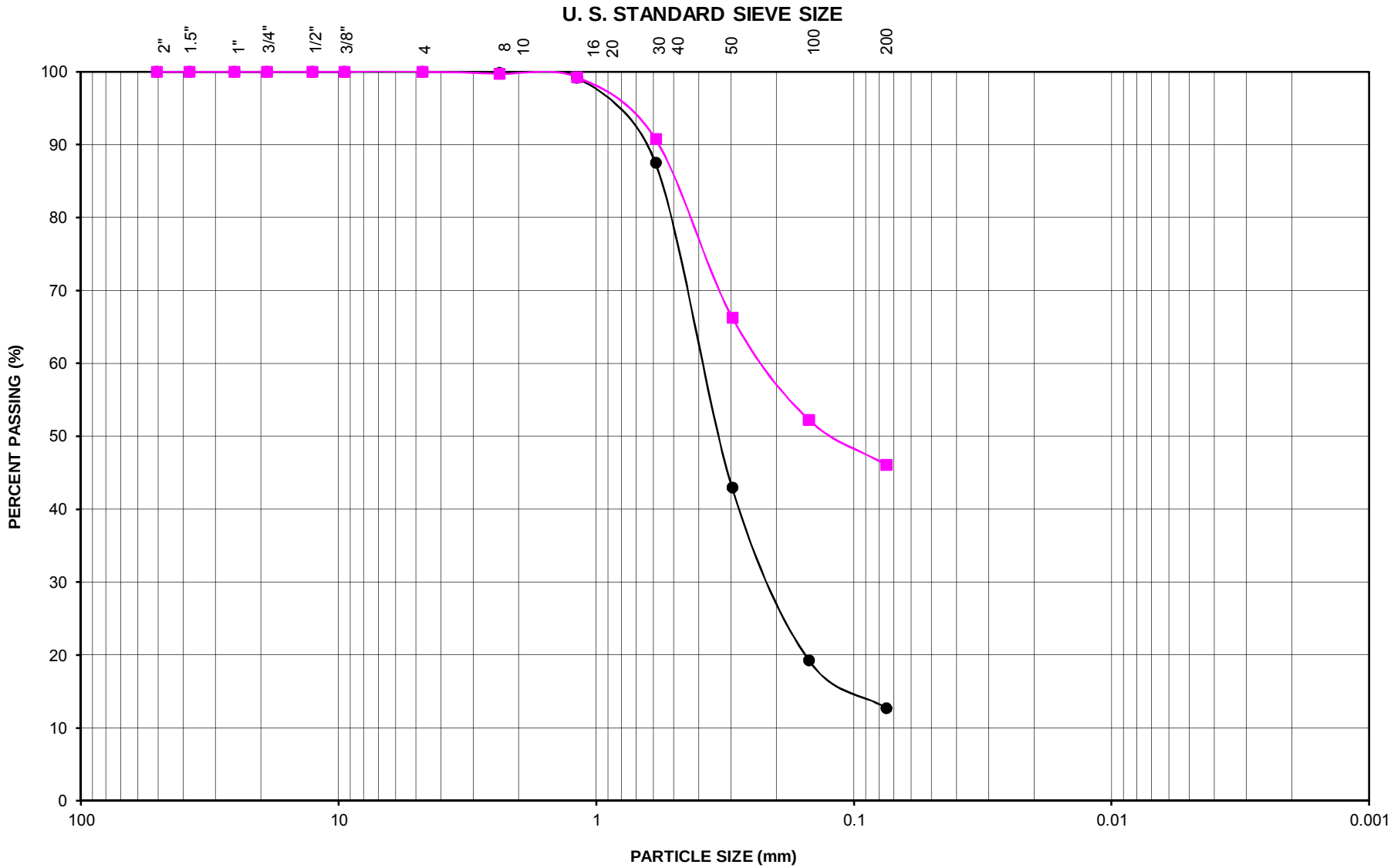
LOCATION	DEPTH (feet)	% MOISTURE
B-1	18.5	17.8
B-4	18.5	11.9
B-13	15	10.2
B-17	18.5	13.4
B-20	25	10.6
B-24	25	9.2



PARTICLE SIZE ANALYSIS

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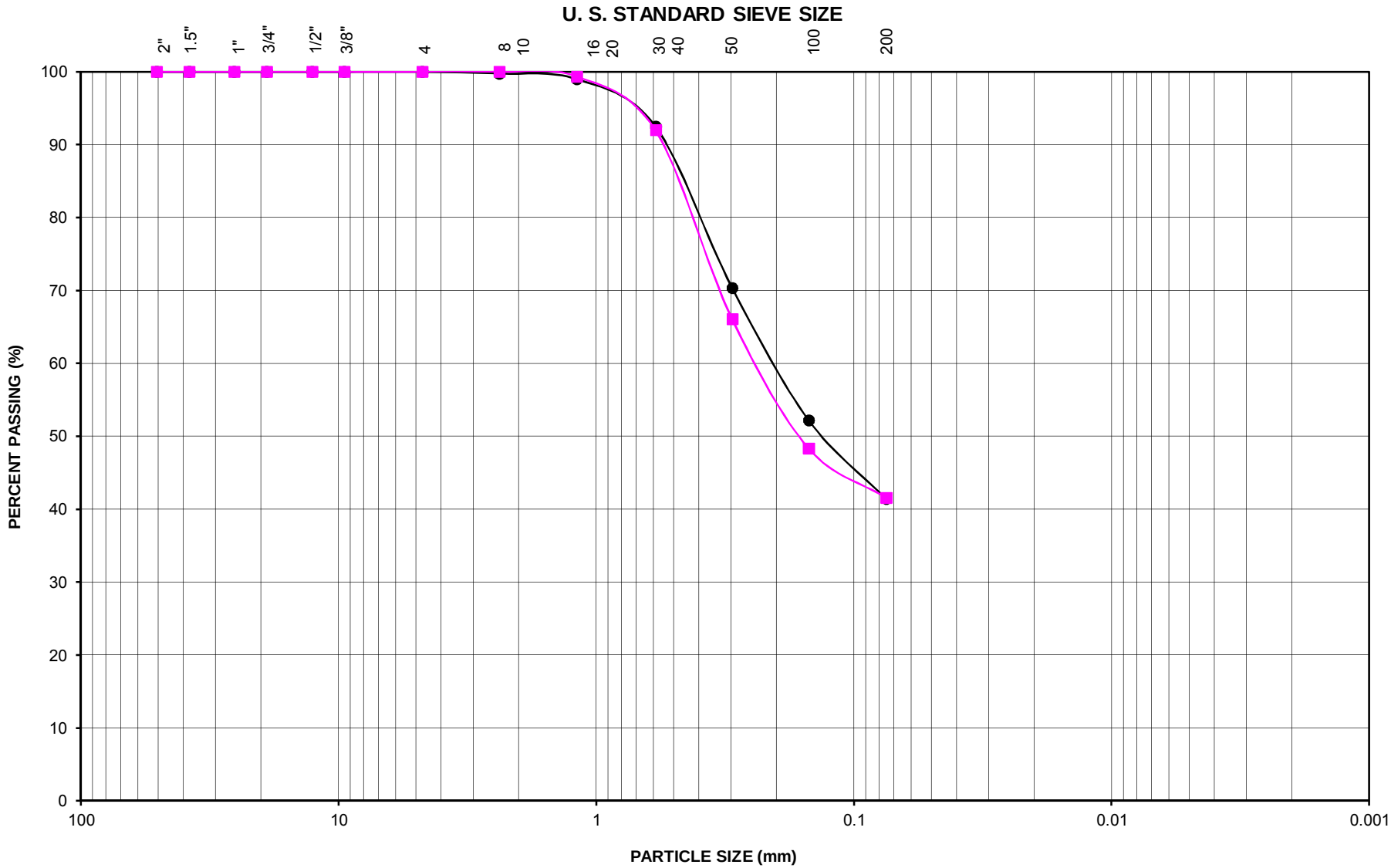
Sample Designation	Sample Depth (feet)	Symbol	Liquid Limit (%)	Plasticity Index	Classification
B-2	3	●	-	-	SM
B-4	15	■	-	-	SM
CTE JOB NUMBER:		10-14226G		FIGURE:	C-2



PARTICLE SIZE ANALYSIS

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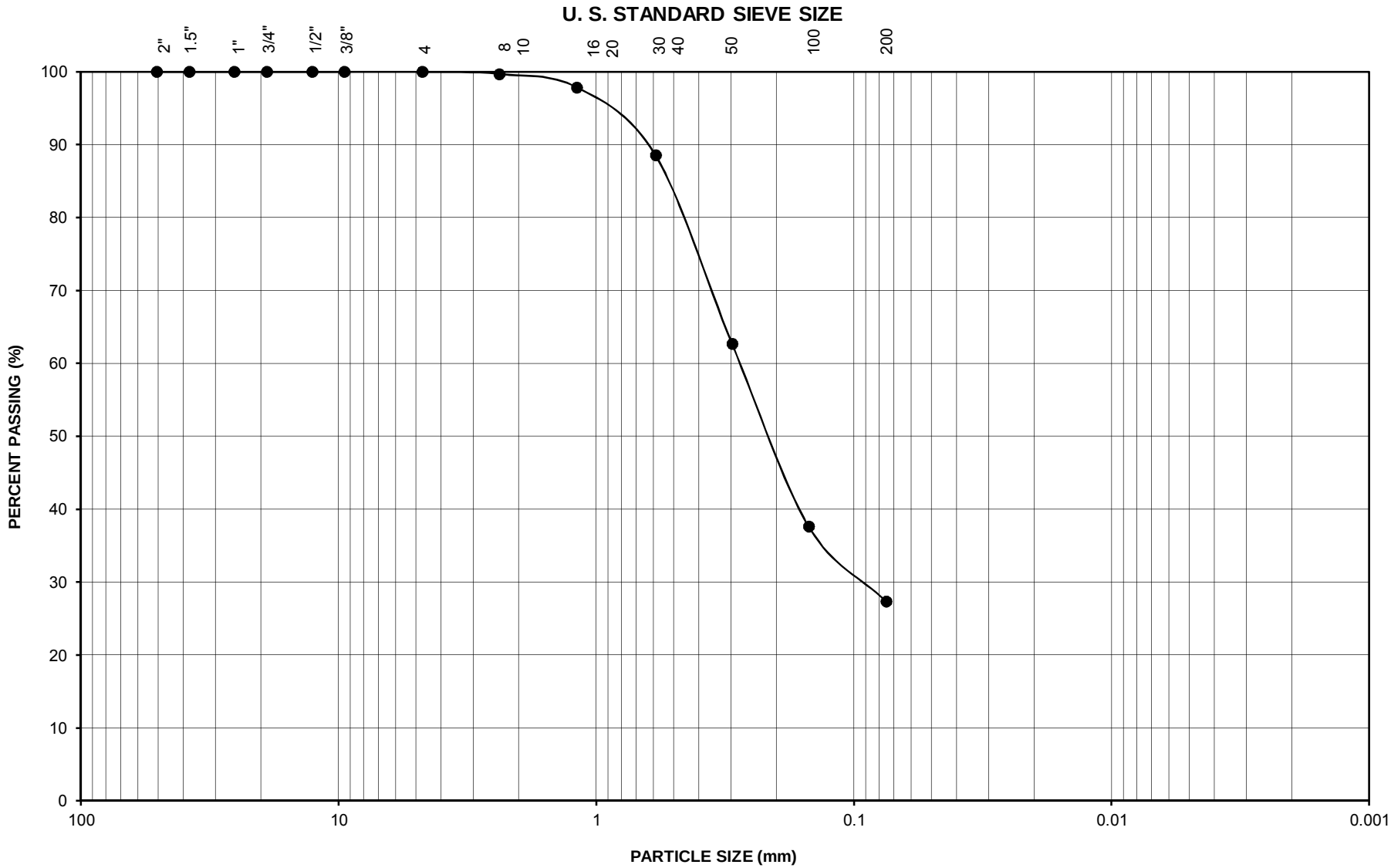
Sample Designation	Sample Depth (feet)	Symbol	Liquid Limit (%)	Plasticity Index	Classification
B-5	5	●	-	-	SM
B-13	10	■	-	-	SM
CTE JOB NUMBER:		10-14226G		FIGURE:	C-3



PARTICLE SIZE ANALYSIS

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Sample Designation	Sample Depth (feet)	Symbol	Liquid Limit (%)	Plasticity Index	Classification
B-17	10	●	-	-	SM
B-18	15	■	-	-	SM
CTE JOB NUMBER:		10-14226G		FIGURE:	C-4



PARTICLE SIZE ANALYSIS

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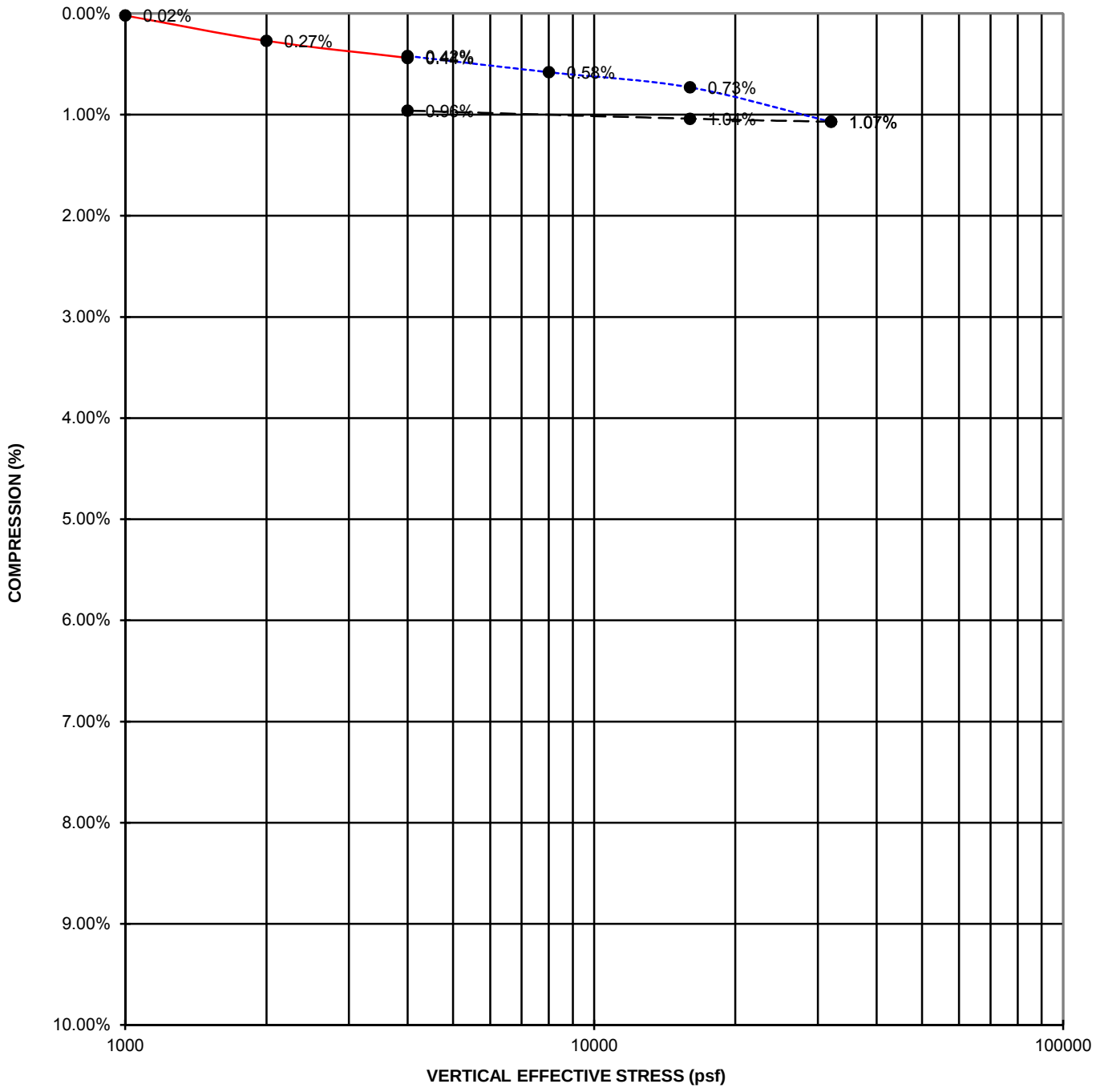
Sample Designation	Sample Depth (feet)	Symbol	Liquid Limit (%)	Plasticity Index	Classification
B-26	10	●	-	-	SM

CTE JOB NUMBER: 10-14226G FIGURE: C-5

CTE INC.

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Inspection | Testing | Geotechnical | Environmental & Construction Engineering | Civil Engineering | Surveying



Consolidation Test ASTM D2435

Project Name:	Cardiff Elementary School				
Project Number:	10-14226G	Sample Date:	4/10/2018	Initial Moisture (%):	7.8
Lab Number:	28350	Test Date:	4/30/2018	Final Moisture (%):	12.9
Sample Location:	B-24 @ 10'	Tested By:	RCV	Initial Dry Density (PCF):	111.0
Sample Description:	Reddish-brown SM			Final Dry Density (PCF):	112.1
				Figure:	C-1

APPENDIX D

STANDARD SPECIFICATIONS FOR GRADING

Section 1 - General

Construction Testing & Engineering, Inc. presents the following standard recommendations for grading and other associated operations on construction projects. These guidelines should be considered a portion of the project specifications. Recommendations contained in the body of the previously presented soils report shall supersede the recommendations and or requirements as specified herein. The project geotechnical consultant shall interpret disputes arising out of interpretation of the recommendations contained in the soils report or specifications contained herein.

Section 2 - Responsibilities of Project Personnel

The geotechnical consultant should provide observation and testing services sufficient to general conformance with project specifications and standard grading practices. The geotechnical consultant should report any deviations to the client or his authorized representative.

The Client should be chiefly responsible for all aspects of the project. He or his authorized representative has the responsibility of reviewing the findings and recommendations of the geotechnical consultant. He shall authorize or cause to have authorized the Contractor and/or other consultants to perform work and/or provide services. During grading the Client or his authorized representative should remain on-site or should remain reasonably accessible to all concerned parties in order to make decisions necessary to maintain the flow of the project.

The Contractor is responsible for the safety of the project and satisfactory completion of all grading and other associated operations on construction projects, including, but not limited to, earth work in accordance with the project plans, specifications and controlling agency requirements.

Section 3 - Preconstruction Meeting

A preconstruction site meeting should be arranged by the owner and/or client and should include the grading contractor, design engineer, geotechnical consultant, owner’s representative and representatives of the appropriate governing authorities.

Section 4 - Site Preparation

The client or contractor should obtain the required approvals from the controlling authorities for the project prior, during and/or after demolition, site preparation and removals, etc. The appropriate approvals should be obtained prior to proceeding with grading operations.

Clearing and grubbing should consist of the removal of vegetation such as brush, grass, woods, stumps, trees, root of trees and otherwise deleterious natural materials from the areas to be graded. Clearing and grubbing should extend to the outside of all proposed excavation and fill areas.

Demolition should include removal of buildings, structures, foundations, reservoirs, utilities (including underground pipelines, septic tanks, leach fields, seepage pits, cisterns, mining shafts, tunnels, etc.) and other man-made surface and subsurface improvements from the areas to be graded. Demolition of utilities should include proper capping and/or rerouting pipelines at the project perimeter and cutoff and capping of wells in accordance with the requirements of the governing authorities and the recommendations of the geotechnical consultant at the time of demolition.

Trees, plants or man-made improvements not planned to be removed or demolished should be protected by the contractor from damage or injury.

Debris generated during clearing, grubbing and/or demolition operations should be wasted from areas to be graded and disposed off-site. Clearing, grubbing and demolition operations should be performed under the observation of the geotechnical consultant.

Section 5 - Site Protection

Protection of the site during the period of grading should be the responsibility of the contractor. Unless other provisions are made in writing and agreed upon among the concerned parties, completion of a portion of the project should not be considered to preclude that portion or adjacent areas from the requirements for site protection until such time as the entire project is complete as identified by the geotechnical consultant, the client and the regulating agencies.

Precautions should be taken during the performance of site clearing, excavations and grading to protect the work site from flooding, ponding or inundation by poor or improper surface drainage. Temporary provisions should be made during the rainy season to adequately direct surface drainage away from and off the work site. Where low areas cannot be avoided, pumps should be kept on hand to continually remove water during periods of rainfall.

Rain related damage should be considered to include, but may not be limited to, erosion, silting, saturation, swelling, structural distress and other adverse conditions as determined by the geotechnical consultant. Soil adversely affected should be classified as unsuitable materials and should be subject to overexcavation and replacement with compacted fill or other remedial grading as recommended by the geotechnical consultant.

The contractor should be responsible for the stability of all temporary excavations. Recommendations by the geotechnical consultant pertaining to temporary excavations (e.g., backcuts) are made in consideration of stability of the completed project and, therefore, should not be considered to preclude the responsibilities of the contractor. Recommendations by the geotechnical consultant should not be considered to preclude requirements that are more restrictive by the regulating agencies. The contractor should provide during periods of extensive rainfall plastic sheeting to prevent unprotected slopes from becoming saturated and unstable. When deemed appropriate by the geotechnical consultant or governing agencies the contractor shall install checkdams, desilting basins, sand bags or other drainage control measures.

In relatively level areas and/or slope areas, where saturated soil and/or erosion gullies exist to depths of greater than 1.0 foot; they should be overexcavated and replaced as compacted fill in accordance with the applicable specifications. Where affected materials exist to depths of 1.0 foot or less below proposed finished grade, remedial grading by moisture conditioning in-place, followed by thorough recompaction in accordance with the applicable grading guidelines herein may be attempted. If the desired results are not achieved, all affected materials should be overexcavated and replaced as compacted fill in accordance with the slope repair recommendations herein. If field conditions dictate, the geotechnical consultant may recommend other slope repair procedures.

Section 6 - Excavations

6.1 Unsuitable Materials

Materials that are unsuitable should be excavated under observation and recommendations of the geotechnical consultant. Unsuitable materials include, but may not be limited to, dry, loose, soft, wet, organic compressible natural soils and fractured, weathered, soft bedrock and nonengineered or otherwise deleterious fill materials.

Material identified by the geotechnical consultant as unsatisfactory due to its moisture conditions should be overexcavated; moisture conditioned as needed, to a uniform at or above optimum moisture condition before placement as compacted fill.

If during the course of grading adverse geotechnical conditions are exposed which were not anticipated in the preliminary soil report as determined by the geotechnical consultant additional exploration, analysis, and treatment of these problems may be recommended.

6.2 Cut Slopes

Unless otherwise recommended by the geotechnical consultant and approved by the regulating agencies, permanent cut slopes should not be steeper than 2:1 (horizontal: vertical).

The geotechnical consultant should observe cut slope excavation and if these excavations expose loose cohesionless, significantly fractured or otherwise unsuitable material, the materials should be overexcavated and replaced with a compacted stabilization fill. If encountered specific cross section details should be obtained from the Geotechnical Consultant.

When extensive cut slopes are excavated or these cut slopes are made in the direction of the prevailing drainage, a non-erodible diversion swale (brow ditch) should be provided at the top of the slope.

6.3 Pad Areas

All lot pad areas, including side yard terrace containing both cut and fill materials, transitions, located less than 3 feet deep should be overexcavated to a depth of 3 feet and replaced with a uniform compacted fill blanket of 3 feet. Actual depth of overexcavation may vary and should be delineated by the geotechnical consultant during grading, especially where deep or drastic transitions are present.

For pad areas created above cut or natural slopes, positive drainage should be established away from the top-of-slope. This may be accomplished utilizing a berm drainage swale and/or an appropriate pad gradient. A gradient in soil areas away from the top-of-slopes of 2 percent or greater is recommended.

Section 7 - Compacted Fill

All fill materials should have fill quality, placement, conditioning and compaction as specified below or as approved by the geotechnical consultant.

7.1 Fill Material Quality

Excavated on-site or import materials which are acceptable to the geotechnical consultant may be utilized as compacted fill, provided trash, vegetation and other deleterious materials are removed prior to placement. All import materials anticipated for use on-site should be sampled tested and approved prior to and placement is in conformance with the requirements outlined.

Rocks 12 inches in maximum and smaller may be utilized within compacted fill provided sufficient fill material is placed and thoroughly compacted over and around all rock to effectively fill rock voids. The amount of rock should not exceed 40 percent by dry weight passing the 3/4-inch sieve. The geotechnical consultant may vary those requirements as field conditions dictate.

Where rocks greater than 12 inches but less than four feet of maximum dimension are generated during grading, or otherwise desired to be placed within an engineered fill, special handling in accordance with the recommendations below. Rocks greater than four feet should be broken down or disposed off-site.

7.2 Placement of Fill

Prior to placement of fill material, the geotechnical consultant should observe and approve the area to receive fill. After observation and approval, the exposed ground surface should be scarified to a depth of 6 to 8 inches. The scarified material should be conditioned (i.e. moisture added or air dried by continued discing) to achieve a moisture content at or slightly above optimum moisture conditions and compacted to a minimum of 90 percent of the maximum density or as otherwise recommended in the soils report or by appropriate government agencies.

Compacted fill should then be placed in thin horizontal lifts not exceeding eight inches in loose thickness prior to compaction. Each lift should be moisture conditioned as needed, thoroughly blended to achieve a consistent moisture content at or slightly above optimum and thoroughly compacted by mechanical methods to a minimum of 90 percent of laboratory maximum dry density. Each lift should be treated in a like manner until the desired finished grades are achieved.

The contractor should have suitable and sufficient mechanical compaction equipment and watering apparatus on the job site to handle the amount of fill being placed in consideration of moisture retention properties of the materials and weather conditions.

When placing fill in horizontal lifts adjacent to areas sloping steeper than 5:1 (horizontal: vertical), horizontal keys and vertical benches should be excavated into the adjacent slope area. Keying and benching should be sufficient to provide at least six-foot wide benches and a minimum of four feet of vertical bench height within the firm natural ground, firm bedrock or engineered compacted fill. No compacted fill should be placed in an area after keying and benching until the geotechnical consultant has reviewed the area. Material generated by the benching operation should be moved sufficiently away from

the bench area to allow for the recommended review of the horizontal bench prior to placement of fill.

Within a single fill area where grading procedures dictate two or more separate fills, temporary slopes (false slopes) may be created. When placing fill adjacent to a false slope, benching should be conducted in the same manner as above described. At least a 3-foot vertical bench should be established within the firm core of adjacent approved compacted fill prior to placement of additional fill. Benching should proceed in at least 3-foot vertical increments until the desired finished grades are achieved.

Prior to placement of additional compacted fill following an overnight or other grading delay, the exposed surface or previously compacted fill should be processed by scarification, moisture conditioning as needed to at or slightly above optimum moisture content, thoroughly blended and recompacted to a minimum of 90 percent of laboratory maximum dry density. Where unsuitable materials exist to depths of greater than one foot, the unsuitable materials should be over-excavated.

Following a period of flooding, rainfall or overwatering by other means, no additional fill should be placed until damage assessments have been made and remedial grading performed as described herein.

Rocks 12 inch in maximum dimension and smaller may be utilized in the compacted fill provided the fill is placed and thoroughly compacted over and around all rock. No oversize material should be used within 3 feet of finished pad grade and within 1 foot of other compacted fill areas. Rocks 12 inches up to four feet maximum dimension should be placed below the upper 10 feet of any fill and should not be closer than 15 feet to any slope face. These recommendations could vary as locations of improvements dictate. Where practical, oversized material should not be placed below areas where structures or deep utilities are proposed. Oversized material should be placed in windrows on a clean, overexcavated or unyielding compacted fill or firm natural ground surface. Select native or imported granular soil (S.E. 30 or higher) should be placed and thoroughly flooded over and around all windrowed rock, such that voids are filled. Windrows of oversized material should be staggered so those successive strata of oversized material are not in the same vertical plane.

It may be possible to dispose of individual larger rock as field conditions dictate and as recommended by the geotechnical consultant at the time of placement.

The contractor should assist the geotechnical consultant and/or his representative by digging test pits for removal determinations and/or for testing compacted fill. The contractor should provide this work at no additional cost to the owner or contractor's client.

Fill should be tested by the geotechnical consultant for compliance with the recommended relative compaction and moisture conditions. Field density testing should conform to ASTM Method of Test D 1556-00, D 2922-04. Tests should be conducted at a minimum of approximately two vertical feet or approximately 1,000 to 2,000 cubic yards of fill placed. Actual test intervals may vary as field conditions dictate. Fill found not to be in conformance with the grading recommendations should be removed or otherwise handled as recommended by the geotechnical consultant.

7.3 Fill Slopes

Unless otherwise recommended by the geotechnical consultant and approved by the regulating agencies, permanent fill slopes should not be steeper than 2:1 (horizontal: vertical).

Except as specifically recommended in these grading guidelines compacted fill slopes should be over-built two to five feet and cut back to grade, exposing the firm, compacted fill inner core. The actual amount of overbuilding may vary as field conditions dictate. If the desired results are not achieved, the existing slopes should be overexcavated and reconstructed under the guidelines of the geotechnical consultant. The degree of overbuilding shall be increased until the desired compacted slope surface condition is achieved. Care should be taken by the contractor to provide thorough mechanical compaction to the outer edge of the overbuilt slope surface.

At the discretion of the geotechnical consultant, slope face compaction may be attempted by conventional construction procedures including backrolling. The procedure must create a firmly compacted material throughout the entire depth of the slope face to the surface of the previously compacted firm fill intercore.

During grading operations, care should be taken to extend compactive effort to the outer edge of the slope. Each lift should extend horizontally to the desired finished slope surface or more as needed to ultimately established desired grades. Grade during construction should not be allowed to roll off at the edge of the slope. It may be helpful to elevate slightly the outer edge of the slope. Slough resulting from the placement of individual lifts should not be allowed to drift down over previous lifts. At intervals not

exceeding four feet in vertical slope height or the capability of available equipment, whichever is less, fill slopes should be thoroughly dozer trackrolled.

For pad areas above fill slopes, positive drainage should be established away from the top-of-slope. This may be accomplished using a berm and pad gradient of at least two percent.

Section 8 - Trench Backfill

Utility and/or other excavation of trench backfill should, unless otherwise recommended, be compacted by mechanical means. Unless otherwise recommended, the degree of compaction should be a minimum of 90 percent of the laboratory maximum density.

Within slab areas, but outside the influence of foundations, trenches up to one foot wide and two feet deep may be backfilled with sand and consolidated by jetting, flooding or by mechanical means. If on-site materials are utilized, they should be wheel-rolled, tamped or otherwise compacted to a firm condition. For minor interior trenches, density testing may be deleted or spot testing may be elected if deemed necessary, based on review of backfill operations during construction.

If utility contractors indicate that it is undesirable to use compaction equipment in close proximity to a buried conduit, the contractor may elect the utilization of light weight mechanical compaction equipment and/or shading of the conduit with clean, granular material, which should be thoroughly jetted in-place above the conduit, prior to initiating mechanical compaction procedures. Other methods of utility trench compaction may also be appropriate, upon review of the geotechnical consultant at the time of construction.

In cases where clean granular materials are proposed for use in lieu of native materials or where flooding or jetting is proposed, the procedures should be considered subject to review by the geotechnical consultant. Clean granular backfill and/or bedding are not recommended in slope areas.

Section 9 - Drainage

Where deemed appropriate by the geotechnical consultant, canyon subdrain systems should be installed in accordance with CTE's recommendations during grading.

Typical subdrains for compacted fill buttresses, slope stabilization or sidehill masses, should be installed in accordance with the specifications.

Roof, pad and slope drainage should be directed away from slopes and areas of structures to suitable disposal areas via non-erodible devices (i.e., gutters, downspouts, and concrete swales).

For drainage in extensively landscaped areas near structures, (i.e., within four feet) a minimum of 5 percent gradient away from the structure should be maintained. Pad drainage of at least 2 percent should be maintained over the remainder of the site.

Drainage patterns established at the time of fine grading should be maintained throughout the life of the project. Property owners should be made aware that altering drainage patterns could be detrimental to slope stability and foundation performance.

Section 10 - Slope Maintenance

10.1 - Landscape Plants

To enhance surficial slope stability, slope planting should be accomplished at the completion of grading. Slope planting should consist of deep-rooting vegetation requiring little watering. Plants native to the southern California area and plants relative to native plants are generally desirable. Plants native to other semi-arid and arid areas may also be appropriate. A Landscape Architect should be the best party to consult regarding actual types of plants and planting configuration.

10.2 - Irrigation

Irrigation pipes should be anchored to slope faces, not placed in trenches excavated into slope faces.

Slope irrigation should be minimized. If automatic timing devices are utilized on irrigation systems, provisions should be made for interrupting normal irrigation during periods of rainfall.

10.3 - Repair

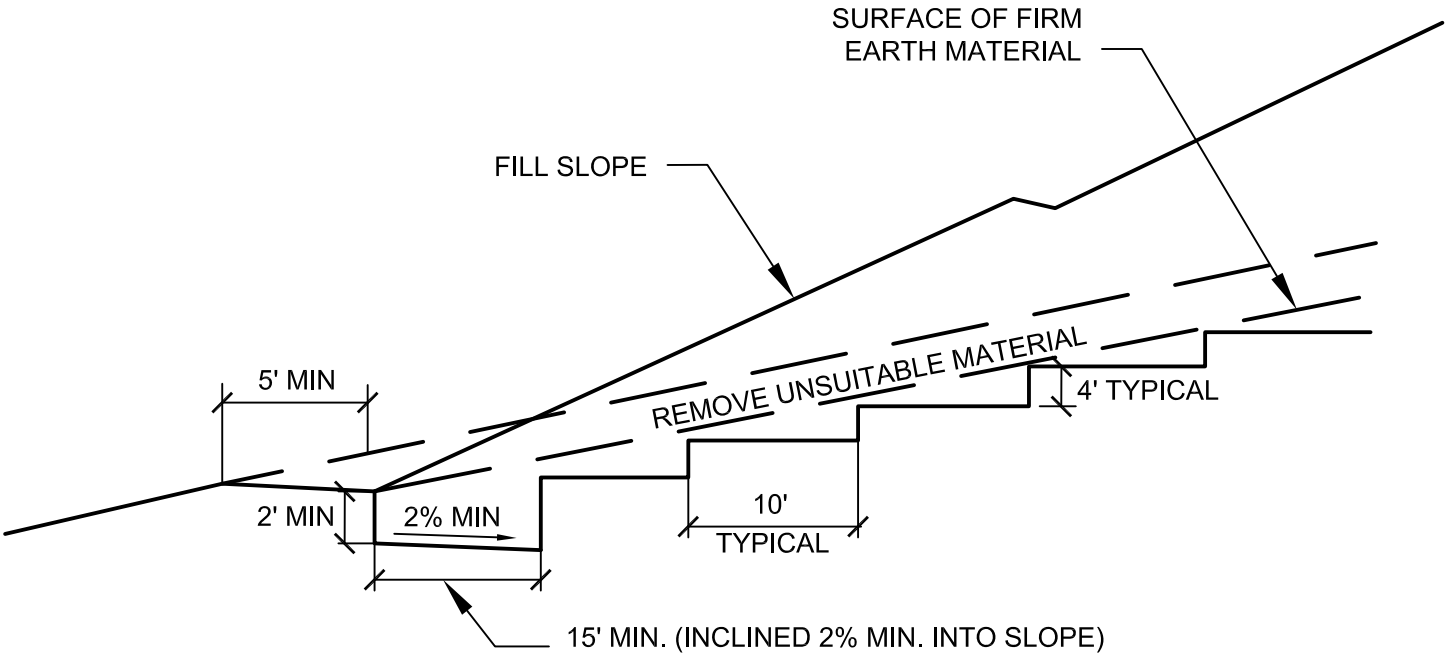
As a precautionary measure, plastic sheeting should be readily available, or kept on hand, to protect all slope areas from saturation by periods of heavy or prolonged rainfall. This measure is strongly recommended, beginning with the period prior to landscape planting.

If slope failures occur, the geotechnical consultant should be contacted for a field review of site conditions and development of recommendations for evaluation and repair.

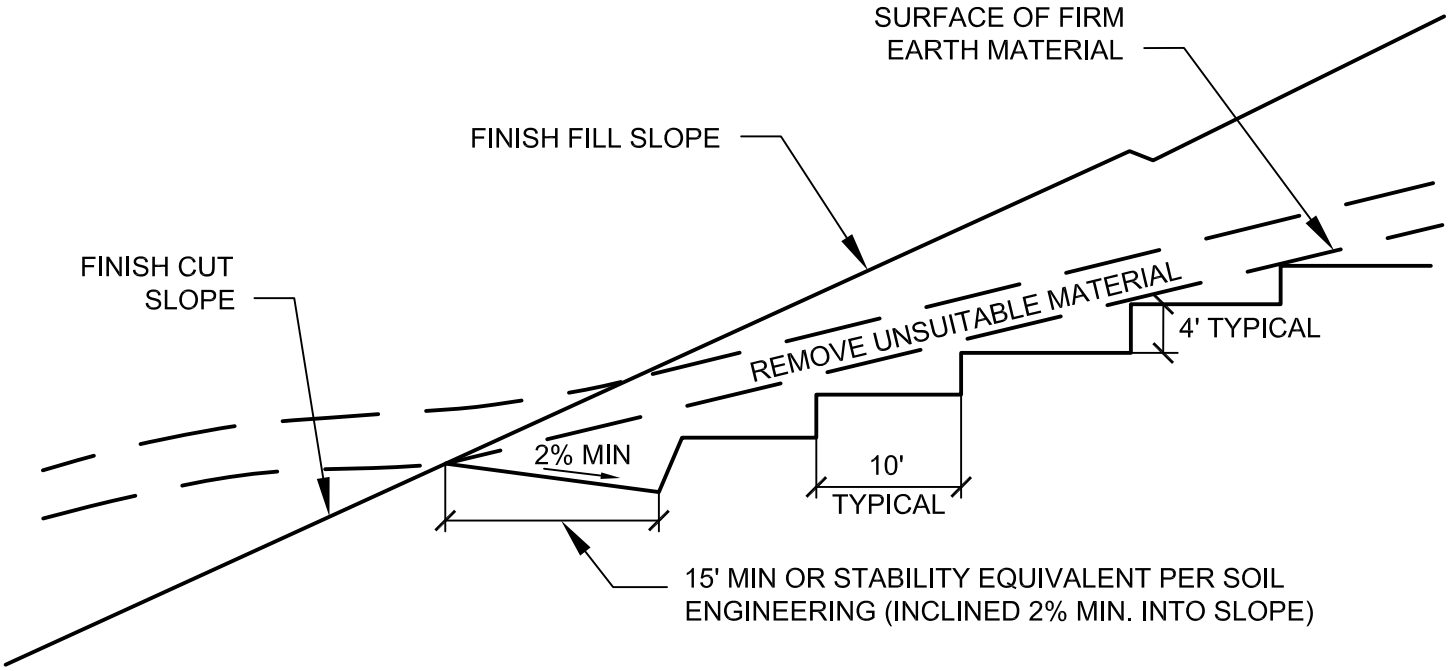
If slope failures occur as a result of exposure to period of heavy rainfall, the failure areas and currently unaffected areas should be covered with plastic sheeting to protect against additional saturation.

In the accompanying Standard Details, appropriate repair procedures are illustrated for superficial slope failures (i.e., occurring typically within the outer one foot to three feet of a slope face).

BENCHING FILL OVER NATURAL

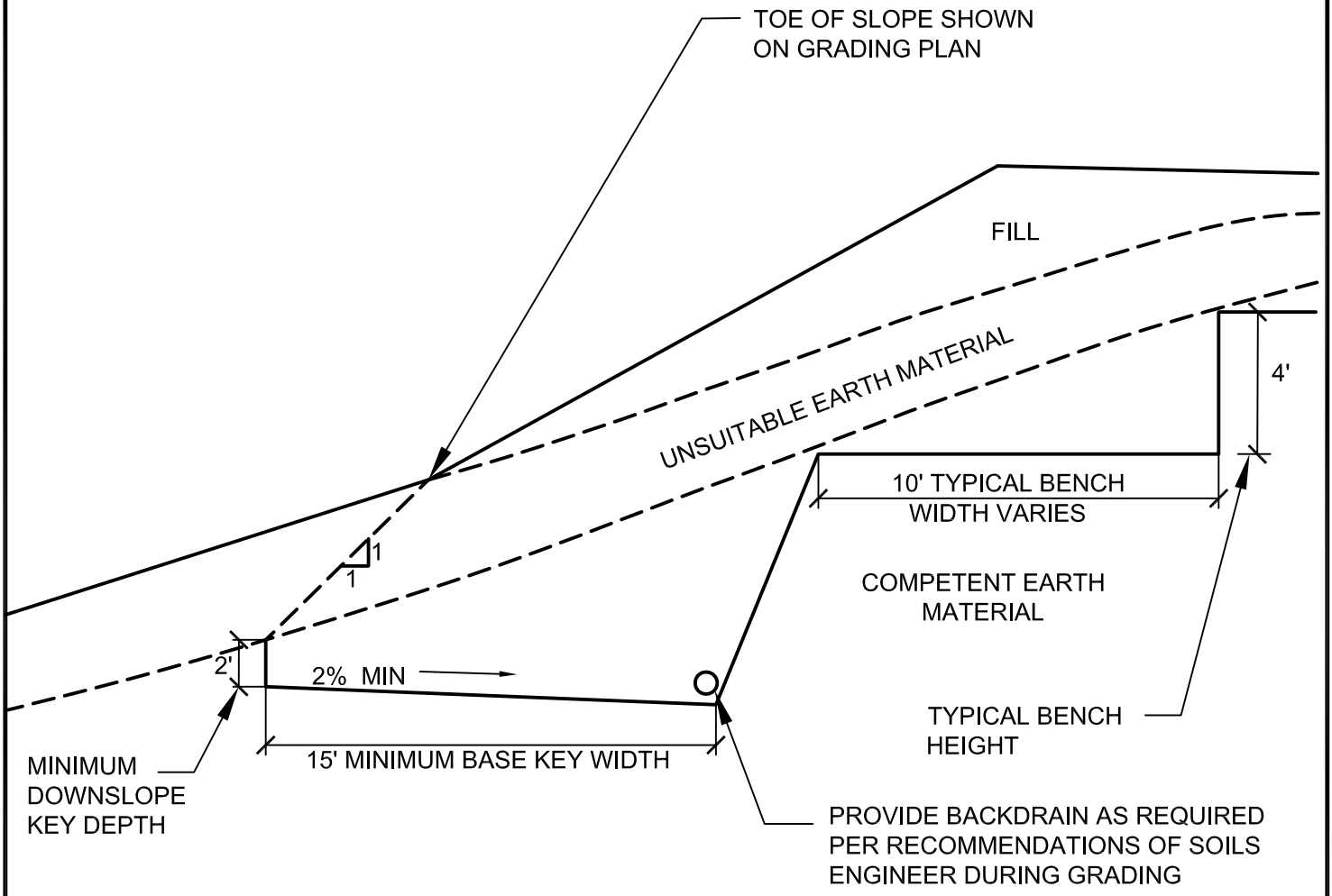


BENCHING FILL OVER CUT



NOT TO SCALE

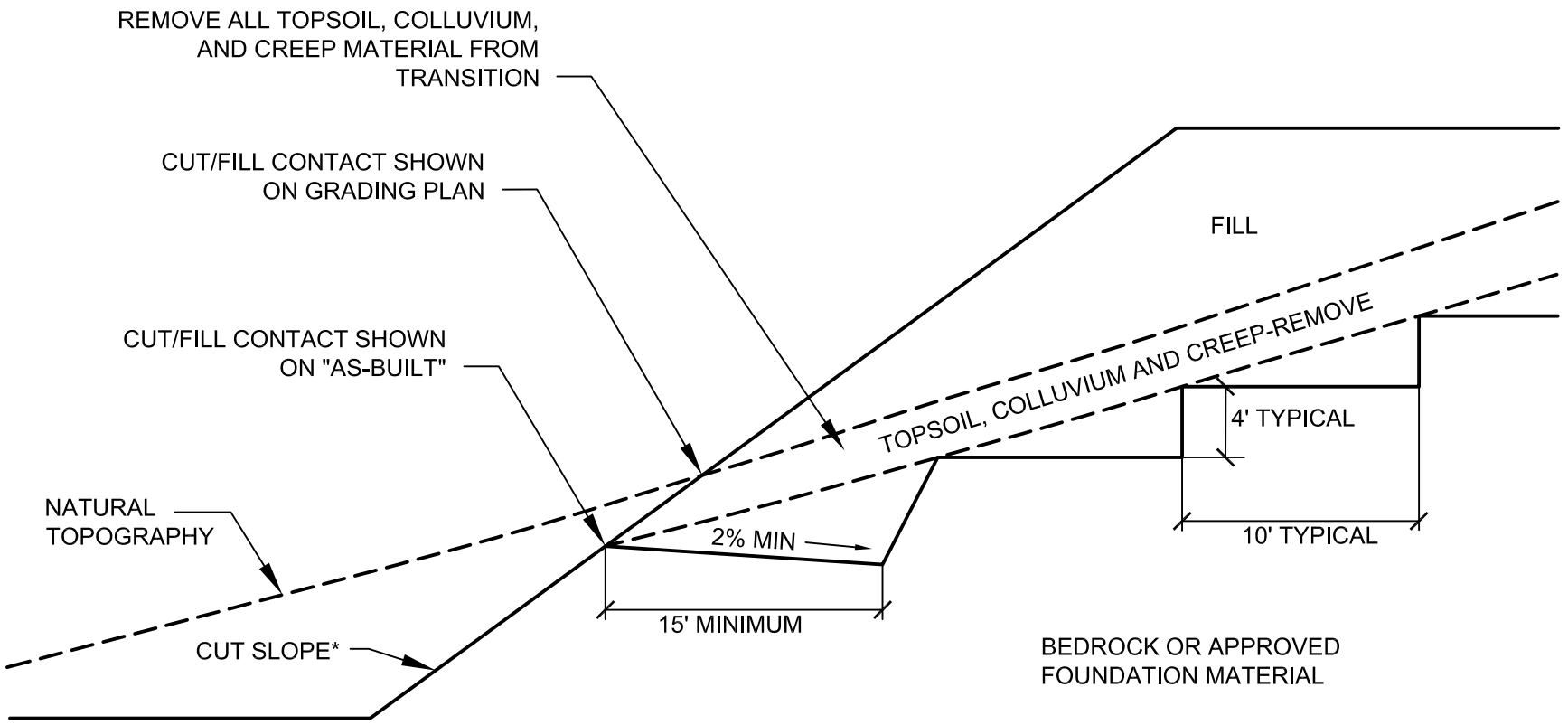
BENCHING FOR COMPACTED FILL DETAIL



WHERE NATURAL SLOPE GRADIENT IS 5:1 OR LESS, BENCHING IS NOT NECESSARY. FILL IS NOT TO BE PLACED ON COMPRESSIBLE OR UNSUITABLE MATERIAL.

NOT TO SCALE

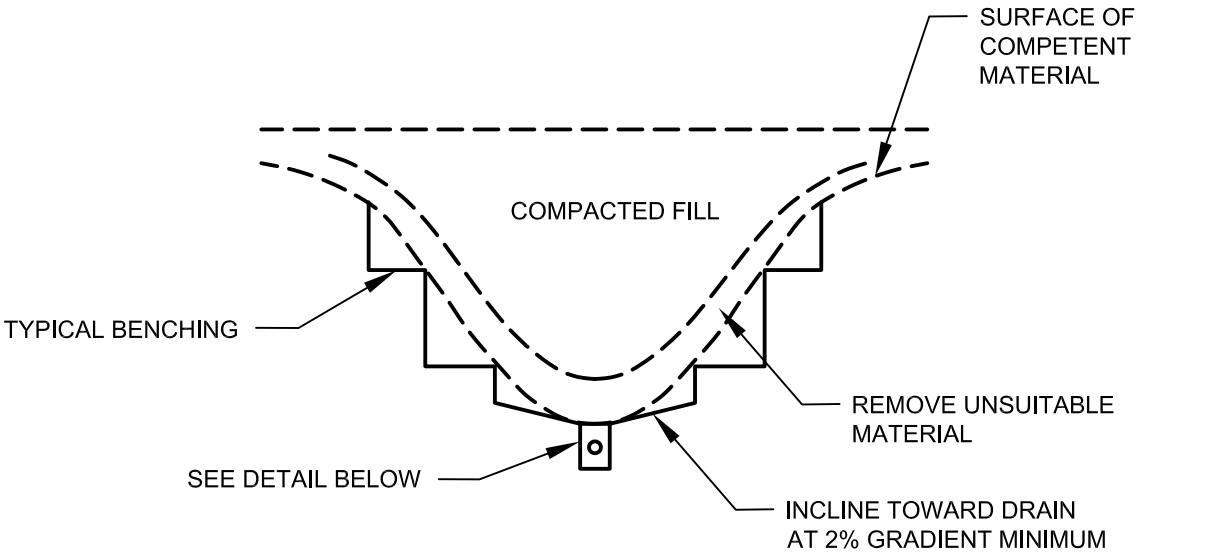
FILL SLOPE ABOVE NATURAL GROUND DETAIL



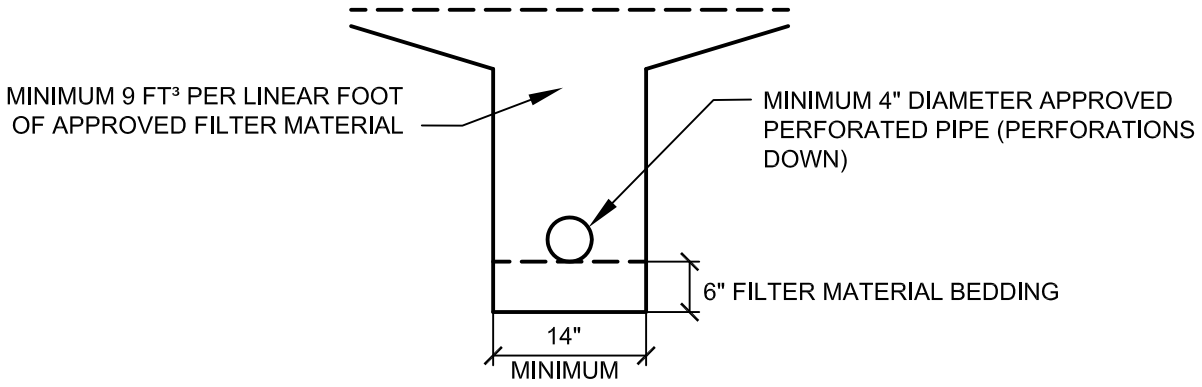
*NOTE: CUT SLOPE PORTION SHOULD BE MADE PRIOR TO PLACEMENT OF FILL

NOT TO SCALE

FILL SLOPE ABOVE CUT SLOPE DETAIL



DETAIL



CALTRANS CLASS 2 PERMEABLE MATERIAL
FILTER MATERIAL TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUAL:

SIEVE SIZE	PERCENTAGE PASSING
1"	100
¾"	90-100
⅜"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

APPROVED PIPE TO BE SCHEDULE 40 POLY-VINYL-CHLORIDE (P.V.C.) OR APPROVED EQUAL. MINIMUM CRUSH STRENGTH 1000 psi

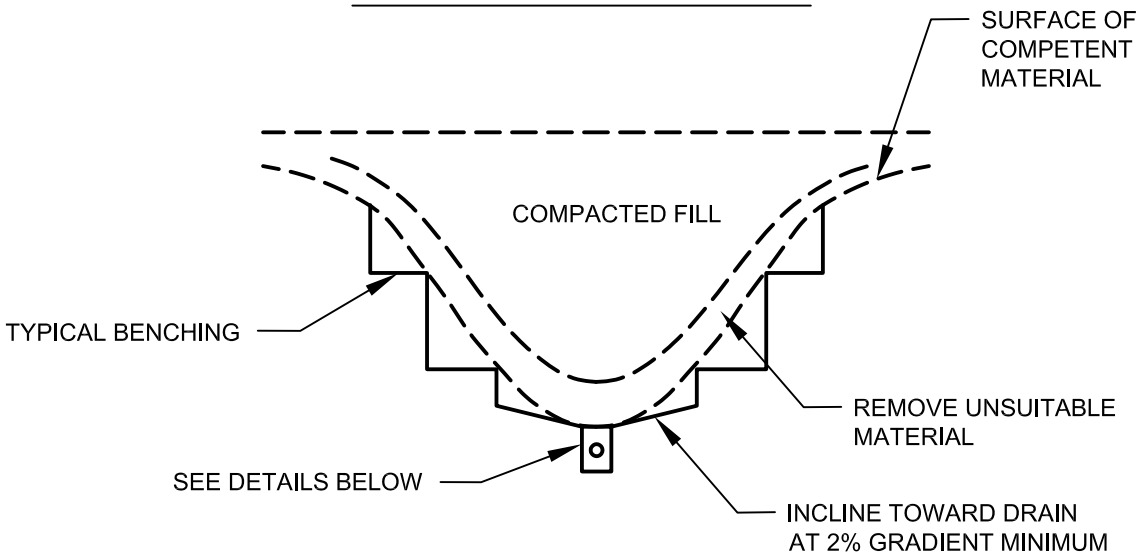
PIPE DIAMETER TO MEET THE FOLLOWING CRITERIA, SUBJECT TO FIELD REVIEW BASED ON ACTUAL GEOTECHNICAL CONDITIONS ENCOUNTERED DURING GRADING

LENGTH OF RUN	PIPE DIAMETER
INITIAL 500'	4"
500' TO 1500'	6"
> 1500'	8"

NOT TO SCALE

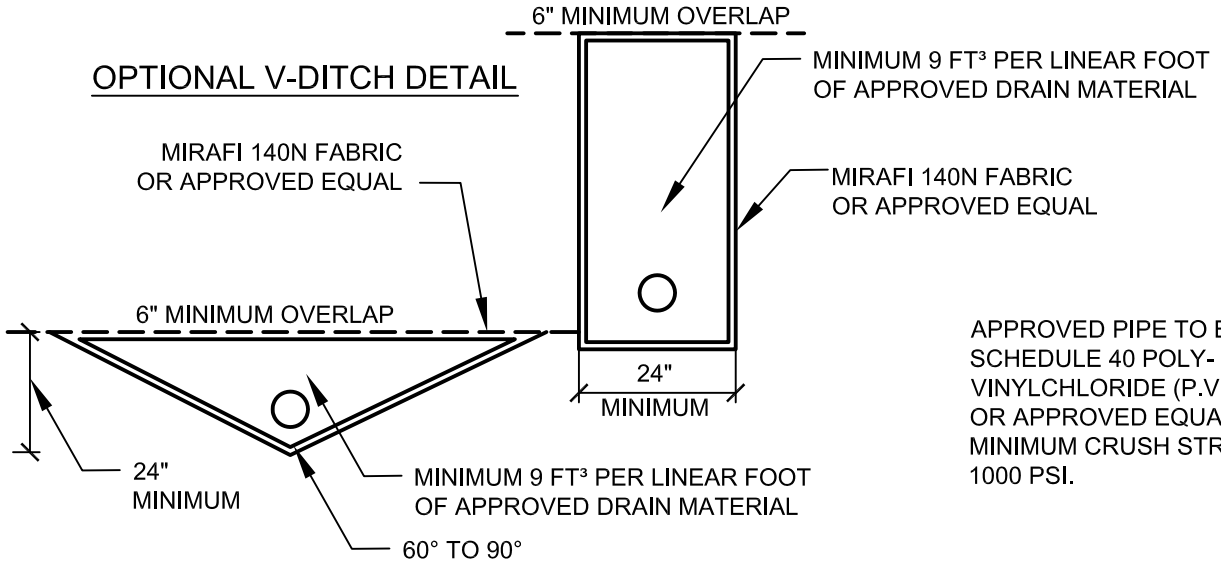
TYPICAL CANYON SUBDRAIN DETAIL

CANYON SUBDRAIN DETAILS



TRENCH DETAILS

OPTIONAL V-DITCH DETAIL



APPROVED PIPE TO BE SCHEDULE 40 POLY-VINYLCHLORIDE (P.V.C.) OR APPROVED EQUAL. MINIMUM CRUSH STRENGTH 1000 PSI.

DRAIN MATERIAL TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUAL:

SIEVE SIZE	PERCENTAGE PASSING
1 ½"	88-100
1"	5-40
¾"	0-17
⅜"	0-7
NO. 200	0-3

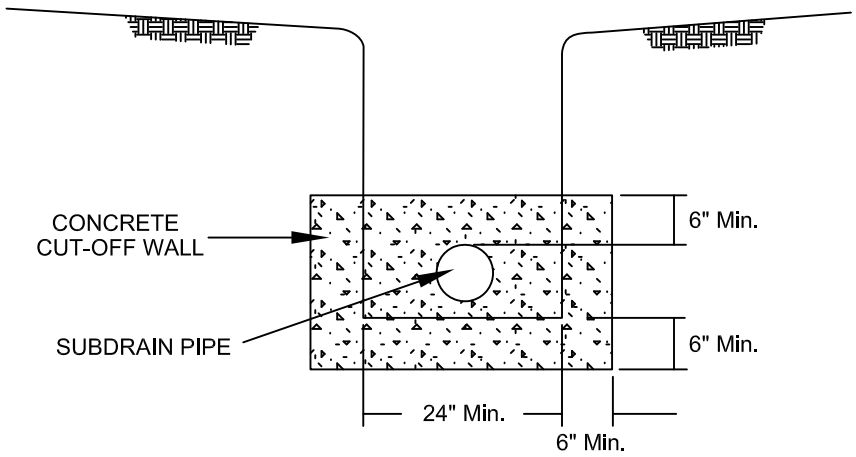
PIPE DIAMETER TO MEET THE FOLLOWING CRITERIA, SUBJECT TO FIELD REVIEW BASED ON ACTUAL GEOTECHNICAL CONDITIONS ENCOUNTERED DURING GRADING

LENGTH OF RUN	PIPE DIAMETER
INITIAL 500'	4"
500' TO 1500'	6"
> 1500'	8"

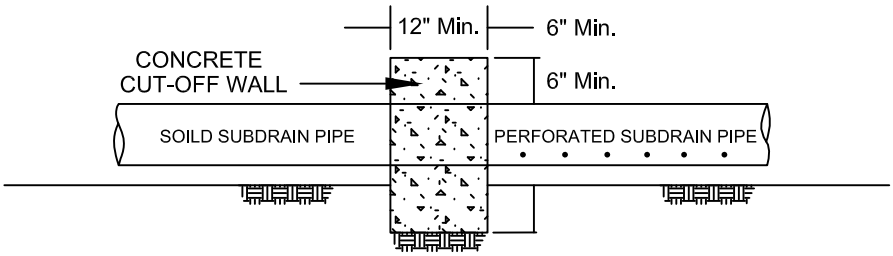
NOT TO SCALE

GEOFABRIC SUBDRAIN

FRONT VIEW



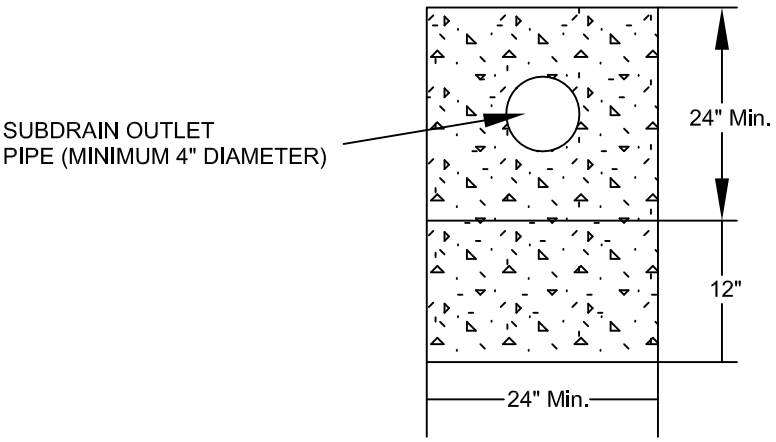
SIDE VIEW



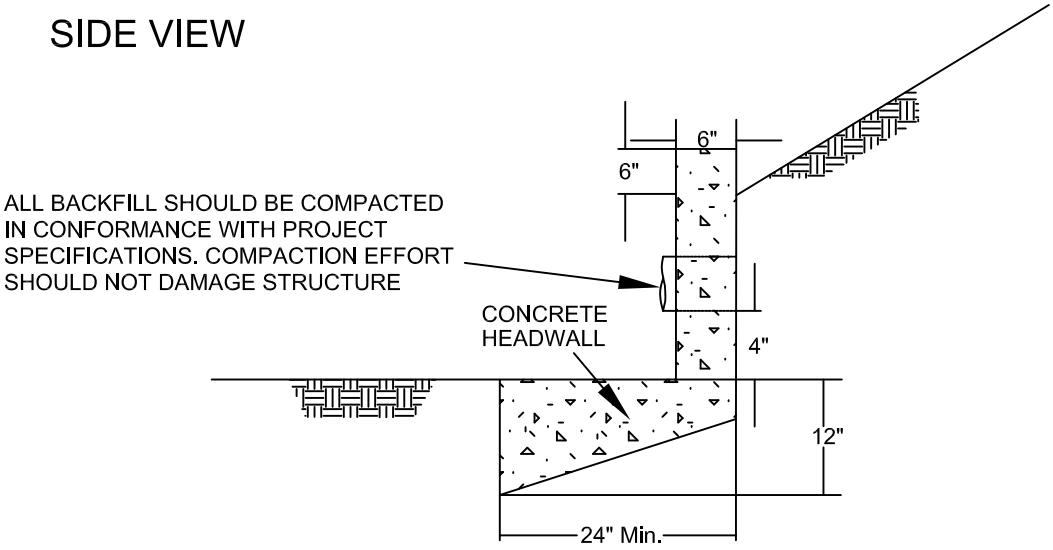
NOT TO SCALE

RECOMMENDED SUBDRAIN CUT-OFF WALL

FRONT VIEW



SIDE VIEW



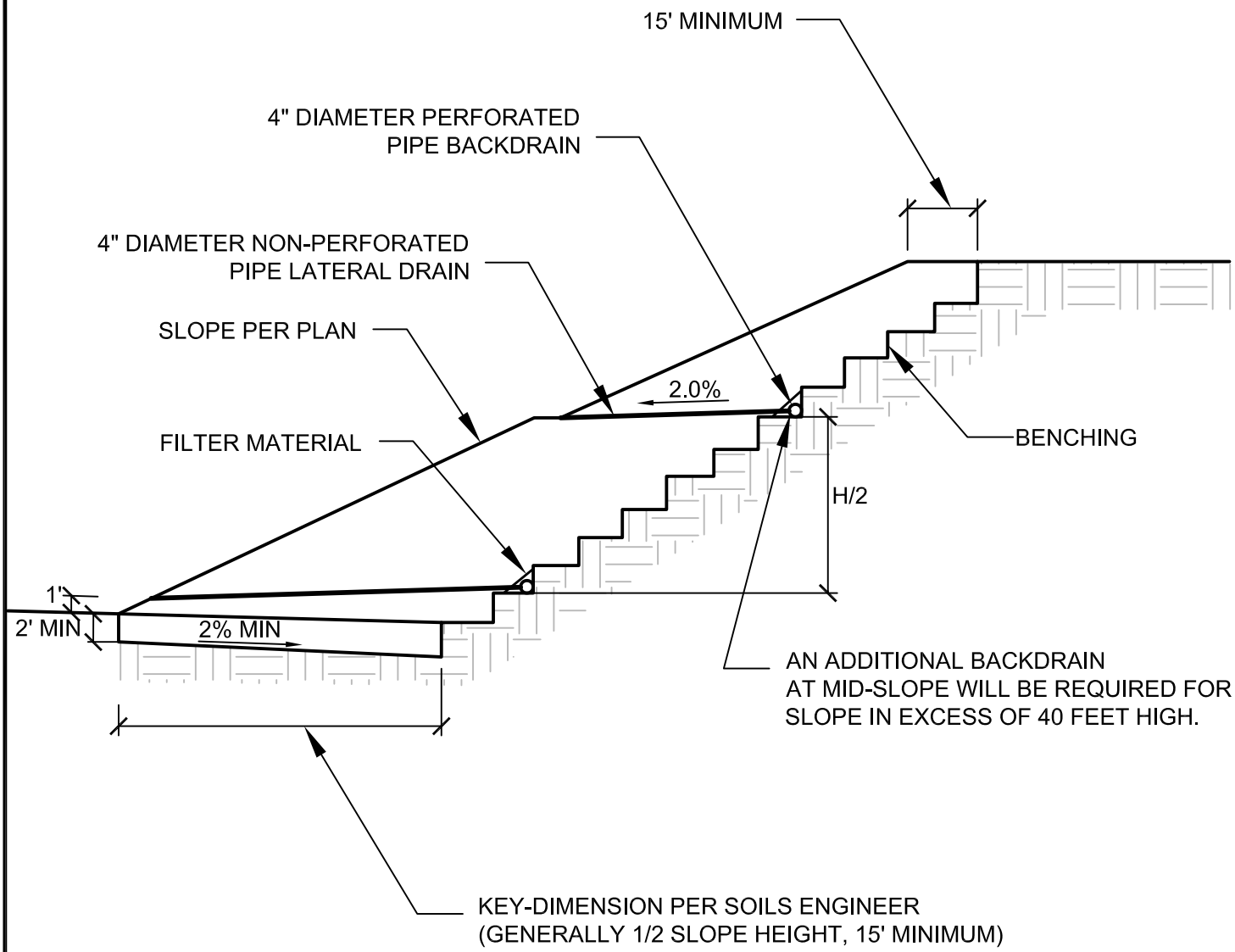
NOTE: HEADWALL SHOULD OUTLET AT TOE OF SLOPE
OR INTO CONTROLLED SURFACE DRAINAGE DEVICE

ALL DISCHARGE SHOULD BE CONTROLLED

THIS DETAIL IS A MINIMUM DESIGN AND MAY BE
MODIFIED DEPENDING UPON ENCOUNTERED
CONDITIONS AND LOCAL REQUIREMENTS

NOT TO SCALE

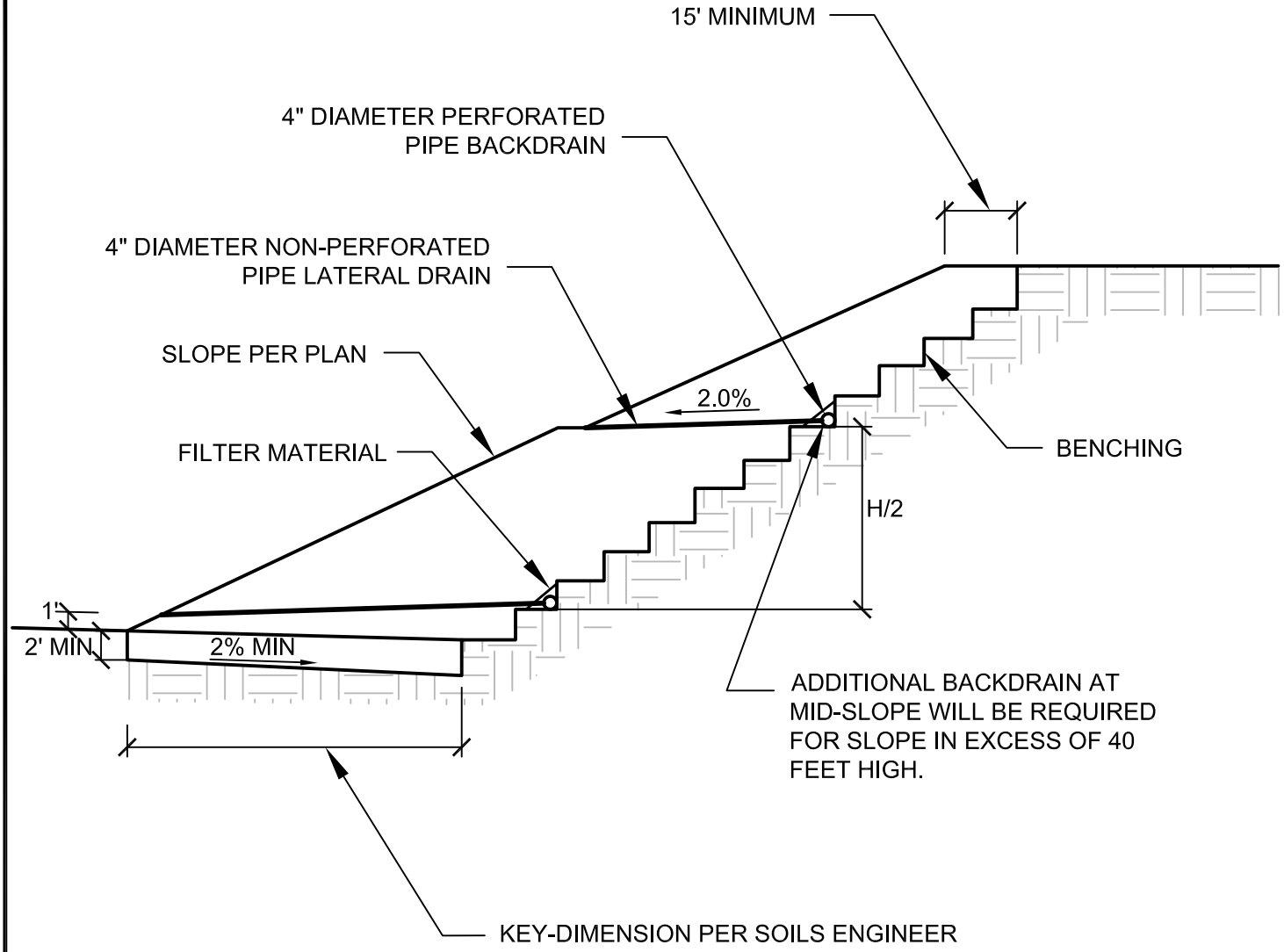
TYPICAL SUBDRAIN OUTLET HEADWALL DETAIL



DIMENSIONS ARE MINIMUM RECOMMENDED

NOT TO SCALE

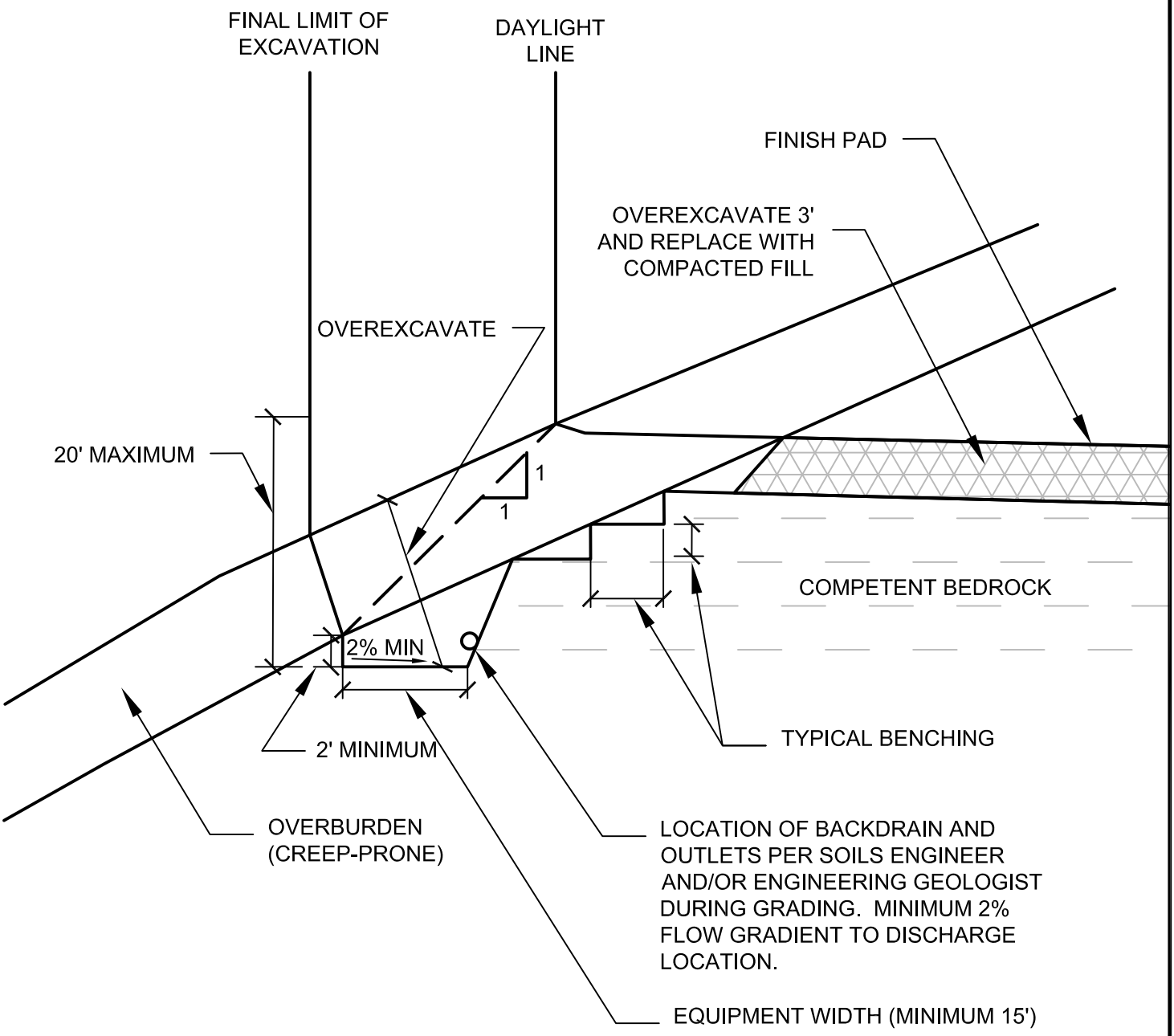
TYPICAL SLOPE STABILIZATION FILL DETAIL



DIMENSIONS ARE MINIMUM RECOMMENDED

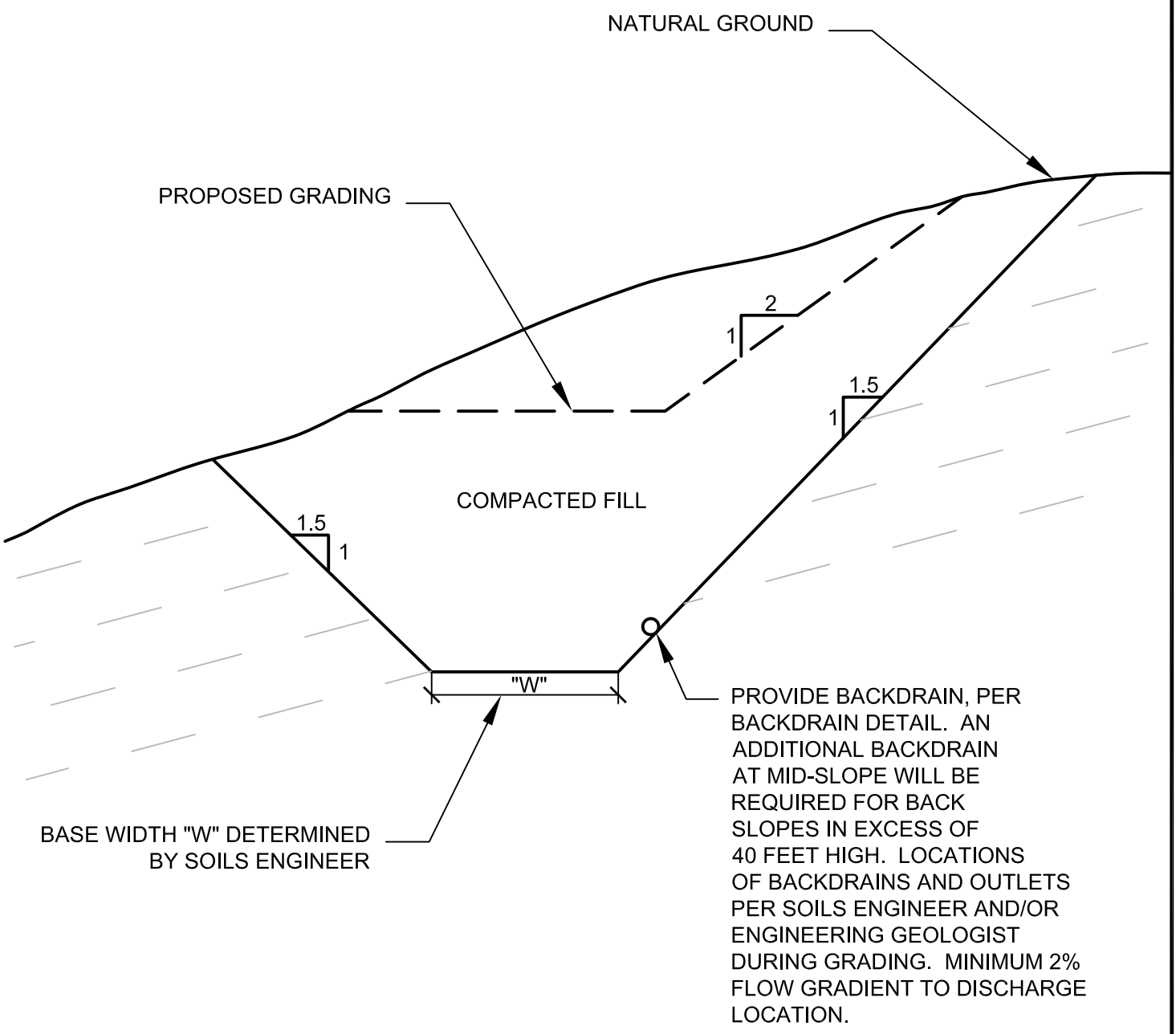
NOT TO SCALE

TYPICAL BUTTRESS FILL DETAIL



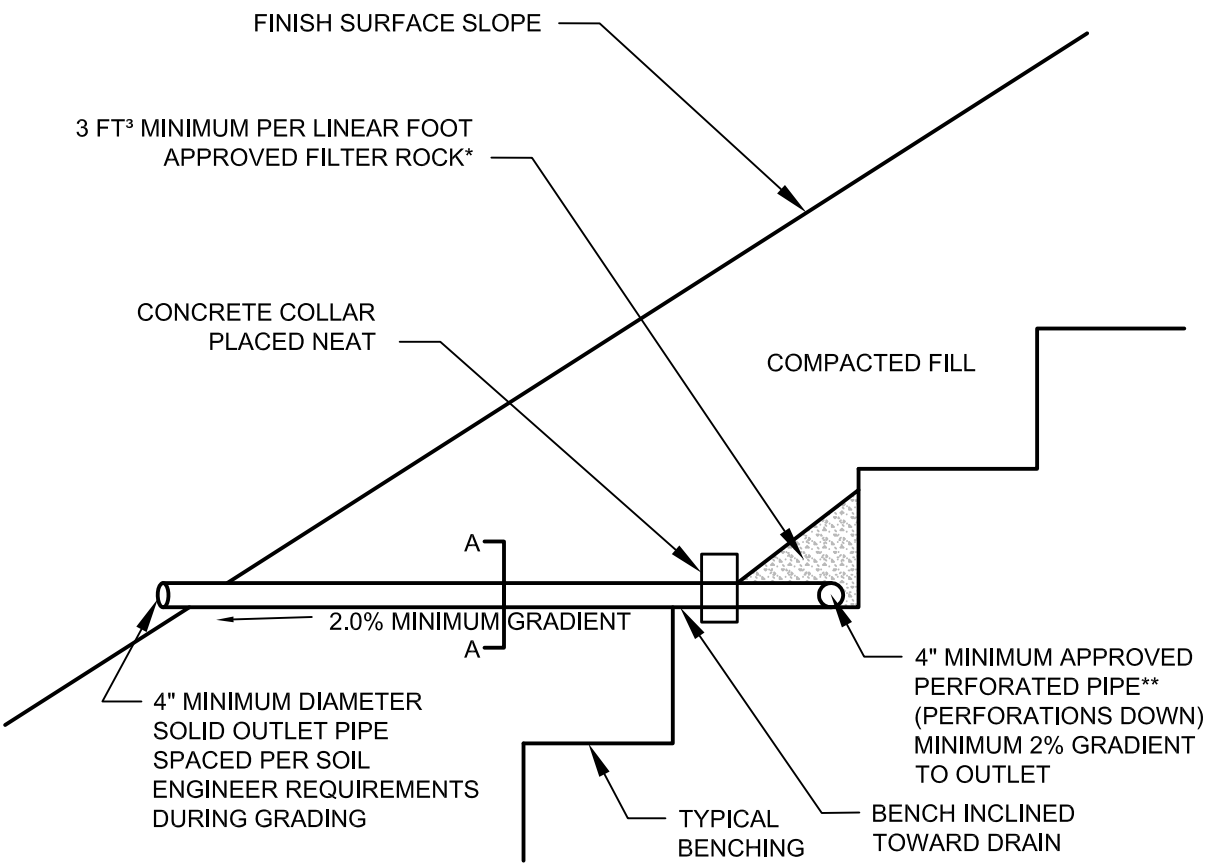
NOT TO SCALE

DAYLIGHT SHEAR KEY DETAIL

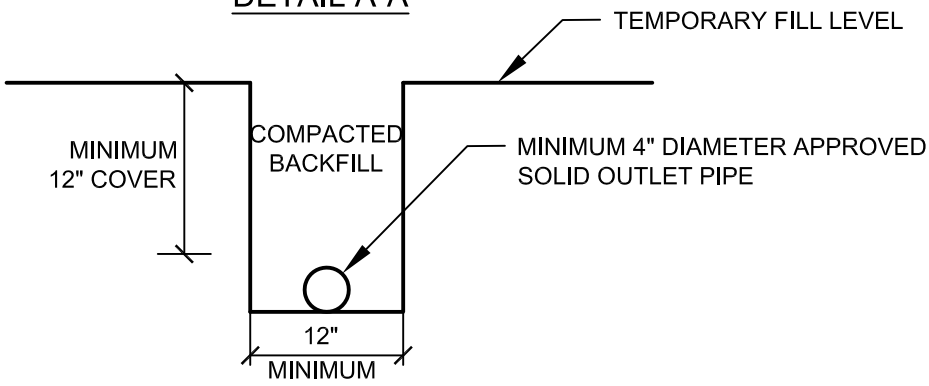


NOT TO SCALE

TYPICAL SHEAR KEY DETAIL



DETAIL A-A



**APPROVED PIPE TYPE:
SCHEDULE 40 POLYVINYL CHLORIDE
(P.V.C.) OR APPROVED EQUAL.
MINIMUM CRUSH STRENGTH 1000 PSI

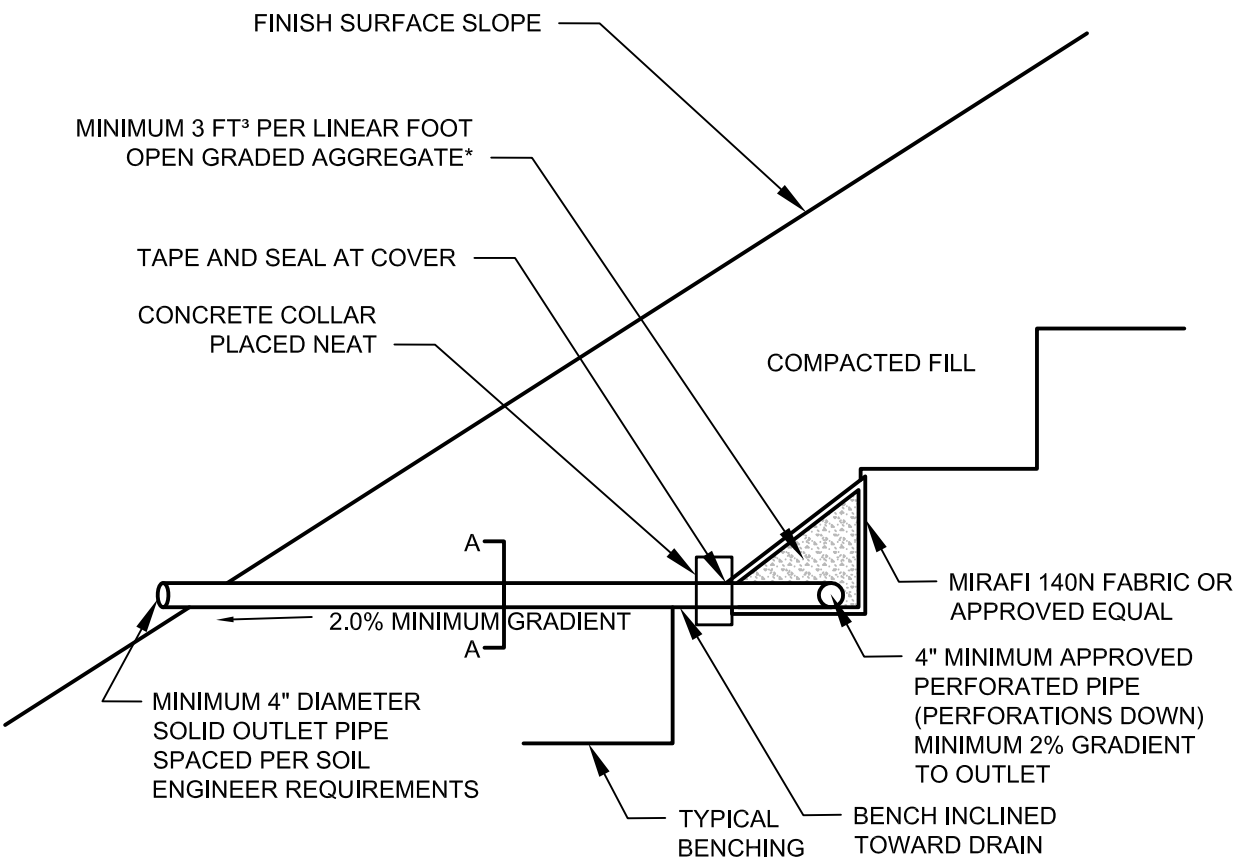
*FILTER ROCK TO MEET FOLLOWING
SPECIFICATIONS OR APPROVED EQUAL:

SIEVE SIZE	PERCENTAGE PASSING
1"	100
¾"	90-100
⅜"	40-100
NO. 4	25-40
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

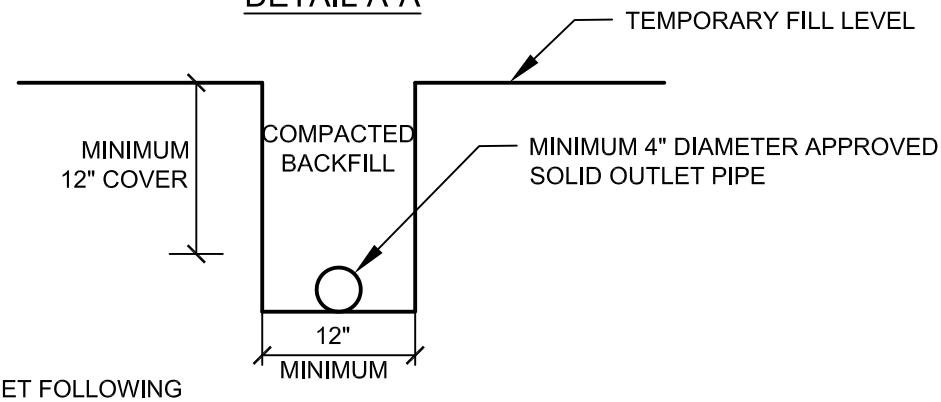
NOT TO SCALE

TYPICAL BACKDRAIN DETAIL

STANDARD SPECIFICATIONS FOR GRADING



DETAIL A-A

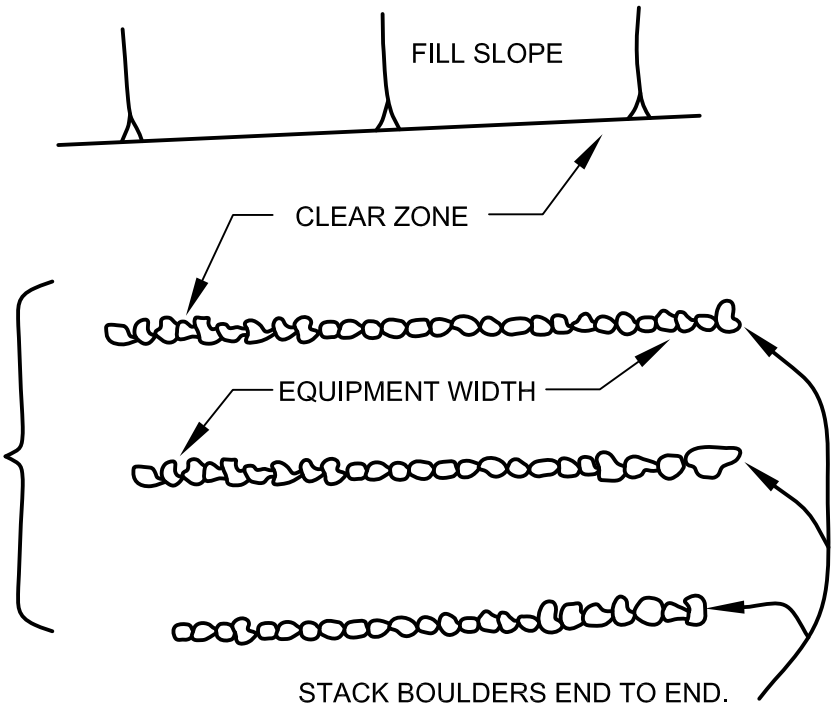


*NOTE: AGGREGATE TO MEET FOLLOWING SPECIFICATIONS OR APPROVED EQUAL:

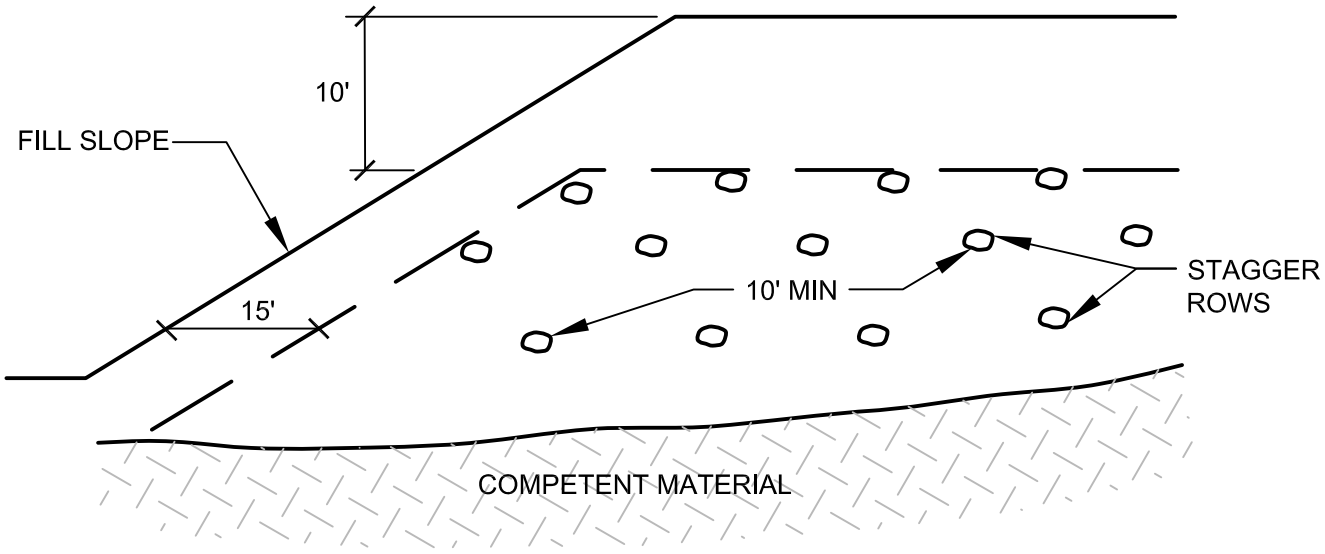
SIEVE SIZE	PERCENTAGE PASSING
1 ½"	100
1"	5-40
¾"	0-17
⅜"	0-7
NO. 200	0-3

NOT TO SCALE

BACKDRAIN DETAIL (GEOFRABIC)

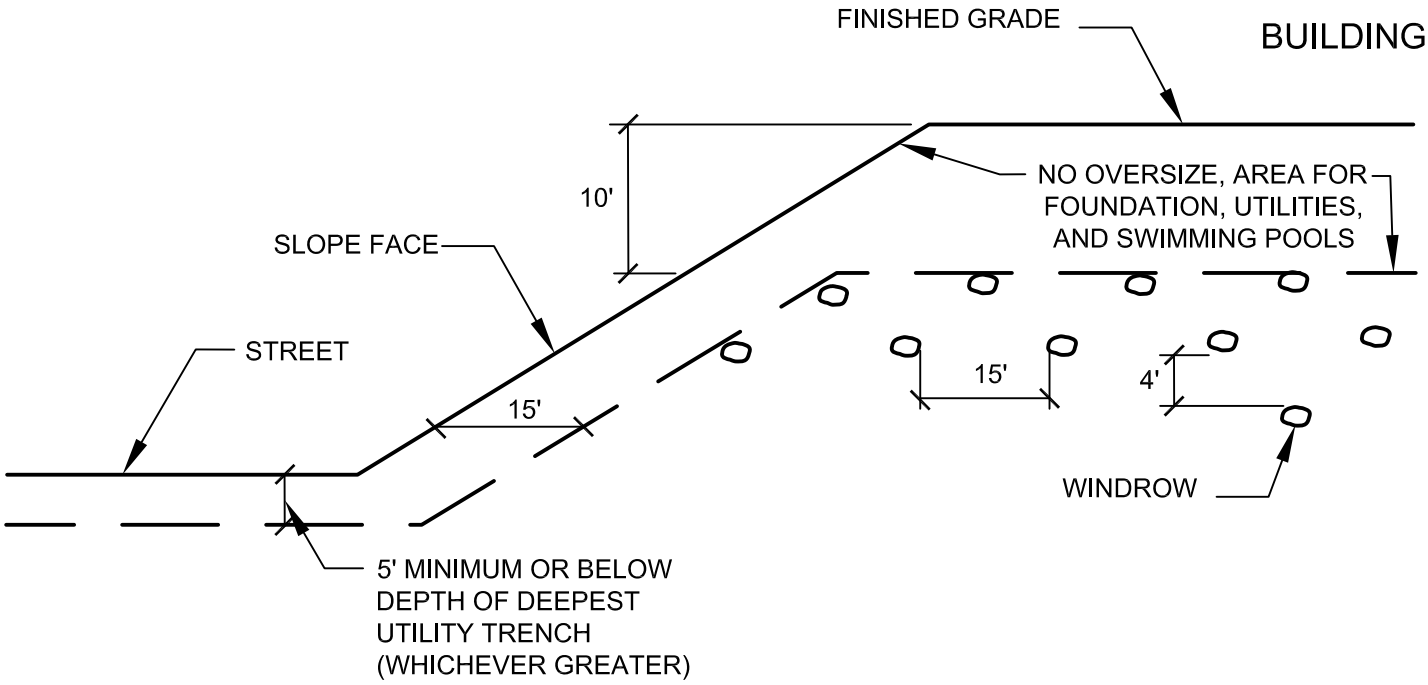


SOIL SHALL BE PUSHED OVER ROCKS AND FLOODED INTO VOIDS. COMPACT AROUND AND OVER EACH WINDROW.

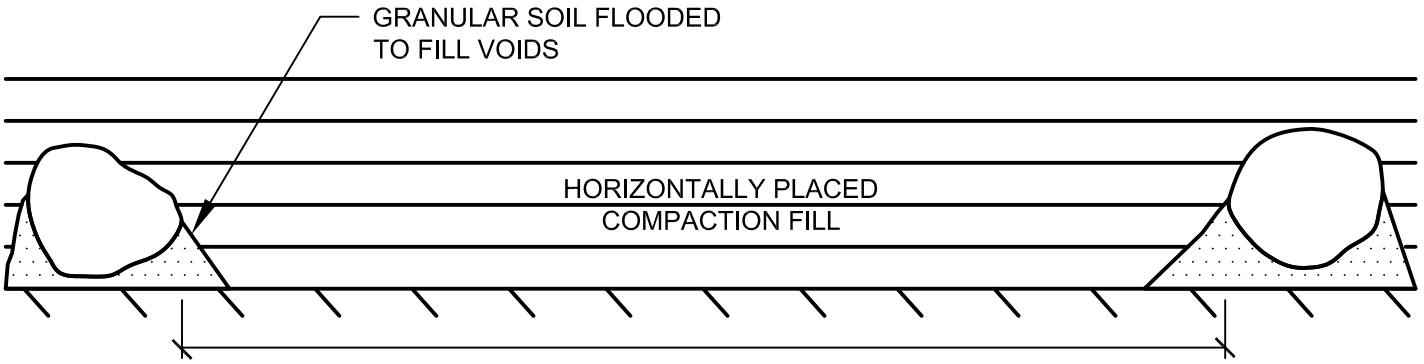


NOT TO SCALE

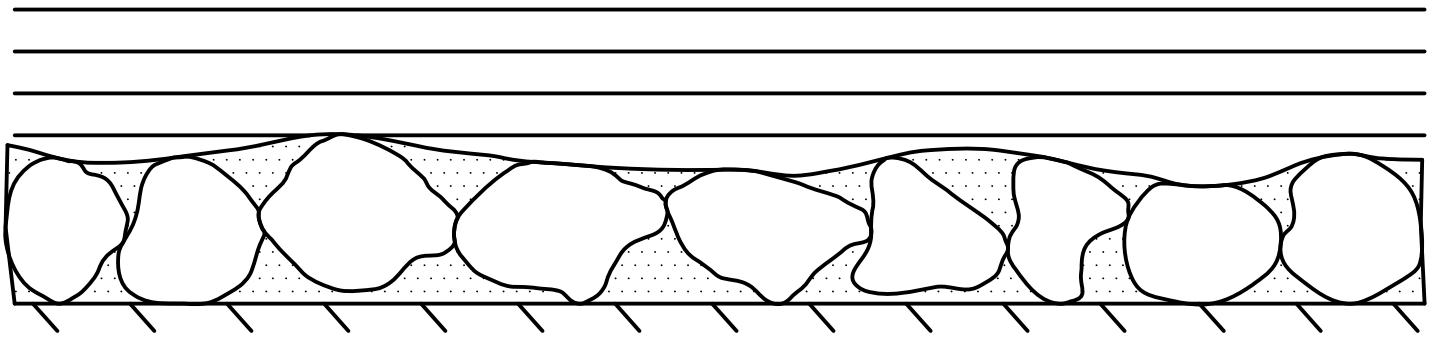
ROCK DISPOSAL DETAIL



TYPICAL WINDROW DETAIL (EDGE VIEW)



PROFILE VIEW

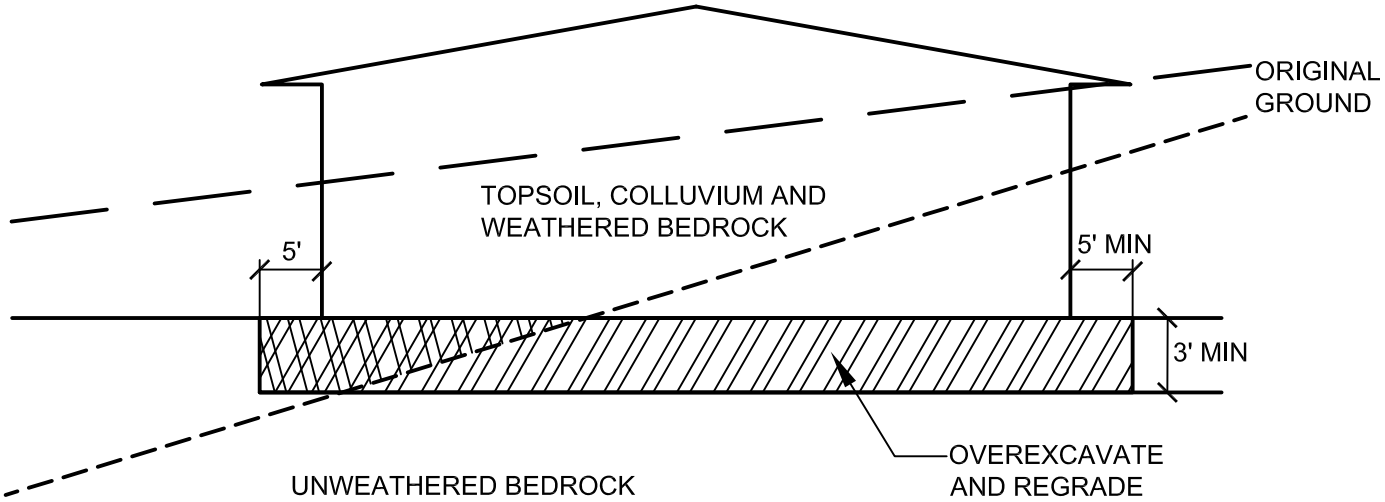


NOT TO SCALE

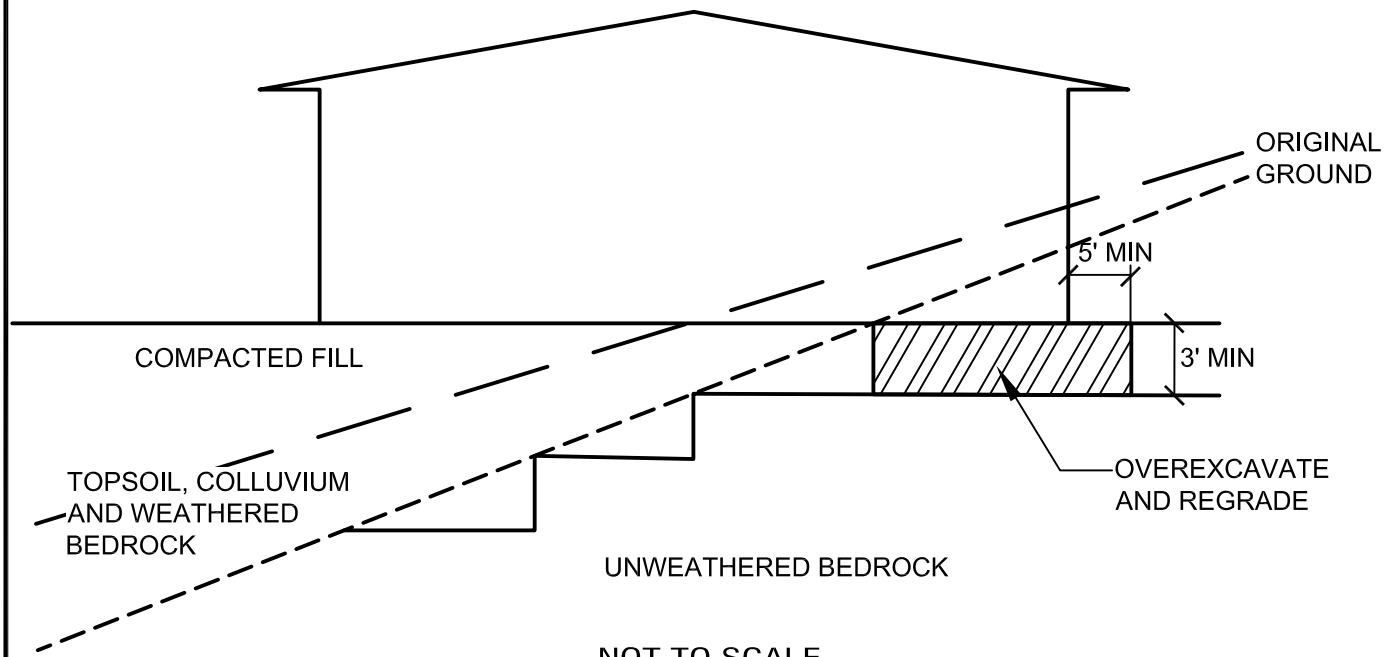
ROCK DISPOSAL DETAIL

GENERAL GRADING RECOMMENDATIONS

CUT LOT



CUT/FILL LOT (TRANSITION)



NOT TO SCALE

TRANSITION LOT DETAIL

APPENDIX E

PERCOLATION TEST RESULTS AND INFILTRATION RATES WITH C.4-1 WORKSHEET

APPENDIX E

PERCOLATION TEST METHODS AND CALCULATED INFILTRATION RATES

Construction Testing and Engineering, Inc. (CTE) provides the percolation test data and calculated infiltration rates pertinent to the proposed bioretention basin at the subject site. This report was performed in general accordance with the City of Encinitas (City) storm water infiltration design requirements February, 2016 edition Appendix C "Geotechnical and Groundwater Investigation Requirements: and Appendix D "Approved Infiltration Rate Assessment Methods for Selection of Storm Water BMPs.". The work included review of pertinent geologic documents, percolation testing, and preparation of this report.

The attached Figure 1 of the Geotechnical Report shows the general site location, and Figure 2 shows the site layout, with approximate exploration and test locations. References, including documents pertinent to the work presented herein are provided in Appendix A; exploration logs are provided in Appendix B; and the City required C.4-1 worksheet for the BMP areas is attached herein.

1.0 PERCOLATION TESTING

The proposed stormwater BMP locations are shown on Figure 2. CTE understands that the project is in the design phase of development. At the time of the testing, the site was in the planning phase and the tests were performed in areas anticipated to be utilized for stormwater infiltration and as directed by the project client. Based on recent plans by Studio E Architects, it appears that two BMP basins are proposed at the site. BMP1 is located in the southwestern corner of the site adjacent to San Elijo Avenue and BMP2 is located in the north-northwest portion of the site.

1.1 Field Exploration

The locations of the proposed BMP's were unknown and/or not provided to CTE at the time of testing. Therefore, two test holes were placed in areas that were anticipated to be utilized for infiltration and as directed by the project client. Recent plans indicate that tests were performed in or near the proposed BMP's. However, additional testing may be required within the proposed basins. The test locations encountered materials anticipated to be present at or near proposed discharge elevations. Percolation test boring logs are presented in the Geotechnical Report, Appendix B.

1.2 Percolation Test Methods

The shallow borehole percolation methodology was used to establish percolation rates. This is

considered an acceptable method of percolation testing, as stated in the City of Encinitas BMP Design Manual, Appendix D (February, 2016). The percolation test procedure was completed in general accordance with the County of San Diego Department of Environmental Health (DEH), Version 2010 guidelines. The percolation rates account for both lateral and vertical flow through the tested section. The derived percolation rates were then converted to infiltration rates following the procedures of the Porchet Method, as recommended by the City of Encinitas BMP Design Manual, Appendix D (February, 2016). Results of the recent percolation testing are presented in the table below.

Project: Proposed Improvements to Cardiff School

Project No. 10-14226G Table 1.2

Percolation Field Data and Calculated Rates

Boring P-1						**Total Depth**	**43 inches**
Time	Test Interval Time (minutes)	Test Refill	Water Level Initial/Start Depth /Inches	Water Level End/Final Depth /Inches	Incremental Water Level Change (inches)	Percolation Rate inches/minutes	Percolation Rate inches/hour
8:36:00	Initial	None	36.3750	initial	initial		
9:06:00	0:30	"	36.3750	37.9375	1.5625	0.0521	3.1250
9:36:00	0:30	36.375	36.3750	38.0000	1.6250	0.0542	3.2500
10:06:00	0:30	36.313	36.3125	37.9375	1.6250	0.0542	3.2500
10:36:00	0:30	36.688	36.6875	37.7500	1.0625	0.0354	2.1250
11:06:00	0:30	36.250	36.2500	37.9375	1.6875	0.0563	3.3750
11:36:00	0:30	36.125	36.1250	37.6875	1.5625	0.0521	3.1250
12:06:00	0:30	36.500	36.5000	38.0000	1.5000	0.0500	3.0000
12:36:00	0:30	36.063	36.0625	37.8125	1.7500	0.0583	3.5000

Boring P-2						**Total Depth**	**65 inches**
Time	Test Interval Time (minutes)	Test Refill	Water Level Initial/Start Depth /Inches	Water Level End/Final Depth /Inches	Incremental Water Level Change (inches)	Percolation Rate inches/minutes	Percolation Rate inches/hour
8:38:00	Initial	None	57.9375	initial	initial		
9:08:00	0:30	"	57.9375	58.6250	0.6875	0.0229	1.3750
9:38:00	0:30	"	58.6250	59.1250	0.5000	0.0167	1.0000
10:08:00	0:30	58.125	58.1250	58.6250	0.5000	0.0167	1.0000
10:38:00	0:30	None	58.6250	58.8125	0.1875	0.0063	0.3750
11:08:00	0:30	57.688	57.6875	58.4375	0.7500	0.0250	1.5000
11:38:00	0:30	None	58.4375	58.8125	0.3750	0.0125	0.7500
12:08:00	0:30	None	58.8125	59.1875	0.3750	0.0125	0.7500
12:38:00	0:30	58.063	58.0625	58.5000	0.4375	0.0146	0.8750

Boring P-3						**Total Depth**	**41 inches**
Time	Test Interval Time (minutes)	Test Refill	Water Level Initial/Start Depth /Inches	Water Level End/Final Depth /Inches	Incremental Water Level Change (inches)	Percolation Rate inches/minutes	Percolation Rate inches/hour
8:41:00	Initial	None	32.7500	initial	initial		
9:11:00	0:30	"	32.7500	36.5625	3.8125	0.1271	7.6250
9:41:00	0:30	32.375	32.3750	36.6250	4.2500	0.1417	8.5000
10:11:00	0:30	32.313	32.3125	36.6250	4.3125	0.1438	8.6250
10:41:00	0:30	32.063	32.0625	36.6250	4.5625	0.1521	9.1250
11:11:00	0:30	31.375	31.3750	36.6250	5.2500	0.1750	10.5000
11:41:00	0:30	27.875	27.8750	35.0000	7.1250	0.2375	14.2500
12:11:00	0:30	24.750	24.7500	31.0000	6.2500	0.2083	12.5000
12:41:00	0:30	31.500	31.5000	37.7500	6.2500	0.2083	12.5000

Boring P-4						**Total Depth**	**63 inches**
Time	Test Interval Time (minutes)	Test Refill	Water Level Initial/Start Depth /Inches	Water Level End/Final Depth /Inches	Incremental Water Level Change (inches)	Percolation Rate inches/minutes	Percolation Rate inches/hour
8:43:00	Initial	None	53.8125	initial	initial		
9:13:00	0:30	"	53.8125	55.2500	1.4375	0.0479	2.8750
9:43:00	0:30	53.438	53.4375	54.9375	1.5000	0.0500	3.0000
10:13:00	0:30	53.625	53.6250	54.9375	1.3125	0.0438	2.6250
10:43:00	0:30	53.813	53.8125	55.0000	1.1875	0.0396	2.3750
11:13:00	0:30	52.938	52.9375	54.2500	1.3125	0.0438	2.6250
11:43:00	0:30	None	54.2500	55.3750	1.1250	0.0375	2.2500
12:13:00	0:30	52.000	52.0000	53.8125	1.8125	0.0604	3.6250
12:43:00	0:30	53.813	53.8130	55.1875	1.3745	0.0458	2.7490

Boring P-5						**Total Depth**	**58 inches**
Time	Test Interval Time (minutes)	Test Refill	Water Level Initial/Start Depth /Inches	Water Level End/Final Depth /Inches	Incremental Water Level Change (inches)	Percolation Rate inches/minutes	Percolation Rate inches/hour
8:46:00	Initial	None	48.9375	initial	initial		
9:16:00	0:30	"	48.9375	53.0000	4.0625	0.1354	8.1250
9:46:00	0:30	48.563	48.5625	51.5625	3.0000	0.1000	6.0000
10:16:00	0:30	49.063	49.0625	51.2500	2.1875	0.0729	4.3750
10:46:00	0:30	49.313	49.3125	51.4375	2.1250	0.0708	4.2500
11:16:00	0:30	49.063	49.0625	51.0000	1.9375	0.0646	3.8750
11:46:00	0:30	49.125	49.1250	51.2500	2.1250	0.0708	4.2500
12:16:00	0:30	48.375	48.3750	50.5625	2.1875	0.0729	4.3750
12:46:00	0:30	49.438	49.4375	51.2500	1.8125	0.0604	3.6250

Boring P-6						Total Depth	40 inches
Time	Test Interval Time (minutes)	Test Refill	Water Level Initial/Start Depth /Inches	Water Level End/Final Depth /Inches	Incremental Water Level Change (inches)	Percolation Rate inches/minutes	Percolation Rate inches/hour
8:49:00	Initial	None	32.2500	initial	initial		
9:19:00	0:30	"	32.2500	37.5625	5.3125	0.1771	10.6250
9:49:00	0:30	31.813	31.8125	35.3750	3.5625	0.1188	7.1250
10:19:00	0:30	32.563	32.5625	35.1250	2.5625	0.0854	5.1250
10:49:00	0:30	32.000	32.0000	34.8750	2.8750	0.0958	5.7500
11:19:00	0:30	31.938	31.9375	34.5625	2.6250	0.0875	5.2500
11:49:00	0:30	31.750	31.7500	34.1875	2.4375	0.0813	4.8750
12:19:00	0:30	31.750	31.7500	34.0625	2.3125	0.0771	4.6250
12:49:00	0:30	32.000	32.0000	33.9375	1.9375	0.0646	3.8750

1.3 Calculated Infiltration Rates

As per the City of Encinitas BMP Design Manual, Appendix D (February, 2016) infiltration rates are to be evaluated through the Porchet Method. CTE utilized the Porchet Method through guidance of the County of Riverside (2011). The intent of the infiltration rate is to take into account bias inherent in percolation test borehole sidewall infiltration as would not occur at a basin bottom where such sidewalls are not present.

The infiltration rate (It) is derived by the equation:

$$I_t = \frac{\Delta H\ \pi r2\ 60}{\Delta t(\pi r2 + 2\pi r H_{avg})} = \frac{\Delta H\ 60\ r}{\Delta t(r + 2H_{avg})}$$

Where:

I_t = tested infiltration rate, inches/hour
ΔH = change in head over the time interval, inches
Δt = time interval, minutes
* r = effective radius of test hole
H_{avg} = average head over the time interval, inches

TABLE 1.3

JOB NAME 10-14226G

Percolation Rate Conversion P-1

		Inches
Time Interval,	$\Delta t =$	30
Final Depth of Water,	$D_f =$	37.8125
Test Hole Radius,	r =	3
Initial Depth to Water,	$D_0 =$	36.0625
Total Depth of Test Hole,	$D_T =$	43

$H_o =$	6.9375	in		
$H_f =$	5.1875	in		
$\Delta H = \Delta D =$	1.75	in		
$H_{avg} =$	6.0625	in		
$I_t =$	0.6942	in/hr	=	**IF-1**

Percolation Rate Conversion P-2

		Inches
Time Interval,	$\Delta t =$	30
Final Depth of Water,	$D_f =$	58.5
Test Hole Radius,	r =	3
Initial Depth to Water,	$D_0 =$	58.0625
Total Depth of Test Hole,	$D_T =$	65

$H_o =$	6.9375	in		
$H_f =$	6.5	in		
$\Delta H = \Delta D =$	0.4375	in		
$H_{avg} =$	6.71875	in		
$I_t =$	0.1597	in/hr	=	**IF-2**

Percolation Rate Conversion P-3

		Inches
Time Interval,	$\Delta t =$	30
Final Depth of Water,	$D_f =$	37.75
Test Hole Radius,	r =	3
Initial Depth to Water,	$D_0 =$	31.5
Total Depth of Test Hole,	$D_T =$	41

$H_o =$	9.5	in		
$H_f =$	3.25	in		
$\Delta H = \Delta D =$	6.25	in		
$H_{avg} =$	6.375	in		
$I_t =$	2.3810	in/hr	=	**IF-1**

Percolation Rate Conversion P-4

		Inches
Time Interval,	$\Delta t =$	30
Final Depth of Water,	$D_f =$	55.1875
Test Hole Radius,	r =	3
Initial Depth to Water,	$D_0 =$	53.8125
Total Depth of Test Hole,	$D_T =$	63

$H_o =$	9.1875	in		
$H_f =$	7.8125	in		
$\Delta H = \Delta D =$	1.375	in		
$H_{avg} =$	8.5	in		
$I_t =$	0.4125	in/hr	=	**IF-2**

Percolation Rate Conversion P-5				Percolation Rate Conversion P-6			
		Inches				Inches	
Time Interval,	$\Delta t =$	30		Time Interval,	$\Delta t =$	30	
Final Depth of Water,	$D_f =$	51.25		Final Depth of Water,	$D_f =$	33.9375	
Test Hole Radius,	r =	3		Test Hole Radius,	r =	3	
Initial Depth to Water,	$D_0 =$	49.4375		Initial Depth to Water,	$D_0 =$	32	
Total Depth of Test Hole,	$D_T =$	56		Total Depth of Test Hole,	$D_T =$	40	
$H_o =$	6.5625	in		$H_o =$	8	in	
$H_f =$	4.75	in		$H_f =$	6.0625	in	
$\Delta H = \Delta D =$	1.8125	in		$\Delta H = \Delta D =$	1.9375	in	
$H_{avg} =$	5.65625	in		$H_{avg} =$	7.03125	in	
$I_t =$	0.7598	in/hr =	**IF-1**	$I_t =$	0.6813	in/hr =	**IF-2**

1.5 Summary of Percolation and Infiltration Test Results

The following Table 1.5 presents the percolation rates observed in the field, the converted infiltration rates as discussed in Section 1.4 and as shown in Table 1.4, and the recommended rate for design (with safety factor applied).

TABLE 1.5
SUMMARY OF PERCOLATION AND INFILTRATION TEST RESULTS

Test Location	Soil Type	Soil Type (USCS)	Treatment Area	San Diego County Percolation Procedure	Depth (inches)	Percolation Rate (inches/hour)	Infiltration Rate (inches/hour)	Recommended Rate for Design* (inches/hour)
P-1	Qop	SM	BMP1	Case 3	43	3.5	0.6942	0.3471
P-2	Qop	SM/SC	Proposed Parking/Drive	Case 3	65	0.5	0.1597	0.0799
P-3	Qop	SM	Campus	Case 3	41	12.5**	2.3810**	1.1905**
P-4	Qop	SM	Campus	Case 3	63	2.75	0.4125	0.2063
P-5	Qop	SM	BMP2	Case 3	56	3.625	0.7598	0.3799
P-6	Qop	SM	BMP2	Case 3	40	3.875	0.6813	0.3407

Qop: Quaternary Old Paralic Deposits

* A safety factor of two (2) was applied to the calculated design infiltration rate

As stated in Appendix C of the City of Encinitas BMP Design Manual (February, 2016), and Worksheet C.4-1, sites with full infiltration potential should have infiltration rates at or above 0.5 inches per hour. It is our understanding that draft revisions of the BMP Design Manual consider infiltration rates of 0.05 inches per hour to be the cutoff between sites with partial infiltration potential and sites not suited for infiltration. Based on these parameters, the infiltration rates of the soils near the BMP areas are considered suitable for partial infiltration. We suggest the design to

utilize the lower rate of the tests performed nearest the proposed basin(s). As stated, the calculated rates support a partial infiltration condition.

As indicated, the tests were performed in areas originally anticipated to be utilized for infiltration. Recent plans showing the proposed basin locations indicate that the design infiltration rate obtained from Test P-1 of **0.3471 inches/hour** should be considered applicable to BMP2 due to the proximity of the test in relation to the BMP. The conservative lower result from Tests P-5 and P-6 of **0.3407 inches/hour** should be considered applicable for BMP1. Based on the geotechnical borings performed during the investigation, soils are anticipated to remain relatively consistent across the site. However, CTE could provide a more specific evaluation of soils within the BMP's if necessary, based on the specific location determination.

2.0 FEASIBILITY OF INFILTRATION

2.1 Groundwater

Static groundwater was not encountered to the maximum explored depth of 31.5 feet bgs at the site and to a depth of ten feet below the bottom of the proposed basins based on borings advanced within 50 feet of the proposed BMP's. Based on regional information, and a review of nearby groundwater data (Geotracker online at Geotracker.waterboards.ca.gov) groundwater depths in the area are expected to range from approximately 25 to 40 feet bgs. Therefore groundwater is not anticipated to be within ten feet of the bottom of the proposed BMP's.

2.2 Slope Stability

Significant slopes or changes to the existing slopes are not proposed. Existing site slopes and proposed minor slopes surrounding BMP's are not anticipated to be significantly affected by infiltration. However, at the design rates of partial infiltration, ponded water within the BMP may destabilize the berm at BMP 2. Therefore, as an added precaution it may be prudent to line the sidewalls of this basin with an impermeable membrane to a depth below the bottom of the slope/berm.

The slope/bluff across San Elijo to the west which descends to the railroad tracks is generally not anticipated to be affected by site infiltration. However, constant discharge into the subsoils during periods of sustained precipitation may contribute to lateral migration beyond the anticipated migrational distance of 100 feet from the basin resulting in seepage along the bluff/slope face.

2.3 Settlement and Volume Change

Settlement and volume change of soils underlying biofiltration basins can limit the amount of infiltration of water into those soils. Less than one percent settlement of site soils once fully saturated would be anticipated.

2.4 Utility Considerations

Infiltration has the potential to damage subsurface utilities, and geotechnical hazards can result from the introduction of infiltrated water. Proposed utilities should be setback a minimum of 10 feet from basin locations, where practical.

2.5 Retaining Walls and Foundations

The proposed BMP1 is located adjacent (within 10 to 15 feet) to a proposed building with at least one structural retaining wall proposed. CTE generally does not recommend infiltration adjacent to structures and retaining walls. Foundations and retaining walls may be impacted by increased water infiltration which may result in increased lateral pressures and reductions in soil strength. However, lateral migration of infiltrate may be partially mitigated by lining the basin sidewalls with an impermeable geofabric as recommended herein. The lining should extend beyond the maximum depth of foundation excavations within 100 feet of the proposed basin and at least five feet below lowest planned ground surface. All retaining walls should be equipped with subdrains as standard practice and BMP's should be designed such that in the event of an overflow, the structural integrity of the wall is not compromised.

2.6 Separation from Seasonal High Water

Based upon the subsurface explorations in combination with site observations, groundwater is at sufficient depth such that it is anticipated to remain separated by 10 feet or more from the BMP bottom.

2.7 Wellhead Protection

It is understood that the site does not include wells, and wells were not observed during CTE's site observations. As stated above, the rates indicate that the site is not suited for infiltration. Therefore, basins are not anticipated to adversely affect such wellheads.

2.8 Water Balance Impacts on Stream Flow

As stated above, the rates indicate that the site is not suited for infiltration. Therefore, infiltrate is not anticipated to adversely affect the natural water balance of regional streams or drainages.

Worksheet C.4-1: Categorization of Infiltration Feasibility Condition

Categorization of Infiltration Feasibility Condition	Worksheet C.4-1

Part 1 - Full Infiltration Feasibility Screening Criteria

Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
1	**Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		X

Provide basis: Six percolation tests were performed at the site. Based on the results of the testing for tests conducted within or near proposed BMP's, the calculated design infiltration rates were as follows:
BMP1: 0.3471 in/hr
BMP2: 0.3407 in/hr

Appendix E of the CTE Preliminary Geotechnical Investigation report discusses the percolation rates and infiltration calculations.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

2	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	X	

Provide basis:
Although the rates are below 0.5 inches per hour, greater rates are not anticipated to increase the risk of geotechnical hazards at BMP1. However, at the design rates of partial infiltration, ponded water within the BMP may destabilize the berm at BMP1. Therefore, as an added precaution it may be prudent to line the sidewalls of this basin with an impermeable membrane to a depth below the bottom of the slope/berm. Due to the proximity of a proposed structure to BMP2, CTE recommends lining the sidewalls of the basin as described in Appendix E of the CTE soils report to mitigate the potential for geotechnical hazards.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

Worksheet C.4-1 Page 2 of 4			
Criteria	Screening Question	Yes	No
3	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, stormwater pollutants or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Based on site explorations and knowledge of the site area, groundwater is anticipated to be deeper than at least 10 feet below the bottom of the planned basin bottoms. Infiltration at the site is not anticipated to increase the risk of groundwater contamination. According to Geotracker online (a State of California on line resource for listings of regulated contaminated sites), there are no open LUST cases in the site area that could impact the site. The proposed development is not industrial and capture of surface waters is not anticipated to increase the risk of groundwater contamination. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
4	**Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: As stated, the infiltration rates observed are less than 0.5 inches per hour. However, infiltration at the site is not anticipated to cause potential water balance issues. The site and up-gradient properties are not known contaminated sites according to Geotracker, a State of California on line resource for listings of regulated contaminated sites. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
Part 1 Result*	If all answers to rows 1 - 4 are "**Yes**" a full infiltration design is potentially feasible. The feasibility screening category is **Full Infiltration** If any answer from row 1-4 is "**No**", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2		Not Full

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by City Engineer to substantiate findings.

Worksheet C.4-1 Page 3 of 4

Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	**Do soil and geologic conditions allow for infiltration in any appreciable rate or volume?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	X	

Provide basis:
Six percolation tests were performed at the site. Based on the results of the testing for tests conducted within or near proposed BMP's, the calculated design infiltration rates were as follows:
BMP1: 0.3407 in/hr
BMP2: 0.3471 in/hr

Appendix E of the CTE Preliminary Geotechnical Investigation report discusses the percolation rates and infiltration calculations. The determination of "appreciable" is a function of interpretation by the City of Encinitas.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.

6	**Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	X	

Provide basis: Based on the obtained rates, infiltration is not anticipated to increase the risk of geotechnical hazards at BMP1. However, at the design rates of partial infiltration, ponded water within the BMP may destabilize the berm at BMP1. Therefore, as an added precaution it may be prudent to line the sidewalls of this basin with an impermeable membrane to a depth below the bottom of the slope/berm. Due to the proximity of a proposed structure to BMP2, CTE recommends lining the basin as described in Appendix E of the CTE soils report to mitigate the potential for geotechnical hazards at this BMP.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.

Worksheet C.4-1 Page 4 of 4			
Criteria	Screening Question	Yes	No
7	**Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, stormwater pollutants or other factors)?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Based on site explorations and knowledge of the site area, groundwater is anticipated to be deeper than at least 10 feet below the bottom of the planned basin bottoms. Infiltration at the site is not anticipated to increase the risk of groundwater contamination. According to Geotracker online (a State of California on line resource for listings of regulated contaminated sites), there are no open LUST cases in the site area that could impact the site. The proposed development is not industrial and capture of surface waters is not anticipated to increase the risk of groundwater contamination. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
8	**Can infiltration be allowed without violating downstream water rights?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Due to minimal topographic relief, it is unlikely that infiltrated water could increase the risk of changing the seasonality of ephemeral streams or increase the risk of contaminating surface waters that currently exist. To CTE's knowledge there is no downstream water rights violation as the site infiltrate is anticipated to remain within or relatively close to the property. However, this question is better directed to the project designers who have access to legal documents such as property rights and easements. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
Part 2 Result*	If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is **Partial Infiltration.** If any answer from row 5-8 is no, then infiltration of any volume is considered to be **infeasible** within the drainage area. The feasibility screening category is **No Infiltration.**		Partial Infiltration

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

Appendix 5.7-1 Preliminary SWQMP

Appendices

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CITY OF ENCINITAS
STORMWATER INTAKE FORM AND PRIORITY DEVELOPMENT PROJECT PRELIMINARY STORMWATER QUALITY MANAGEMENT PLAN (SWQMP)

FOR:
CARDIFF SCHOOL
CASE NO. 18-120 CDP

1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CA 92007
APN 260-340-01 AND -02

PREPARED BY:
WAYNE W. CHANG, PE 46548
CHANG CONSULTANTS
P.O. BOX 9496
RANCHO SANTA FE, CA 92067
(858) 692-0760

PREPARED FOR:
CARDIFF SCHOOL DISTRICT
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CA 92007
(760) 632-5892

DATE OF SWQMP:
AUGUST 31, 2018
REVISION #0 (FIRST SUBMITTAL)

GRADING PLAN PREPARED BY:
STEVE KETTLER, PE 48358
KETTLER LEWECK ENGINEERING
303 A STREET, SUITE 302
SAN DIEGO, CA 92101
(619) 269-3444

FOR REVIEW ONLY

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PREPARER'S CERTIFICATION

I hereby declare that I am the Engineer in Responsible Charge of design of storm water best management practices (BMPs) for this project, and that I have exercised responsible charge over the design of the BMPs as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with the Priority Development Project (PDP) requirements of the City of Encinitas BMP Design Manual, which is a design manual for compliance with local City of Encinitas and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2015-0100) requirements for storm water management.

I have read and understand that the City Engineer has adopted minimum requirements for managing urban runoff, including storm water, from land development activities, as described in the BMP Design Manual. I certify that this PDP SWQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this PDP Storm Water Quality Management Plan (SWQMP) by the City Engineer is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of storm water BMPs for this project, of my responsibilities for project design.

Will sign and seal upon approval, PE 46548

Engineer's Seal

Engineer of Work's Signature, PE Number

Wayne W. Chang

Print Name

Chang Consultants

Company

August 31, 2018

Date

PROJECT OWNER'S CERTIFICATION

This PDP SWQMP has been prepared for [INSERT PROJECT OWNER'S COMPANY NAME] by [INSERT SWQMP PREPARER'S COMPANY NAME]. The PDP SWQMP is intended to comply with the PDP requirements of the City of Encinitas BMP Design Manual, which is a design manual for compliance with local City of Encinitas and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2015-0100) requirements for storm water management.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan. Once the undersigned transfers its interests in the property, its successor-in-interest shall bear the aforementioned responsibility to implement the best management practices (BMPs) described within this plan, including ensuring on-going operation and maintenance of structural BMPs. A signed copy of this document shall be available on the subject property into perpetuity.

Will sign upon approval

_____

Project Owner's Signature

_____

Print Name

Cardiff School District

_____

Company

_____

Date

SUBMITTAL RECORD

Use this table to keep a record of submittals of this PDP SWQMP. Each time the PDP SWQMP is re-submitted, provide the date and status of the project. In the fourth column, summarize the changes that have been made or indicate if response to plancheck comments is included. When applicable, insert response to plancheck comments behind this page.

Submittal Number	Date	Project Status	Summary of Changes
1	8/31/2018	X Preliminary Design / Planning/ CEQA □ Final Design	Initial Submittal (for Coastal Development Permit)
2		□ Preliminary Design / Planning/ CEQA □ Final Design	
3		□ Preliminary Design / Planning/ CEQA □ Final Design	
4		□ Preliminary Design / Planning/ CEQA □ Final Design	

PROJECT IDENTIFICATION

Project/Applicant Name: Cardiff School	
Permit/Application Number: Case No. 18-120 CDP	Date: August 31, 2018
Site Address: 1888 Montgomery Avenue, Cardiff-by-the-Sea, CA 92007	APN: 260-340-01 and -02
Scope of work/project description: The site supports an existing K-3 elementary school. The project is for modernization and reconstruction of the school. The work includes demolition of five one-story buildings and three relocatable classroom buildings, construction of ten one-story buildings including classrooms, a makerspace lab, food service, a multipurpose room, and associated support spaces. Improvements also include a new parking lot and dropoff, reconstruction of hardcourts, playgrounds, landscaping, a lunch court, shade structures, an entry trellis, perimeter fencing/gates, and an outdoor assembly area.	

DETERMINATION OF PROJECT STATUS AND REQUIREMENTS

This form will identify permanent, post construction BMP requirements. Refer to City of Encinitas Stormwater BMP Design Manual for guidance.

Step 1: Is the project a "development project"? Development projects are defined as "construction, rehabilitation, redevelopment, or reconstruction of any public or private projects". See Section 1.3 and Table 1-2 of the manual for guidance. For example, interior remodels, roof replacements, and electrical and plumbing work are not development projects.	X Yes	***Go to Step 2.***
	□ No	***Stop.*** Permanent BMP requirements do not apply. No SWQMP will be required. Provide discussion below.

If "No", provide discussion / justification explaining why the project is not a "development project":

Step 2: Complete questions below for Project Type Determination.

The project is (select one): □New Development x Redevelopment

The total proposed, newly created and/or replaced impervious area is: 175,613 ft^2

Is the project in any of the following categories, (a) through (f) below?

Yes X	No □	(a)	New development projects or redevelopment projects that create and/or replaced 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects.
Yes X	No □	(b)	Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects.
Yes X	No □	(c)	New and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses:

			(i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812). (ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater. (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce. (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
Yes □	No X	(d)	New or redevelopment projects that create and/or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharge directly to an Environmentally Sensitive Area (ESA). "Discharge directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands). Note: ESAs are areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Board and SDRWQCB; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and SDRWQCB; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees. See manual Section 1.4.2 for additional guidance.
Yes □	No X	(e)	New development projects, or redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, that support one or more of the following uses: (i) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following SIC codes: 5013, 5014, 5541, 7532-7534, or 7536-7539. (ii) Retail gasoline outlets. This category includes retail gasoline outlets that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic of 100 or more vehicles per day.
Yes X	No □	(f)	New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction. *Note: See manual Section 1.4.2 for additional guidance.*

Does the project meet the definition of one or more of the PDP categories (a) through (f) listed above?

X Yes – **The project is a Priority Development Project, the applicant shall provide PDP Post Construction BMPs and *continue to Step 3*.**

□ No – **The project is a Standard or Basic Project. *Stop here and complete the "City of Encinitas Stormwater Intake Form for All Developments and Standard Projects SWQMP".***

The following is for *redevelopment PDPs* only:

The area of existing (pre-project) impervious area at the project site is: 139,633 ft^2 (A)
The total proposed newly created or replaced impervious area is: 175,613 ft^2 (B)
Percent impervious surface created or replaced (B/A)*100: 125.8 %
The percent impervious surface created or replaced is (select one based on the above calculation):

□ Less than or equal to fifty percent (50%) – only new and/or replaced impervious areas are considered PDP subject to treatment and HMP criteria
OR

x Greater than fifty percent (50%) – the entire site is a PDP; treatment and HMP criteria apply to entire site regardless of whether it is replaced		
Step 3 (PDPs only): Do hydromodification control requirements apply? See Section 1.6 of the BMP Design Manual for guidance.	X Yes	PDP structural BMPs required for pollutant control (Chapter 5) and hydromodification control (Chapter 6). ***Go to Step 4.***
	□ No	PDP structural BMPs required for pollutant control (Chapter 5) only. Provide brief discussion of exemption to hydromodification control below. ***Go to "Site Information Checklist"***
Discussion / justification if hydromodification control requirements do not apply:		
Step 4 (PDPs subject to treatment and hydromodification controls): Does protection of critical coarse sediment yield areas apply based on review of City of Encinitas Potential Critical Coarse Sediment Yield Area Map? See Section 6.2 of the BMP Design Manual for guidance.	□ Yes	Management measures required for protection of critical coarse sediment yield areas (Chapter 6.2). ***Go to "Site Information Checklist"***
	X No	Management measures not required for protection of critical coarse sediment yield areas. Provide brief discussion below. ***Go to "Site Information Checklist"***
Discussion / justification if management measures not required for protection of critical coarse sediment yield areas: There are no CCSYAs on-site per the myEncinitas mapping application and the WMAA.		

SITE INFORMATION CHECKLIST

Project's Watershed (Complete Hydrologic Unit, Area, and Subarea Name with Numeric Identifier)	Carlsbad Hydrologic Unit (904.00), Escondido Creek Hydrologic Area (904.60), San Elijo Hydrologic Subarea (904.61)
Parcel Area (Total area of Assessor's Parcel(s) associated with the project)	7.41 Acres (322,730 Square Feet)
Area to be Disturbed by the Project (Project Area)	7.16 Acres (312,045 Square Feet)
Project Proposed Impervious Area (Subset of Project Area)	4.03 Acres (175,613 Square Feet)
Project Proposed Pervious Area (Subset of Project Area)	3.13 Acres (136,432 Square Feet)
Note: Proposed Impervious Area + Proposed Pervious Area = Area to be Disturbed by the Project. This may be less than the Parcel Area.	

Description of Existing Site Condition

Current status of the site (select all that apply):

X Existing development

□ Previously graded but not built out

□ Demolition completed without new construction

□ Agricultural or other non-impervious use

□ Vacant, undeveloped/natural

Description / Additional Information:
The site currently supports the Cardiff School, which is a K-3 elementary school.

Existing Land Cover includes (select all that apply):

X Vegetative Cover

X Non-Vegetated Pervious Areas

X Impervious Areas

Description / Additional Information:

The existing vegetative cover at the school site include landscaping, a garden area, and grass-lined recreational fields. Non-vegetated pervious areas include earth covered portions of the recreational fields as well as play areas. The impervious areas include the elementary school buildings, parking, hardscape, and hard courts.

Underlying soil belongs to Hydrologic Soil Group (select all that apply):

□ NRCS Type A

□ NRCS Type B

X NRCS Type C – per soils engineer based on infiltration testing results.

□ NRCS Type D

Approximate Depth to Groundwater (GW):

□ GW Depth < 5 feet

□ 5 feet < GW Depth < 10 feet

□ 10 feet < GW Depth < 20 feet

X GW Depth > 20 feet

Existing Natural Hydrologic Features (select all that apply):

□ Watercourses

□ Seeps

□ Springs

□ Wetlands

X None

Description / Additional Information:
The site is fully developed with an elementary school, so there are no existing hydrologic features.

Description of Existing Site Drainage Patterns

How is storm water runoff conveyed from the site? At a minimum, this description should answer:

1) Is existing drainage conveyance natural or urban?
2) Is runoff from offsite conveyed through the site? If yes, quantify all offsite drainage areas, design flows, and locations where offsite flows enter the project site, and summarize how such flows are conveyed through the site.
3) Provide details regarding existing project site drainage conveyance network, including any existing storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, natural or constructed channels. And
4) Identify all discharge locations from the existing project site along with a summary of conveyance system size and capacity for each of the discharge locations. Provide summary of the pre-project drainage areas and design flows to each of the existing runoff discharge locations.

Describe existing site drainage patterns:
Storm runoff from the existing elementary school site flows in two general directions: north and south. The northerly portion of the site flows towards its northwest corner at the intersection of San Elijo Avenue and Montgomery Avenue. The northerly runoff is conveyed west across San Elijo Avenue near the intersection in a concrete cross-gutter. The runoff will then be conveyed south by hardened SANDAG drainage facilities that are under construction and existing hardened City drainage facilities to San Elijo Lagoon.

The southerly portion of the site flows towards the adjacent San Elijo Avenue and Mozart Avenue. The runoff is ultimately conveyed south along the existing San Elijo Avenue curb and gutter to an existing storm drain system near Liverpool Drive. The storm drain system discharges into a recently constructed SANDAG open cell concrete block channel on the west side of San Elijo Avenue at Liverpool Drive. The southerly area runoff combines with the northerly area runoff in the SANDAG channel. The channel then connects to the aforementioned hardened City drainage facilities that discharge to San Elijo Lagoon.

As-built drawings show private underground storm drain systems around the classroom areas. The storm drain systems outlet onto the recreational fields at the west and north portions of the site. Surface runoff flows across the fields and follows the above described drainage patterns.

Description of Proposed Site Development
Project Description / Proposed Land Use and/or Activities: The project proposes to improve the existing elementary school. The work includes demolition of five one-story buildings and three relocatable classroom buildings, construction of ten one-story buildings including classrooms, a makerspace lab, food service, a multipurpose room, and associated support spaces. Improvements also include a new parking lot and dropoff, reconstruction of hardcourts, playgrounds, landscaping, a lunch court, shade structures, an entry trellis, perimeter fencing/gates, and an outdoor assembly area.
List/describe proposed impervious features of the project (e.g., buildings, roadways, parking lots, courtyards, athletic courts, other impervious features): The proposed impervious areas include the proposed buildings, parking lot, driveways, hardscape, hardcourts, and courtyards.
List/describe proposed pervious features of the project (e.g., landscape areas): The pervious features include proposed landscaping, biofiltration basins, and permeable pavers.
Does the project include grading and changes to site topography? X Yes □ No Description / Additional Information: Grading is required for the proposed project. The site is gently sloping, so the grading will not involve large cuts or fills.

Description of Proposed Site Drainage Patterns

Does the project include changes to site drainage (e.g., installation of new storm water conveyance systems)?

X Yes

□ No

If yes, provide details regarding the proposed project site drainage conveyance network, including storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, natural or constructed channels, and the method for conveying offsite flows through or around the proposed project site. Identify all discharge locations from the proposed project site along with a summary of the conveyance system size and capacity for each of the discharge locations. Provide a summary of pre- and post-project drainage areas and design flows to each of the runoff discharge locations. Reference the drainage study for detailed calculations.

Describe proposed site drainage patterns:

New private, on-site drainage facilities will be constructed to direct storm runoff from the project area to one of two proposed biofiltration basins. The project will maintain runoff to the north and south similar to existing conditions. The proposed condition runoff from the northerly biofiltration basin will be piped to San Elijo Avenue and flow north along the street. Runoff from the southerly biofiltration basin will be piped to San Elijo Avenue and flow south along the street. The recreational fields along San Elijo Avenue are proposed self-mitigating areas. Storm runoff from these areas will flow onto the adjacent street and then be directed both north and south – there is a high point along San Elijo Avenue near the middle of the site.

Identification and Narrative of Receiving Water and Pollutants of Concern

Describe flow path of storm water from the project site discharge location(s), through urban storm conveyance systems as applicable, to receiving creeks, rivers, and lagoons as applicable, and ultimate discharge to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable):

Under existing and proposed conditions, the northerly portion of the site flows towards its northwest corner at the intersection of San Elijo Avenue and Montgomery Avenue. The northerly runoff is conveyed west across San Elijo Avenue near the intersection in a concrete cross-gutter. The runoff will then be conveyed south by hardened SANDAG drainage facilities that are under construction and existing hardened City drainage facilities to San Elijo Lagoon near the Pacific Ocean.

Under existing and proposed conditions, the southerly portion of the site flows towards the adjacent San Elijo Avenue and Mozart Avenue. The runoff is ultimately conveyed south along the existing San Elijo Avenue curb and gutter to an existing storm drain system near Liverpool Drive. The storm drain system discharges into a recently constructed SANDAG open cell concrete block channel on the west side of San Elijo Avenue at Liverpool Drive. The southerly area runoff combines with the northerly area runoff in the SANDAG channel. The channel then connects to the aforementioned hardened City drainage facilities that discharge to San Elijo Lagoon.

List any 303(d) impaired water bodies within the path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable), identify the pollutant(s)/stressor(s) causing impairment, and identify any TMDLs and/or Highest Priority Pollutants from the WQIP for the impaired water bodies:

303(d) Impaired Water Body	Pollutant(s)/Stressor(s)	TMDLs / WQIP Highest Priority Pollutant
San Elijo Lagoon	Eutrophic, indicator bacteria, sedimentation/siltation.	TMDL required, but not completed. WQIP HPP for Escondido Creek is indicator bacteria, toxicity, and nutrients.
Pacific Ocean Shoreline at Cardiff State Beach at San Elijo Lagoon	Total coliform.	TMDL required, but not completed. WQIP HPP for Escondido Creek is indicator bacteria, toxicity, and nutrients.

Identification of Project Site Pollutants*

***Identification of project site pollutants is only required if flow-thru treatment BMPs are implemented onsite in lieu of retention or biofiltration BMPs (note the project must also participate in an alternative compliance program unless prior lawful approval to meet earlier PDP requirements is demonstrated)**

Identify pollutants expected from the project site based on all proposed use(s) of the site (see BMP Design Manual Appendix B.6):

Pollutant	Not Applicable to the Project Site	Expected from the Project Site	Also a Receiving Water Pollutant of Concern
Sediment		X	X
Nutrients		X	
Heavy Metals		X	

Organic Compounds		X	
Trash & Debris		X	
Oxygen Demanding Substances		X	
Oil & Grease		X	
Bacteria & Viruses		X	X
Pesticides		X	

Hydromodification Management Requirements

Do hydromodification management requirements apply (see Section 1.6 of the BMP Design Manual)?

X Yes, hydromodification management flow control structural BMPs required.

□ No, the project will discharge runoff directly to existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

□ No, the project will discharge runoff directly to conveyance channels whose bed and bank are concrete-lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

□ No, the project will discharge runoff directly to an area identified as appropriate for an exemption by the WMAA for the watershed in which the project resides.

Description / Additional Information (to be provided if a 'No' answer has been selected above):

Critical Coarse Sediment Yield Areas*

*This section only required if hydromodification management requirements apply

Based on the maps provided within the WMAA, do potential critical coarse sediment yield areas exist within the project drainage boundaries?

□ Yes

X No, no critical coarse sediment yield areas to be protected based on WMAA maps

If yes, have any of the optional analyses presented in Section 6.2 of the BMP Design Manual been performed?

□ 6.2.1 Verification of Geomorphic Landscape Units (GLUs) Onsite

□ 6.2.2 Downstream Systems Sensitivity to Coarse Sediment

□ 6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite

□ No optional analyses performed, the project will avoid critical coarse sediment yield areas identified based on WMAA maps

If optional analyses were performed, what was the final result?

□ No critical coarse sediment yield areas to be protected based on verification of GLUs onsite

□ Critical coarse sediment yield areas exist but additional analysis has determined that protection is not required. Documentation attached in Attachment 2.b of the SWQMP.

□ Critical coarse sediment yield areas exist and require protection. The project will implement management measures described in Sections 6.2.4 and 6.2.5 as applicable, and the areas are identified on the SWQMP Exhibit.

Discussion / Additional Information:

Flow Control for Post-Project Runoff*

*This section only required if hydromodification management requirements apply

List and describe point(s) of compliance (POCs) for flow control for hydromodification management (see Section 6.3.1). For each POC, provide a POC identification name or number correlating to the project's HMP Exhibit and a receiving channel identification name or number correlating to the project's HMP Exhibit.

Runoff from the entire site will be conveyed by hardened, non-erodible drainage facilities to San Elijo Lagoon near the outlet to the Pacific Ocean. The discharge location is into the north edge of the lagoon immediately east of South Coast Highway 101. This is the POC for the project and labeled the “POC.”

Has a geomorphic assessment been performed for the receiving channel(s)?

□ No, the low flow threshold is 0.1Q2 (default low flow threshold)

X Yes, the result is low flow threshold 0.1Q2

□ Yes, the result is low flow threshold 0.3Q2

□ Yes, the result is low flow threshold 0.5Q2

If a geomorphic assessment has been performed, provide title, date, and preparer:

Hydromodification Screening for Cardiff School by Chang Consultants dated August 31, 2018.

Discussion / Additional Information: (optional)

Included as Attachment 2c.

Other Site Requirements and Constraints

When applicable, list other site requirements or constraints that will influence storm water management design, such as zoning requirements including setbacks and open space, or local codes governing minimum street width, sidewalk construction, allowable pavement types, and drainage requirements.

N/A.

Optional Additional Information or Continuation of Previous Sections As Needed
This space provided for additional information or continuation of information from previous sections as needed. N/A.

SOURCE CONTROL BMP CHECKLIST

All development projects must implement source control BMPs SC-1 through SC-6 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement source control BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the source control BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification may be provided.

Source Control Requirement	Applied?		
SC-1 Prevention of Illicit Discharges into the MS4	X Yes	□ No	□ N/A
SC-2 Storm Drain Stenciling or Signage	X Yes	□ No	□ N/A
SC-3 Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	□ Yes	□ No	X N/A
SC-4 Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	□ Yes	□ No	X N/A
SC-5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	X Yes	□ No	□ N/A
SC-6 Additional BMPs Based on Potential Sources of Runoff Pollutants (must answer for each source listed below)			
X Onsite storm drain inlets	X Yes	□ No	□ N/A
□ Interior floor drains and elevator shaft sump pumps drain to sewer	□ Yes	□ No	X N/A
□ Interior parking garages drain to sewer	□ Yes	□ No	X N/A
X Need for future indoor & structural pest control	X Yes	□ No	□ N/A
X Landscape/outdoor pesticide use	X Yes	□ No	□ N/A
□ Pools, spas, ponds, decorative fountains, and other water features	□ Yes	□ No	X N/A
X Food service	X Yes	□ No	□ N/A
X Refuse/Trash areas must be covered	X Yes	□ No	□ N/A
□ Industrial processes	□ Yes	□ No	X N/A
□ Outdoor storage of equipment or materials must be covered	□ Yes	□ No	X N/A
□ Vehicle and equipment cleaning	□ Yes	□ No	X N/A
□ Vehicle/equipment repair and maintenance	□ Yes	□ No	X N/A
□ Fuel dispensing areas	□ Yes	□ No	X N/A
□ Loading docks	□ Yes	□ No	X N/A
X Fire sprinkler test water	X Yes	□ No	□ N/A
X Miscellaneous drain or wash water	X Yes	□ No	□ N/A
X Plazas, sidewalks, and parking lots	X Yes	□ No	□ N/A

Discussion / justification if SC-1 through SC-6 not implemented. Justification must be provided for ALL "No" answers shown above.

SITE DESIGN BMP CHECKLIST

All development projects must implement site design BMPs SD-1 through SD-8 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement site design BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the site design BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification may be provided.

Source Control Requirement	Applied?		
SD-1 Maintain Natural Drainage Pathways and Hydrologic Features	□ Yes	□ No	X N/A
SD-2 Conserve Natural Areas, Soils, and Vegetation	□ Yes	□ No	X N/A
SD-3 Minimize Impervious Area	X Yes	□ No	□ N/A
SD-4 Minimize Soil Compaction	X Yes	□ No	□ N/A
SD-5 Impervious Area Dispersion - Directly Connected Impervious Areas (e.g. roof downspouts connected to street) are not allowed	X Yes	□ No	□ N/A
SD-6 Runoff Collection	□ Yes	X No	□ N/A
SD-7 Landscaping with Native or Drought Tolerant Species	X Yes	□ No	□ N/A
SD-8 Harvesting and Using Precipitation	□ Yes	X No	□ N/A

Discussion / justification if SD-1 through SD-8 not implemented. Justification must be provided for ALL "No" answers shown above.

The project includes two biofiltration basins for pollutant and flow control, so runoff collection is not proposed under the current submittal. However, it is possible that permeable pavement will be included in some areas during final engineering.

Harvest and use is not feasible per Form I-7 in Attachment 1c.

PDP STRUCTURAL BMPS

All PDPs must implement structural BMPs for storm water pollutant control (see Chapter 5 of the BMP Design Manual). Selection of PDP structural BMPs for storm water pollutant control must be based on the selection process described in Chapter 5. PDPs subject to hydromodification management requirements must also implement structural BMPs for flow control for hydromodification management (see Chapter 6 of the BMP Design Manual). Both storm water pollutant control and flow control for hydromodification management can be achieved within the same structural BMP(s).

PDP structural BMPs must be verified by the local jurisdiction at the completion of construction. This may include requiring the project owner or project owner's representative and engineer of record to certify construction of the structural BMPs (see Section 1.12 of the BMP Design Manual). PDP structural BMPs must be maintained into perpetuity (see Section 7 of the BMP Design Manual). The local jurisdiction will confirm the maintenance annually.

Use this section to provide narrative description of the general strategy for structural BMP implementation at the project site in the box below. Then complete the PDP structural BMP summary information sheet (page 3 of this form) for each structural BMP within the project (copy the BMP summary information page as many times as needed to provide summary information for each individual structural BMP).

Describe the general strategy for structural BMP implementation at the site. This information must describe how the steps for selecting and designing storm water pollutant control BMPs presented in Section 5.1 of the BMP Design Manual were followed, and the results (type of BMPs selected). For projects requiring hydromodification flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate.

The project must meet pollutant control requirements. The City of Encinitas' 2016 "Storm Water Standards" outline steps in selecting structural BMPs. Harvest and use is considered first. As discussed in SD-8 above and in Attachment 1c, harvest and use is not feasible for the project.

Infiltration is considered next. The project's geotechnical engineer, Construction Testing & Engineering, Inc., has determined that full infiltration is infeasible because the design infiltration rates are less than 0.50 inches per hour, which is below the City's reliable full infiltration rates (see Attachment 1d). They determined that partial infiltration is feasible with the design infiltration rates and is not anticipated to increase the risk of geotechnical hazards, create groundwater concerns, nor violate downstream water rights. Based on this, biofiltration basins without impermeable liners have been selected as the integrated pollutant and flow control BMPs. A biofiltration is proposed at the northerly portion of the site to treat storm water runoff from the northerly drainage area. A second biofiltration basin is proposed at the southwesterly portion of the site to treat storm water runoff from the southerly drainage area.

STRUCTURAL BMP SUMMARY INFORMATION

Copy this page as necessary to provide information on each individual proposed structural BMP

Structural BMP ID No: BMP 1	DMA No: DMA 1
Construction Plan Sheet No: C3.0 and C5.0	
Type of structural BMP: □ Retention by harvest and use (HU-1) □ Retention by infiltration basin (INF-1) □ Retention by bioretention (INF-2) □ Retention by permeable pavement (INF-3) □ Partial retention by biofiltration with partial retention (PR-1) X Biofiltration (BF-1) □ Biofiltration with Nutrient Sensitive Media Design (BF-2) □ Proprietary Biofiltration (BF-3) meeting all requirements of Appendix F □ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) □ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) □ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) □ Detention pond or vault for hydromodification management □ Other (describe in discussion section below)	
Purpose: □ Pollutant control only □ Hydromodification control only X Combined pollutant control and hydromodification control □ Pre-treatment/forebay for another structural BMP □ Other (describe in discussion section below)	
Who will inspect and certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms required by the City Engineer (See Section 1.12 of the BMP Design Manual)	To be determined during final engineering.
Who will be the final owner of this BMP?	Cardiff School District
Who will maintain this BMP into perpetuity?	Cardiff School District
What is the funding mechanism for maintenance?	Cardiff School District
Discussion (as needed): This serves the southerly project runoff.	

STRUCTURAL BMP SUMMARY INFORMATION

Copy this page as necessary to provide information on each individual proposed structural BMP

Structural BMP ID No: BMP 2	DMA No: DMA 2
Construction Plan Sheet No: C3.0 and C4.0	
Type of structural BMP: □ Retention by harvest and use (HU-1) □ Retention by infiltration basin (INF-1) □ Retention by bioretention (INF-2) □ Retention by permeable pavement (INF-3) □ Partial retention by biofiltration with partial retention (PR-1) X Biofiltration (BF-1) □ Biofiltration with Nutrient Sensitive Media Design (BF-2) □ Proprietary Biofiltration (BF-3) meeting all requirements of Appendix F □ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) □ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) □ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) □ Detention pond or vault for hydromodification management □ Other (describe in discussion section below)	
Purpose: □ Pollutant control only □ Hydromodification control only X Combined pollutant control and hydromodification control □ Pre-treatment/forebay for another structural BMP □ Other (describe in discussion section below)	
Who will inspect and certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms required by the City Engineer (See Section 1.12 of the BMP Design Manual)	To be determined during final engineering.
Who will be the final owner of this BMP?	Cardiff School District
Who will maintain this BMP into perpetuity?	Cardiff School District
What is the funding mechanism for maintenance?	Cardiff School District
Discussion (as needed): This serves the northerly project runoff.	

ATTACHMENT 1 - BACKUP FOR PDP POLLUTANT CONTROL BMPS

This is the cover sheet for Attachment 1.

Indicate which items are included behind this cover sheet:

Attachment	Contents	Checklist
Attachment 1a	DMA Exhibit (Required) See DMA Exhibit Checklist on the back of this Attachment cover sheet.	X Included
Attachment 1b	Tabular Summary of DMAs Showing DMA ID matching DMA Exhibit, DMA Area, and DMA Type (Required)* *Provide table in this Attachment OR on DMA Exhibit in Attachment 1a	X Included on DMA Exhibit in Attachment 1a ☐ Included as Attachment 1b, separate from DMA Exhibit
Attachment 1c	Form I-7, Harvest and Use Feasibility Screening Checklist (Required unless the entire project will use infiltration BMPs) Refer to Appendix B.3-1 of the BMP Design Manual to complete Form I-7.	X Included ☐ Not included because the entire project will use infiltration BMPs
Attachment 1d	Form I-8, Categorization of Infiltration Feasibility Condition (Required unless the project will use harvest and use BMPs) Refer to Appendices C and D of the BMP Design Manual to complete Form I-8.	X Included ☐ Not included because the entire project will use harvest and use BMPs
Attachment 1e	Pollutant Control BMP Design Worksheets / Calculations (Required) Refer to Appendices B and E of the BMP Design Manual for structural pollutant control BMP design guidelines	X Included The biofiltration basins will meet pollutant control and flow control requirements. See Attachment 2d for SDHM analyses.

Use this checklist to ensure the required information has been included on the DMA Exhibit:

The DMA Exhibit must identify:

X Underlying hydrologic soil group
X Approximate depth to groundwater
X Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
X Critical coarse sediment yield areas to be protected
X Existing topography and impervious areas
X Existing and proposed site drainage network and connections to drainage offsite
X Proposed demolition
X Proposed grading
X Proposed impervious features
X Proposed design features and surface treatments used to minimize imperviousness
X Drainage management area (DMA) boundaries, DMA ID numbers, and DMA areas (square footage or acreage), and DMA type (i.e., drains to BMP, self-retaining, or self-mitigating)
X Potential pollutant source areas and corresponding required source controls (see Chapter 4, Appendix E.1, and Form I-3B)
X Structural BMPs (identify location, type of BMP, and size/detail)

PROPOSED DMA EXHIBIT

NOTES:

The underlying hydrologic soil group has been classified as C by the project's geotechnical engineer.

Groundwater was not encountered at the site to the maximum explored depth of 31.5 feet.

The existing site is fully developed, so contains no natural hydrologic features.

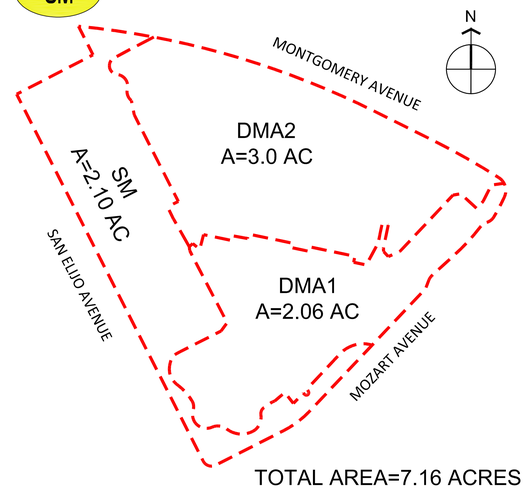
Critical course sediment yield areas have not been mapped on-site by myEncinitas or the WMAA.

BMP 1 and 2 are proposed biofiltration basins without an impervious liner.

The points of compliance (POC) for the biofiltration basin sizing are at the basin outlets and identified hereon. The POC for the channel screening assessment is at the outlet of the downstream drainage facilities into San Elijo Lagoon, which is approximately 0.56 miles south of the site.

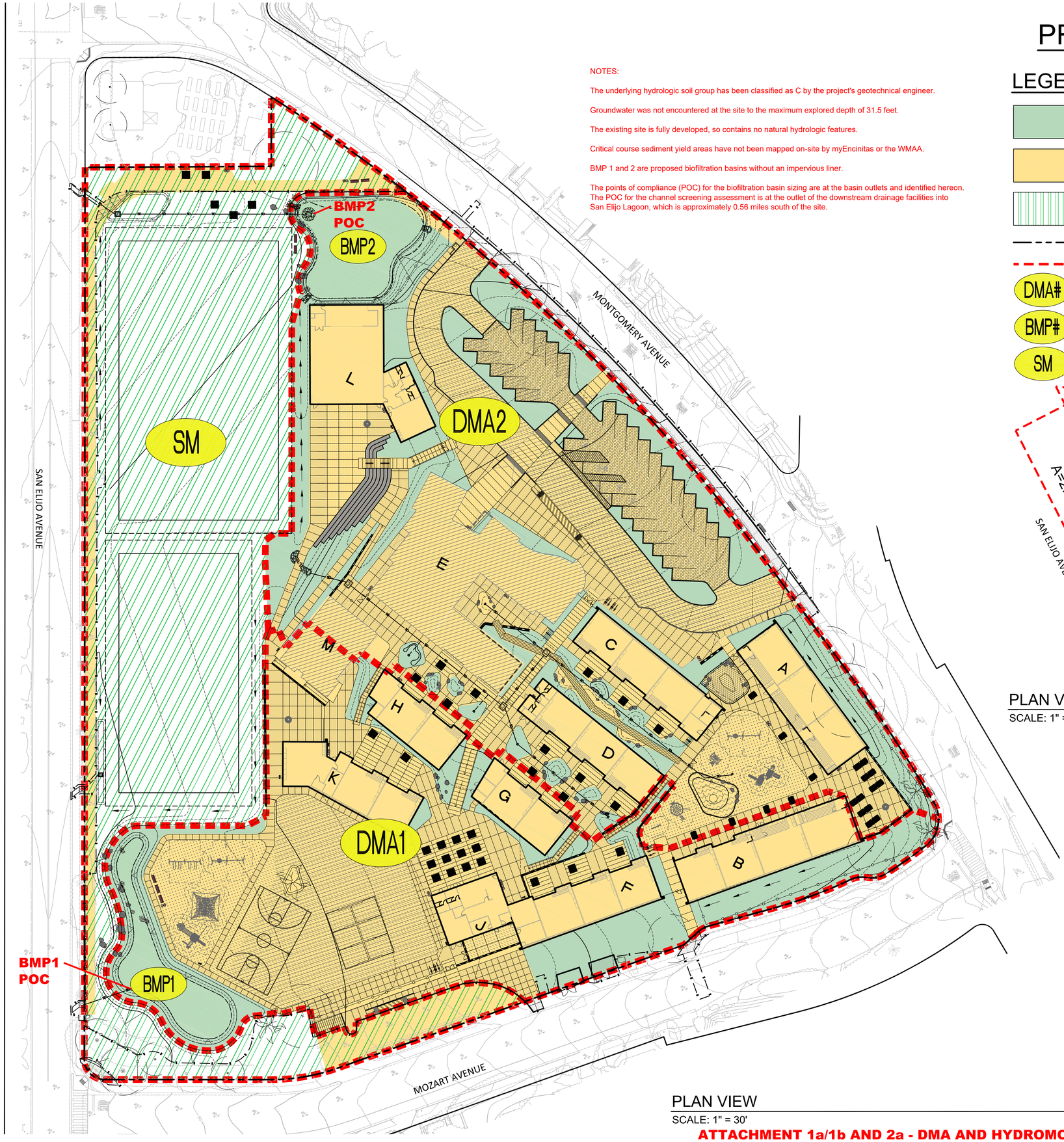
LEGEND

PROPOSED PERVIOUS AREA	DMA1 AREA = 17,503 SF	DMA2 AREA = 35,358 SF
PROPOSED IMPERVIOUS AREA	DMA1 AREA = 72,164 SF	DMA2 AREA = 95,521 SF
SELF-MITIGATING AREA	SM IMPERVIOUS AREA = 8,558 SF PERVIOUS AREA = 82,942 SF TOTAL = 7.16-ACRES	
PROPERTY LINE		
PROPSOED DRAINAGE BOUNDARY LINE		
DMA# — PROPOSED DRAINAGE SUB-CATCHMENT DESIGNATION		
BMP# — BEST MANAGEMENT PRACTICE		
SM — SELF-MITIGATING AREA		



TOTAL AREA=7.16 ACRES

PLAN VIEW
SCALE: 1" = 100'
0' 50' 100' 200'



PLAN VIEW
SCALE: 1" = 30'
0' 15' 30' 60'

ATTACHMENT 1a/1b AND 2a - DMA AND HYDROMODIFICATION MANAGEMENT EXHIBIT

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Cardiff School District

Project 17110

06/08/18	100% DD
07/31/18	50% CD

PROPOSED
DMA EXHIBIT

DMA

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Harvest and Use Feasibility Checklist	Form I-7

1. Is there a demand for harvested water (check all that apply) at the project site that is reliably present during the wet season?

- ☐ Toilet and urinal flushing
- ☐ Landscape irrigation
- ☐ Other:_____

There is not enough demand for toilet and urinal flushing or landscape irrigation as indicated below.

2. If there is a demand; estimate the anticipated average wet season demand over a period of 36 hours. Guidance for planning level demand calculations for toilet/urinal flushing and landscape irrigation is provided in Section B.3.2.

The overall DCV is 7,583 cf from Worksheet B.2-1 or 56,725 gallons (0.25 DCV = 14,181 gallons). Items 3a to 3c below indicate that the 36 hour demand is compared to DCV to assess H&U. The demand from table B.3-1 is 33 gallons per school employee per day or 49.5 gallons per 36 hours. In order for demand to exceed 0.25 DCV, there must be 286 employees (14,181/49.5=286), which is not possible, so H&U is infeasible.

3. Calculate the DCV using worksheet B-2.1.

DCV = 312,045 (cubic feet)

3a. Is the 36 hour demand greater than or equal to the DCV?	3b. Is the 36 hour demand greater than 0.25DCV but less than the full DCV?	3c. Is the 36 hour demand less than 0.25DCV?
☐ Yes / ☒ No ⇨ ⇩	☐ Yes / ☒ No ⇨ ⇩	☒ Yes ⇩
Harvest and use appears to be feasible. Conduct more detailed evaluation and sizing calculations to confirm that DCV can be used at an adequate rate to meet drawdown criteria.	Harvest and use may be feasible. Conduct more detailed evaluation and sizing calculations to determine feasibility. Harvest and use may only be able to be used for a portion of the site, or (optionally) the storage may need to be upsized to meet long term capture targets while draining in longer than 36 hours.	Harvest and use is considered to be infeasible.

Is harvest and use feasible based on further evaluation?

☐ Yes, refer to Appendix E to select and size harvest and use BMPs.

☒ No, select alternate BMPs.

Worksheet B.2-1. DCV

Design Capture Volume		Worksheet B-2.1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.53	inches
2	Area tributary to BMP (s)	A=	7.16	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.55	unitless
4	Street trees volume reduction	TCV=	0	cubic-feet
5	Rain barrels volume reduction (1 cubic foot=7.48 gallons)	RCV=	0	cubic-feet
6	Calculate DCV = (3630 x C x d x A) – TCV - RCV	DCV=	7,583	cubic-feet

See attached for 85th percentile, 24-hour precipitation and proposed pervious/impervious areas.

Table B.3-1. Toilet and Urinal Water Usage per Resident or Employee

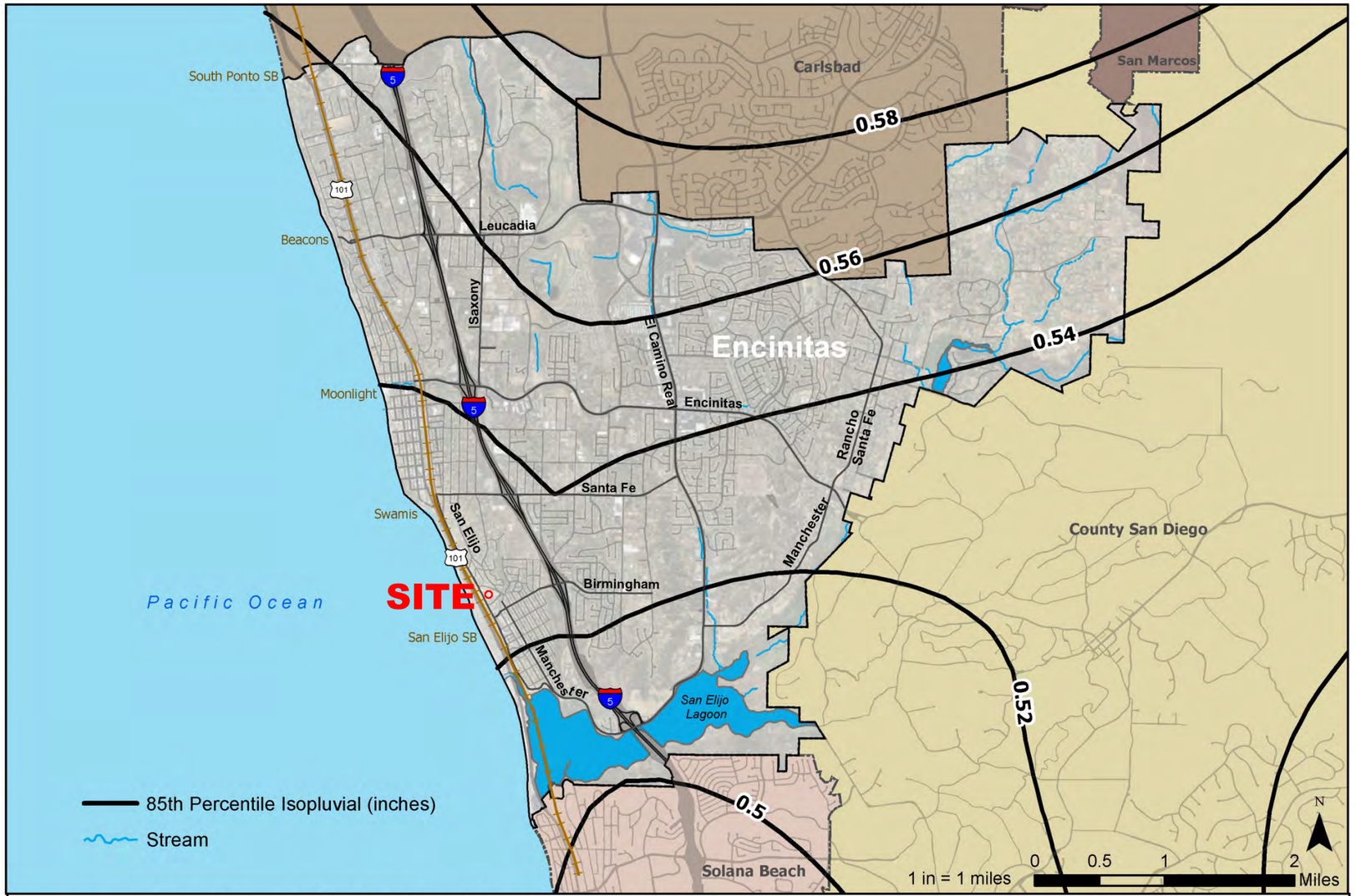
Land Use Type	Toilet User Unit of Normalization	Per Capita Use per Day		Visitor Factor[4]	Water Efficiency Factor	Total Use per Resident or Employee
		Toilet Flushing[1,2]	Urinals[3]			
Residential	Resident	18.5	NA	NA	0.5	9.3
Office	Employee (non-visitor)	9.0	2.27	1.1	0.5	7 (avg)
Retail	Employee (non-visitor)	9.0	2.11	1.4	0.5	
Schools	Employee (non-student)	6.7	3.5	6.4	0.5	33
Various Industrial Uses (excludes process water)	Employee (non-visitor)	9.0	2	1	0.5	5.5

1- Based on American Waterworks Association Research Foundation,1999. Residential End Uses of Water. Denver, CO: AWWARF
2 - Based on use of 3.45 gallons per flush and average number of per employee flushes per subsector, Table D-1 for MWD (Pacific Institute, 2003)
3 - Based on use of 1.6 gallons per flush, Table D-4 and average number of per employee flushes per subsector, Appendix D (Pacific Institute, 2003)
4 - Multiplied by the demand for toilet and urinal flushing for the project to account for visitors. Based on proportion of annual use allocated to visitors and others (includes students for schools; about 5 students per employee) for each subsector in Table D-1 and D-4 (Pacific Institute, 2003)
5 – Accounts for requirements to use ultra low flush toilets in new development projects; assumed that requirements will reduce toilet and urinal flushing demand by half on average compared to literature estimates. Ultra low flush toilets are required in all new construction in California as of January 1, 1992. Ultra low flush toilets must use no more than 1.6 gallons per flush and Ultra low flush urinals must use no more than 1 gallon per flush. Note: If zero flush urinals are being used, adjust accordingly.

B.3.2.2 General Requirements for Irrigation Demand Calculations

The following guidelines should be followed for computing harvested water demand from landscape irrigation:

- If reclaimed water is planned for use for landscape irrigation, then the demand for harvested stormwater should be reduced by the amount of reclaimed water that is available during the wet season.
- Irrigation rates should be based on the irrigation demand exerted by the types of landscaping that are proposed for the project, with consideration for water conservation requirements.
- Irrigation rates should be estimated to reflect the average wet season rates (defined as November through April) accounting for the effect of storm events in offsetting harvested water demand. In the absence of a detailed demand study, it should be assumed that irrigation demand is not present during days with greater than 0.1 inches of rain and the subsequent 3-day period. This irrigation shutdown period is consistent with standard practice in land application of wastewater and is applicable to stormwater to prevent irrigation from resulting in dry weather runoff. Based on a statistical analysis of San Diego



85th Percentile Isopluvials of 24-hr Precipitation

This map shows the 85th percentile isopluvial contour lines. The 85th percentile is a 24-hr rainfall total. It represents a value such that 85% of the observed 24-hr rainfall totals will be less than the value indicated on the specified contour line.

Data Source: Fred McCamic, County of San Diego, Department of Public Works, Cartographic Services. Rand Allan, County of San Diego, Department of Public Works, Flood Control Engineering. SanGIS 2015.

DISCLAIMER: **This map should not be used for Engineering, Survey, or Site-Specific Analysis.**
Every reasonable effort has been made to assure the accuracy of the data provided; nevertheless, some information may not be accurate. The City of Encinitas assumes no liability or responsibility arising from the use of or reliance upon this information.
Map Coordinates: Stateplane NAD83 Feet, CA Zone 6. Photo date: 7/2009. 4in pixel resolution. Digital true color. Ortho and Topo positional accuracy meets precision adequate to support NMAS, 1"=100' mapping.

City of Encinitas

Precip. = 0.53"

Figure B.1-1: 85th Percentile 24-hour Isopluvial Map

PROPOSED AREA TABULATION EXHIBIT

LEGEND

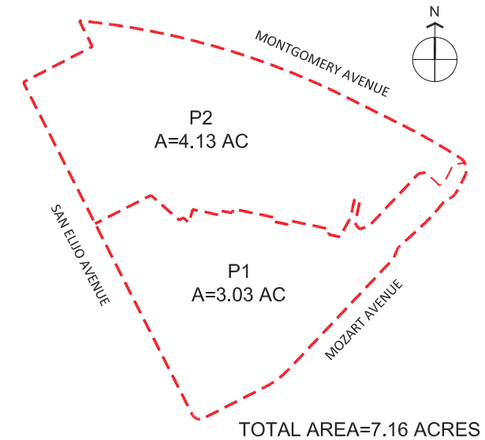
		BASIN P1	BASIN P2
	PROPOSED PERVIOUS AREA	AREA = 57,196 SF	AREA = 79,236 SF
	PROPOSED IMPERVIOUS AREA	AREA = 74,907 SF	AREA = 100,706 SF
		TOTAL = 132,103 SF (3.03-ACRES)	TOTAL = 179,942 SF (4.13-ACRES)

PROPERTY LINE

PROPSOED DRAINAGE BOUNDARY LINE

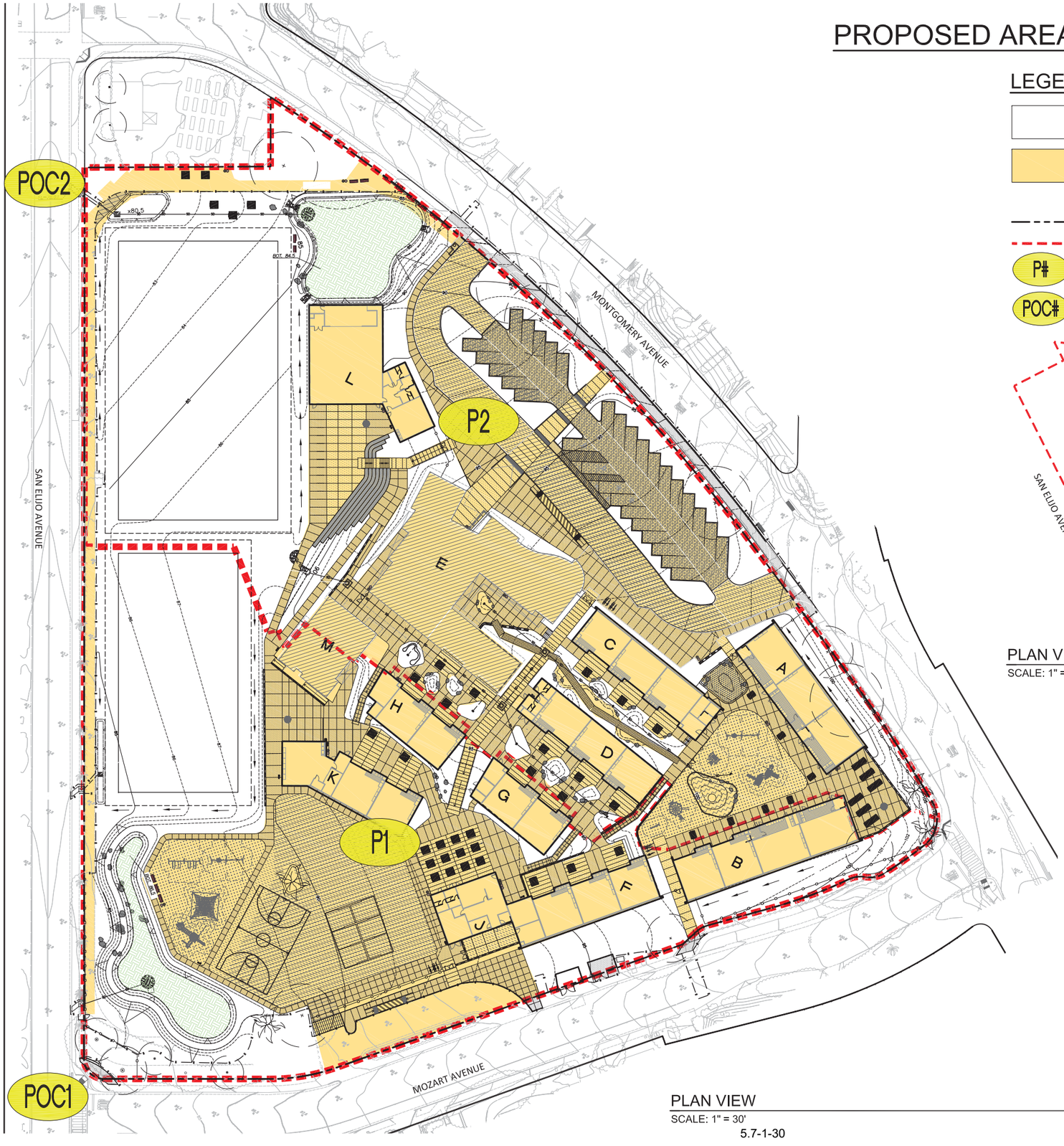
P# PROPOSED DRAINAGE SUB-CATCHMENT DESIGNATION

POC# POINT-OF-COMPARISON



TOTAL AREA=7.16 ACRES

PLAN VIEW
SCALE: 1" = 100'
0' 50' 100' 200'



PLAN VIEW
SCALE: 1" = 30'
0' 15' 30' 60'

5.7-1-30

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Project 17110

06/08/18	100% DD
07/31/18	50% CD

PROPOSED AREA TABULATION EXHIBIT

PR1

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Attachment 1d

Worksheet C.4-1: Categorization of Infiltration Feasibility Condition

Categorization of Infiltration Feasibility Condition		Worksheet C.4-1	
Part 1 - Full Infiltration Feasibility Screening Criteria **Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?**			
Criteria	Screening Question	Yes	No
1	**Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		X
Provide basis: Six percolation tests were performed at the site. Based on the results of the testing for tests conducted within or near proposed BMP's, the calculated design infiltration rates were as follows: BMP1: 0.3471 in/hr BMP2: 0.3407 in/hr Appendix E of the CTE Preliminary Geotechnical Investigation report discusses the percolation rates and infiltration calculations. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
2	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	X	
Provide basis: Although the rates are below 0.5 inches per hour, greater rates are not anticipated to increase the risk of geotechnical hazards at BMP1. However, at the design rates of partial infiltration, ponded water within the BMP may destabilize the berm at BMP1. Therefore, as an added precaution it may be prudent to line the sidewalls of this basin with an impermeable membrane to a depth below the bottom of the slope/berm. Due to the proximity of a proposed structure to BMP2, CTE recommends lining the sidewalls of the basin as described in Appendix E of the CTE soils report to mitigate the potential for geotechnical hazards. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			

Worksheet C.4-1 Page 2 of 4			
Criteria	Screening Question	Yes	No
3	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, stormwater pollutants or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Based on site explorations and knowledge of the site area, groundwater is anticipated to be deeper than at least 10 feet below the bottom of the planned basin bottoms. Infiltration at the site is not anticipated to increase the risk of groundwater contamination. According to Geotracker online (a State of California on line resource for listings of regulated contaminated sites), there are no open LUST cases in the site area that could impact the site. The proposed development is not industrial and capture of surface waters is not anticipated to increase the risk of groundwater contamination. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
4	**Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: As stated, the infiltration rates observed are less than 0.5 inches per hour. However, infiltration at the site is not anticipated to cause potential water balance issues. The site and up-gradient properties are not known contaminated sites according to Geotracker, a State of California on line resource for listings of regulated contaminated sites. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
Part 1 Result*	If all answers to rows 1 - 4 are "**Yes**" a full infiltration design is potentially feasible. The feasibility screening category is **Full Infiltration** If any answer from row 1-4 is "**No**", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2		Not Full

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by City Engineer to substantiate findings.

Worksheet C.4-1 Page 3 of 4

Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	**Do soil and geologic conditions allow for infiltration in any appreciable rate or volume?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	X	

Provide basis:

Six percolation tests were performed at the site. Based on the results of the testing for tests conducted within or near proposed BMP's, the calculated design infiltration rates were as follows:
BMP1: 0.3407 in/hr
BMP2: 0.3471 in/hr

Appendix E of the CTE Preliminary Geotechnical Investigation report discusses the percolation rates and infiltration calculations. The determination of "appreciable" is a function of interpretation by the City of Encinitas.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.

6	**Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	X	

Provide basis: Based on the obtained rates, infiltration is not anticipated to increase the risk of geotechnical hazards at BMP1. However, at the design rates of partial infiltration, ponded water within the BMP may destabilize the berm at BMP1. Therefore, as an added precaution it may be prudent to line the sidewalls of this basin with an impermeable membrane to a depth below the bottom of the slope/berm. Due to the proximity of a proposed structure to BMP2, CTE recommends lining the basin as described in Appendix E of the CTE soils report to mitigate the potential for geotechnical hazards at this BMP.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.

Worksheet C.4-1 Page 4 of 4			
Criteria	Screening Question	Yes	No
7	**Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, stormwater pollutants or other factors)?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Based on site explorations and knowledge of the site area, groundwater is anticipated to be deeper than at least 10 feet below the bottom of the planned basin bottoms. Infiltration at the site is not anticipated to increase the risk of groundwater contamination. According to Geotracker online (a State of California on line resource for listings of regulated contaminated sites), there are no open LUST cases in the site area that could impact the site. The proposed development is not industrial and capture of surface waters is not anticipated to increase the risk of groundwater contamination. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
8	**Can infiltration be allowed without violating downstream water rights?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Due to minimal topographic relief, it is unlikely that infiltrated water could increase the risk of changing the seasonality of ephemeral streams or increase the risk of contaminating surface waters that currently exist. To CTE's knowledge there is no downstream water rights violation as the site infiltrate is anticipated to remain within or relatively close to the property. However, this question is better directed to the project designers who have access to legal documents such as property rights and easements. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
Part 2 Result*	If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is **Partial Infiltration.** If any answer from row 5-8 is no, then infiltration of any volume is considered to be **infeasible** within the drainage area. The feasibility screening category is **No Infiltration.**	Partial Infiltration	

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

Attachment 1e

POLLUTANT CONTROL BMP DESIGN

Biofiltration basins will serve as combined pollutant control and treatment control BMPs. The San Diego Hydrology Model v. 3.1 was used to perform the analyses for the two proposed biofiltration basins. See Attachment 2d for the calculations.

ATTACHMENT 2 - BACKUP FOR PDP HYDROMODIFICATION CONTROL MEASURES

This is the cover sheet for Attachment 2.

□ Mark this box if this attachment is not included because the project is exempt from PDP hydromodification management requirements.

Indicate which items are included behind this cover sheet:

Attachment	Contents	Checklist
Attachment 2a	Hydromodification Management Exhibit (Required)	X Included Combined with Attachment 1a. See Hydromodification Management Exhibit Checklist on the back of this Attachment cover sheet.
Attachment 2b	Management of Critical Coarse Sediment Yield Areas (WMAA Exhibit is required, additional analyses are optional) See Section 6.2 of the BMP Design Manual.	X Exhibit showing project drainage boundaries marked on WMAA Critical Coarse Sediment Yield Area Map (Required) Optional analyses for Critical Coarse Sediment Yield Area Determination □ 6.2.1 Verification of Geomorphic Landscape Units Onsite □ 6.2.2 Downstream Systems Sensitivity to Coarse Sediment □ 6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite
Attachment 2c	Geomorphic Assessment of Receiving Channels (Optional) See Section 6.3.4 of the BMP Design Manual.	□ Not performed X Included □ Submitted as separate stand-alone document
Attachment 2d	Flow Control Facility Design, including Structural BMP Drawdown Calculations and Overflow Design Summary (Required) See Chapter 6 and Appendix G of the BMP Design Manual	X Included □ Submitted as separate stand-alone document
Attachment 2e	Vector Control Plan (Required when structural BMPs will not drain in 96 hours)	□ Included X Not required because BMPs will drain in less than 96 hours

Use this checklist to ensure the required information has been included on the Hydromodification Management Exhibit:

The Hydromodification Management Exhibit must identify:

X Underlying hydrologic soil group

X Approximate depth to groundwater

X Existing natural hydrologic features (watercourses, seeps, springs, wetlands)

X Critical coarse sediment yield areas to be protected

X Existing topography

X Existing and proposed site drainage network and connections to drainage offsite

X Proposed grading

X Proposed impervious features

X Proposed design features and surface treatments used to minimize imperviousness

X Point(s) of Compliance (POC) for Hydromodification Management

X Existing and proposed drainage boundary and drainage area to each POC (when necessary, create separate exhibits for pre-development and post-project conditions)

X Structural BMPs for hydromodification management (identify location, type of BMP, and size/detail)

Attachment 2a is combined with Attachment 1a

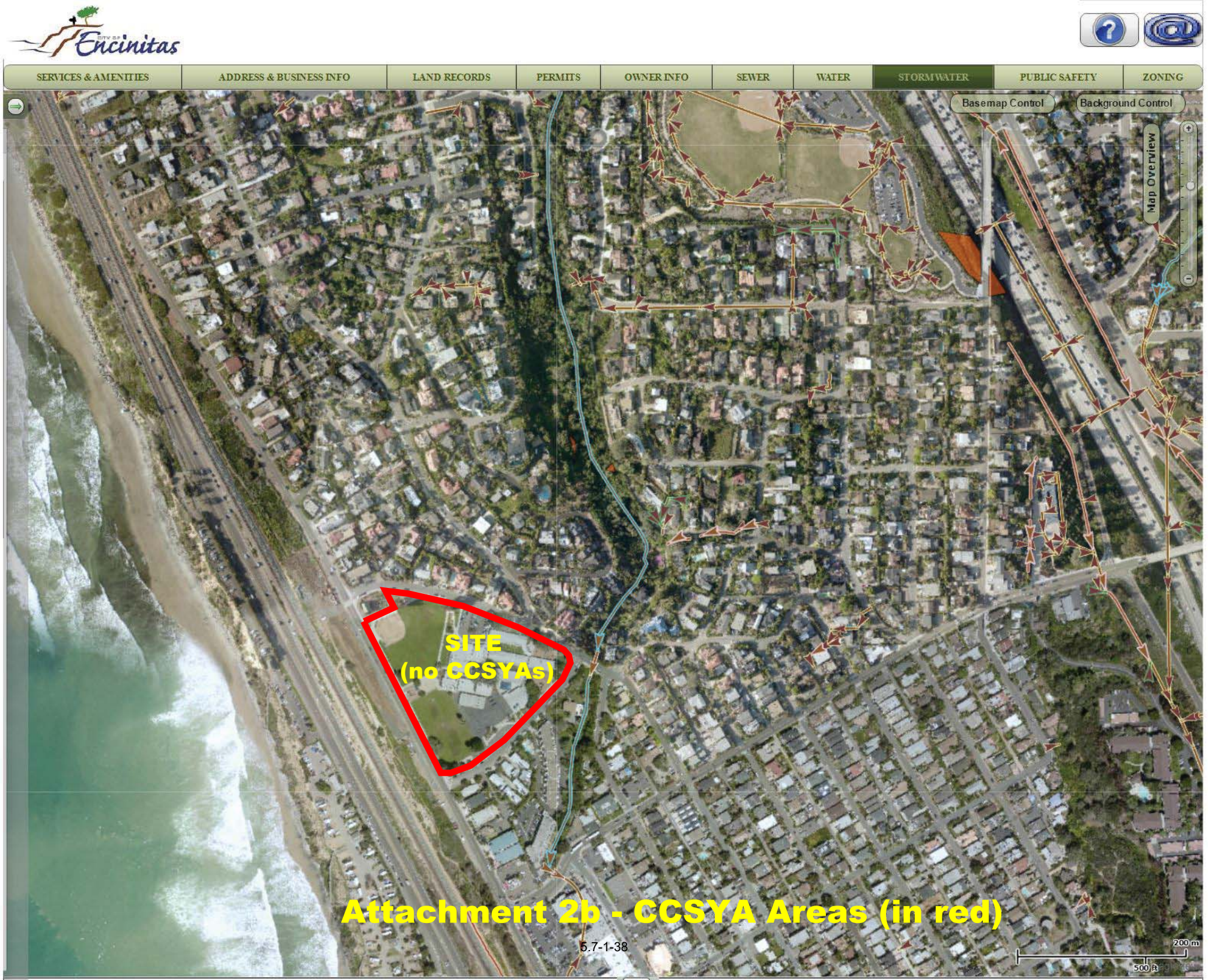
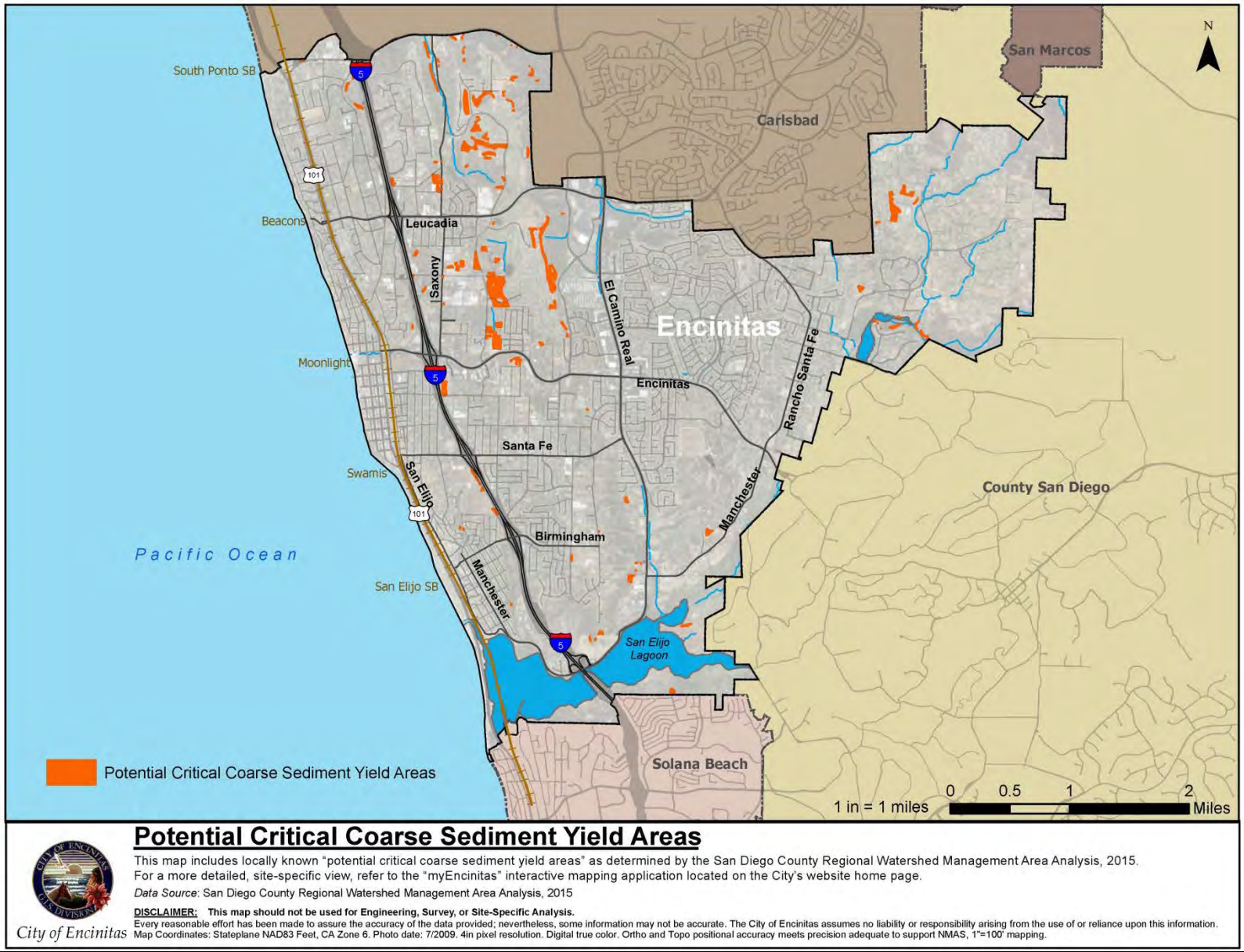

Encinitas
SERVICES & AMENITIES
ADDRESS & BUSINESS INFO
LAND RECORDS
PERMITS
OWNER INFO
SEWER
WATER
STORMWATER
PUBLIC SAFETY
ZONING
Basemap Control
Background Control
Map Overview
SITE
(no CCSYAs)
Attachment 2b - CCSYA Areas (in red)
5.7-1-38
200 m
500 ft

Figure H-1: Potential Critical Coarse Sediment Yield Areas within the City of Encinitas



Attachment 2c
HYDROMODIFICATION SCREENING

FOR THE

CARDIFF SCHOOL

August 31, 2018

Wayne W. Chang, MS, PE 46548

ChangConsultants
Civil Engineering ◦ Hydrology ◦ Hydraulics ◦ Sedimentation

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FOR REVIEW ONLY

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APPENDICES

A. SCCWRP Reference Documents and Initial Desktop Analysis

B. SCCWRP Field Screening Data

INTRODUCTION

The County of San Diego's March 2011, *Final Hydromodification Management Plan,* and January 8, 2011, *Standard Urban Stormwater Mitigation Plan* (SUSMP) as well as the City of Encinitas' February 16, 2016, *Engineering Design Manual, Chapter 7: BMP Manual* outline low flow thresholds for hydromodification analyses. The thresholds are based on a percentage of the pre-project 2-year flow (Q_2), i.e., $0.1Q_2$ (low flow threshold and high susceptibility to erosion), $0.3Q_2$ (medium flow threshold and medium susceptibility to erosion), or $0.5Q_2$ (high flow threshold and low susceptibility to erosion). A flow threshold of $0.1Q_2$ represents a natural downstream receiving conveyance system with a high susceptibility to bed and/or bank erosion. This is the default value used for hydromodification analyses and will result in the most conservative (largest) on-site facility sizing. A flow threshold of $0.3Q_2$ or $0.5Q_2$ represents downstream receiving conveyance systems with a medium or low susceptibility to erosion, respectively. In order to qualify for a medium or low erosion susceptibility rating, a project must perform a channel screening analysis based on the March 2010, *Hydromodification Screening Tools: Field Manual for Assessing Channel Susceptibility,* developed by the Southern California Coastal Water Research Project (SCCWRP). The SCCWRP results are compared with the critical shear stress results from the County of San Diego to establish the appropriate erosion susceptibility threshold of low, medium, or high.



Vicinity Map

This report provides a hydromodification screening analysis for the Cardiff School project being designed by Kettler Leweck Engineering. The site currently contains a K-3 elementary school and is located at 1888 Montgomery Avenue in the Cardiff-by-the-Sea community in the city of Encinitas (see the Vicinity Map). The project proposes modernization and reconstruction of the school. The work includes demolition of five one-story buildings and three relocatable classroom buildings, construction of ten one-story buildings including classrooms, a makerspace lab, food service, a multipurpose room, and associated support spaces. Improvements also include a new parking lot and drop-off, reconstruction of hardcourts, playgrounds, landscaping, a lunch court, shade structures, an entry trellis, perimeter fencing/gates, and an outdoor assembly area.

Under pre-project conditions, storm runoff from the existing elementary school site flows in two general directions: north and south (see the Flow Patterns Exhibit in Appendix A). The northerly portion of the site flows towards its northwest corner at the intersection of San Elijo Avenue and Montgomery Avenue. The northerly runoff is conveyed west across San Elijo Avenue near the intersection in a concrete cross-gutter. The runoff will then be conveyed south by hardened SANDAG drainage facilities that are under construction and existing hardened City drainage facilities (concrete channels, corrugated metal pipe, and riprap) to San Elijo Lagoon immediately east of South Coast Highway 101.

The southerly portion of the site flows towards the adjacent San Elijo Avenue and Mozart Avenue. The runoff is ultimately conveyed south along the existing San Elijo Avenue curb and gutter to an existing storm drain system near Liverpool Drive. The storm drain system discharges into a recently constructed SANDAG open cell concrete block channel on the west side of San Elijo Avenue at Liverpool Drive. The southerly area runoff combines with the northerly area runoff in the SANDAG channel. The channel then connects to the aforementioned hardened City drainage facilities that discharge to San Elijo Lagoon.

Under post-project conditions, the majority of the development area runoff will be conveyed to one of two proposed biofiltration basins for treatment and flow control. A northerly biofiltration basin will treat the northerly project runoff while a southwesterly biofiltration basin will treat the southerly project runoff. Both biofiltration basin outflows will be piped to San Elijo Avenue. In addition, the westerly portion of the site will contain self-mitigating areas whose runoff will sheet flow directly onto San Elijo Avenue. The overall project flows will then be directed north and south away from the site, and ultimately flow into San Elijo Lagoon as described in the prior paragraph.

The SCCWRP screening tool requires both office and field work to establish the vertical and lateral susceptibility of a downstream receiving channel to erosion. The vertical and lateral assessments are performed independently of each other although the lateral results can be affected by the vertical rating. A screening analysis was performed to assess the low flow threshold for the project's point of compliance (POC). A POC is the first location where runoff from the project discharges into a natural system. The channel screening analysis is performed below the POC. The POC for the project is at the aforementioned outlet of the hardened, non-erodible drainage facilities to San Elijo Lagoon.

The initial step in performing the SCCWRP screening analysis is to establish the domain of analysis and the study reaches within the domain. This is followed by office and field components of the screening tool along with the associated analyses and results. The following sections cover these procedures in sequence.

DOMAIN OF ANALYSIS

SCCWRP defines an upstream and downstream domain of analysis, which establish the study limits. The County of San Diego's HMP specifies the downstream domain of analysis based on the SCCWRP criteria. The HMP indicates that the downstream domain is the first point where one of these is reached:

- at least one reach downstream of the first grade control point (preferably second grade control location)
- tidal backwater/lentic waterbody
- equal order tributary
- accumulation of 50 percent drainage area for stream systems or 100 percent drainage area for urban conveyance systems (storm drains, hardened channels, etc.)

The upstream limit is defined as:

- proceed upstream for 20 channel top widths or to the first grade control point, whichever comes first. Identify hard points that can check headward migration and evidence of active headcutting.

SCCWRP defines the maximum spatial unit, or reach (a reach is circa 20 channel widths), for assigning a susceptibility rating within the domain of analysis to be 200 meters (656 feet). If the domain of analysis is greater than 200 meters, the study area should be subdivided into smaller reaches of less than 200 meters for analysis, as appropriate. Most of the units in the HMP's SCCWRP analysis are metric. Metric units are used in this report only where given so in the HMP. Otherwise English units are used.

Downstream Domain of Analysis

The downstream domain of analysis for the study area has been determined by assessing and comparing the four bullet items above to determine which is closest to the point of compliance (POC). As discussed in the Introduction, the project runoff is either self-mitigating or will be collected, treated, and then directed by private drainage facilities to San Elijo Avenue adjacent to the site. From here, the runoff will be conveyed by hardened, non-erodible drainage facilities to San Elijo Lagoon immediately east of South Coast Highway 101. The drainage facilities at the outlet into the lagoon consist of a concrete-lined trapezoidal channel onto riprap (see Figure 1). The channel and riprap are non-erodible, so the POC is at the bottom of the riprap, i.e., where the riprap meets the lagoon floor. The downstream domain of analysis is selected below this POC.

Per the first bullet item, the first permanent grade control below the POC was sought during a site visit. The Pacific Ocean is on the west side of South Coast Highway 101, so San Elijo Lagoon meets the Pacific Ocean immediately west of the POC, i.e., the lagoon mouth is in the vicinity of the South Coast Highway bridge. There are no permanent grade controls between the POC and Pacific Ocean, so the bullet item 1 criteria does not occur.

The second bullet item is the tidal backwater or lentic (standing or still water such as ponds, pools, marshes, lakes, lagoons, etc.) waterbody location. The nearest tidal backwater is at the lagoon mouth where San Elijo Lagoon discharges to the Pacific Ocean. The second bullet item criteria is met at this location, which is in close proximity to the POC.

The third bullet item is met when the natural drainage course below a POC confluences with a stream with an equal order or larger tributary area. San Elijo Lagoon does not confluence with an equal order or larger tributary between the POC and Pacific Ocean, so the third bullet item criteria does not occur.

The final bullet item is related to the tributary drainage area that is accumulated along the drainage course below the POC. San Elijo Lagoon will not accumulate anywhere near 50 or 100 percent drainage area in the short distance between the POC and Pacific Ocean, so the fourth bullet item criteria does not occur.

From the above information, the downstream domain of analysis location for the POC is based the second bullet item. Of the four bullet items, this is the first point reached below the POC and is, in fact, the only bullet criteria that is met.

In order to determine the specific downstream domain of analysis location, the tidal backwater must be established. Section 1.6 of the *BMP Design Manual* states that hydromodification management requirements are related to the "mean high tide water surface elevation," so the Pacific Ocean tidal backwater is defined by its mean high water level. NOAA provides tidal information measured at Scripps Pier in La Jolla (see Appendix A), which is the closest tidal recording station. The data indicates that the mean high water is at elevation 4.60 feet mean lower low water (MLLW) or 4.41 feet NAVD 88.

The POC elevation at the riprap was field surveyed for comparison with the mean high tide elevation (see the Study Area Exhibit in Appendix A). The field survey determined that the elevation of the bottom of the exposed riprap at the POC is -0.64 feet NGVD 29 or 1.52 NAVD 88 (see the Corpscon vertical datum conversion in Appendix A), which is nearly 3 feet below mean high water. Based on this, a low susceptibility to erosion can be claimed since daily tidal activity reaches the POC and will dominate hydromodification effects on the lagoon floor. It is noted that the mean tide is at elevation 2.75 feet MLLW or 2.56 feet NAVD 88, so the POC is even below mean tide by over a foot.

Despite the tidal influence at the POC a hydromodification screening assessment was performed for the natural lagoon floor downstream of the POC (see the Study Area Exhibit) to further confirm the results. The downstream domain of analysis was set at the estimated lagoon water

location during lower tides. The estimated water location was based on site observations during various tidal conditions and review of aerial photographs.

Upstream Domain of Analysis
The upstream domain of analysis must be established for the POC. The areas upstream of the POC include either improved drainage facilities or the lagoon. Therefore, the POC establishes the upstream domain of analysis location.

Study Reaches within Domain of Analysis
The entire domain of analysis extends 15 feet from the upstream domain of analysis location at the POC to the downstream domain of analysis at the estimated low tide location. The entire domain of analysis was modeled as a single reach, Reach 1, which is within the 656-foot maximum reach length specified by SCCWRP.

INITIAL DESKTOP ANALYSIS

After the domain of analysis is established, SCCWRP requires an "initial desktop analysis" that involves office work. The initial desktop analysis establishes the watershed area, mean annual precipitation, valley slope, and valley width. These terms are defined in Form 1, which is included in Appendix A. The following discusses the initial desktop analyses and the corresponding topographic mapping used.

The watershed area tributary to Reach 1 has been delineated in HDR's March 2, 2016, *Final Drainage Report, San Elijo Lagoon Double Track Project,* which analyzed SANDAG's aforementioned drainage facilities (see the Introduction). Relevant excerpts from the report are included in Appendix A. Drainage Areas C through F and H are tributary to Reach 1 and cover 442.66 acres (0.6917 square miles).

The mean annual precipitation was obtained from rain gages nearest to the site. These include the Western Regional Climate Center's Lockwood Mesa (Solana Beach) gage south of the site and Oceanside Marina gage north of the site (see Appendix A). The average annual rainfall measured at the closest gage, Lockwood Mesa, for the period of record from 1940 to 1965 is 9.66 inches. Although this gage covers a relatively long duration, it does not have recent information. The next closest station with extensive and recent data is the Oceanside Marina gage with a period of record from 1909 to 2012. The Oceanside Marina gage measured an average annual rainfall of 10.54 inches over this period. Since the Oceanside gage has a greater period of record and its precipitation is slightly higher than the Lockwood Mesa gage, the Oceanside Marina average annual rainfall of 10.54 inches was used for the analysis. The higher rainfall will yield more conservative (greater erosion) results.

The mean high water elevation is above the POC elevation and the field survey shows that the POC elevation is lower than surrounding ground elevations. These suggest that the valley slope below the POC is increasing, rather than decreasing. For the purposes of the screening assessment a nearly level valley slope is selected, and the Reach 1 valley slope is set at 0.10 percent. The valley width of Reach 1 is based on the effective flow corridor below the riprap.

Based on the field survey and review of aerial photographs, the valley width is approximately 15 feet. The drainage area, valley slope, and valley width for Reach 1 are included in Table 1.

Reach	Tributary Drainage Area, sq. mi.	Valley Slope, m/m	Valley Width, m
1	0.6917	0.10	4.57

Table 1. Summary of Drainage Area, Valley Slope, and Valley Width

These values were input to a spreadsheet to calculate the simulated peak flow, screening index, and valley width index outlined in Form 1. The input data and results are tabulated in Appendix A. This completes the initial desktop analysis.

FIELD SCREENING

After the initial desktop analysis is complete, a field assessment must be performed. The field assessment is used to establish a natural channel's vertical and lateral susceptibility to erosion. SCCWRP states that although they are admittedly linked, vertical and lateral susceptibility are assessed separately for several reasons. First, vertical and lateral responses are primarily controlled by different types of resistance, which, when assessed separately, may improve ease of use and lead to increased repeatability compared to an integrated, cross-dimensional assessment. Second, the mechanistic differences between vertical and lateral responses point to different modeling tools and potentially different management strategies. Having separate screening ratings may better direct users and managers to the most appropriate tools for subsequent analyses.

The field screening tool uses combinations of decision trees and checklists. Decision trees are typically used when a question can be answered fairly definitively and/or quantitatively (e.g., d_{50} < 16 mm). Checklists are used where answers are relatively qualitative (e.g., the condition of a grade control). Low, medium, high, and very high ratings are applied separately to the vertical and lateral analyses. When the vertical and lateral analyses return divergent values, the most conservative value shall be selected as the flow threshold for the hydromodification analyses.

Vertical Stability

The purpose of the vertical stability decision tree (Figure 6-4 in the County of San Diego HMP) is to assess the state of the channel bed with a particular focus on the risk of incision (i.e., down cutting). The decision tree is included in Figure 5. The first step is to assess the channel bed resistance. There are three categories defined as follows:

1. Labile Bed – sand-dominated bed, little resistant substrate.

2. Transitional/Intermediate Bed – bed typically characterized by gravel/small cobble, Intermediate level of resistance of the substrate and uncertain potential for armoring.

3. Threshold Bed (Coarse/Armored Bed) – armored with large cobbles or larger bed material or highly-resistant bed substrate (i.e., bedrock).

Based on the channel photographs in the figures and site investigation, the bed material and resistance are generally within the transitional/intermediate bed category. The lagoon bed contains smaller grain sizes typically found in a labile bed, but this is offset by the proximity to the Pacific Ocean and its tidal influence. In addition to the material size, there are several factors that establish the erodibility of a channel such as the flow rate (i.e., size of the tributary area), grade controls, channel slope and length, vegetative cover, channel planform, etc. The Introduction of the SCCWRP *Hydromodification Screening Tools: Field Manual* identifies several of these factors. When multiple factors influence erodibility, it is appropriate to perform the more detailed SCCWRP analysis, which is to analyze a channel according to SCCWRP's transitional/intermediate bed procedure. This requires the most rigorous steps and will generate appropriate results given the range of factors that define erodibility. The transitional/intermediate bed procedure takes into account that bed material may fall within the labile category (the bed material size is used in SCCWRP's Form 3 Figure 4), but other factors may trend towards a less erodible condition. Dr. Eric Stein from SCCWRP, who co-authored the *Hydromodification Screening Tools: Field Manual* in the *Final Hydromodification Management Plan* (HMP), indicated that it would be appropriate to analyze channels with multiple factors that impact erodibility using the transitional/intermediate bed procedure. Consequently, this procedure was used to produce more accurate results.

Transitional/intermediate beds cover a wide susceptibility/potential response range and need to be assessed in greater detail to develop a weight of evidence for the appropriate screening rating. The three primary risk factors used to assess vertical susceptibility for channels with transitional/intermediate bed materials are:

1. Armoring potential – three states (Checklist 1)

2. Grade control – three states (Checklist 2)

3. Proximity to regionally-calibrated incision/braiding threshold (Screening Index Threshold – Probability Diagram)

These three risk factors are assessed using checklists and a diagram (see Appendix B), and the results of each are combined to provide a final vertical susceptibility rating for the intermediate/transitional bed-material group. Each checklist and diagram contains a Category A, B, or C rating. Category A is the most resistant to vertical changes while Category C is the most susceptible.

Checklist 1 determines armoring potential of the channel bed. The channel bed along Reach 1 is within Category C. Reach 1 is in adjacent to the beach, so the grain sizes are smaller, sand-sized particles with a lessor armoring potential.

Checklist 2 determines grade control characteristics of the channel bed. This is reliant on the spacing of the grade controls. The three categories for Checklist 2 are related to a grade control

spacing of $2/S_v$ and $4/S_v$, where S_v is the valley slope from Appendix A. The $2/S_v$ and $4/S_v$ results are in meters, so a factor is applied to convert to feet. A reach is in Category A if it has a spacing of less than $2/S_v$, in Category B is it has a spacing between $2/S_v$ and $4/S_v$, and in Category C if it has a spacing greater than $4/S_v$. The $2/S_v$ and $4/S_v$ values for Reach 1 are 6,562 and 13,123 feet, respectively. Reach 1 is 15 feet long, which is much less than its $2/S_v$ and $4/S_v$ values. In addition, the Pacific Ocean tidal backwater acts as a natural grade control that prevents erosion of the underlying bed material. Therefore, Reach 1 is within Category A.

The Screening Index Threshold is a probability diagram that depicts the risk of incising or braiding based on the potential stream power of the valley relative to the median particle diameter. The threshold is based on regional data from Dr. Howard Chang of Chang Consultants and others. The probability diagram is based on d_{50} as well as the screening index (INDEX) value determined in the initial desktop analysis (see Appendix A). The Form 1 results in Appendix A determined an INDEX of 0.0015 for Reach 1. The Screening Index Threshold diagram shows that the probability of incising or braiding is less than 50 percent if the INDEX value is 0.015 or less. Since the Reach 1 Screening Index value is less than the 50 percent value, Reach 1 is within Category A.

The overall vertical rating is determined from the Checklist 1, Checklist 2, and Screening Index Threshold results. The scoring is based on the following values:

Category A = 3, Category B = 6, Category C = 9

The vertical rating score is based on these values and the equation:

$$\text{Vertical Rating} = [(\text{armoring} \times \text{grade control})^{1/2} \times \text{screening index score}]^{1/2}$$
$$= [(9 \times 3)^{1/2} \times 3]^{1/2}$$
$$= 3.9$$

Since the vertical rating is less than 4.5, Reach 1 has a low threshold for vertical susceptibility.

Lateral Stability

The purpose of the lateral decision tree (Figure 6-5 from County of San Diego HMP included in Figure 6) is to assess the state of the channel banks with a focus on the risk of widening. Channels can widen from either bank failure or through fluvial processes such as chute cutoffs, avulsions, and braiding. Widening through fluvial avulsions/active braiding is a relatively straightforward observation. If braiding is not already occurring, the next logical step is to assess the condition of the banks. Banks fail through a variety of mechanisms; however, one of the most important distinctions is whether they fail in mass (as many particles) or by fluvial detachment of individual particles. Although much research is dedicated to the combined effects of weakening, fluvial erosion, and mass failure, SCCWRP found it valuable to segregate bank types based on the inference of the dominant failure mechanism (as the management approach may vary based on the dominant failure mechanism). A decision tree (Form 4 in Appendix B) is used in conducting the lateral susceptibility assessment. Definitions and photographic examples are also provided below for terms used in the lateral susceptibility assessment.

The first step in the decision tree is to determine if lateral adjustments are occurring. The adjustments can take the form of extensive mass wasting (greater than 50 percent of the banks are exhibiting planar, slab, or rotational failures and/or scalloping, undermining, and/or tension cracks). The adjustments can also involve extensive fluvial erosion (significant and frequent bank cuts on over 50 percent of the banks). Neither mass wasting nor extensive fluvial erosion was evident within Reach 1 during a field investigation. Reach 1 is very short at 15 feet, does not have pronounced banks, and is subject to tidal influences, so the potential for lateral changes is minor.

The next step in the Form 4 decision tree is to assess the consolidation of the bank material. The banks in Reach 1 are along the lagoon floor, so are gently sloping, which equates to moderate to well-consolidated material. The gently sloping banks showed no evidence of excessive crumbling and are composed of relatively well-packed, uniform particles.

Form 6 (see Appendix B) is used to assess the probability of mass wasting. Form 6 identifies a 10, 50, and 90 percent probability based on the bank angle and bank height. A site visit indicates that the average natural bank angle is much flatter than 2 to 1 (26.6 degrees) in Reach 1. Form 6 shows that the probability of mass wasting and bank failure has less than 10 percent risk for a 26.6 degree bank angle or less regardless of the bank height.

The final two steps in the Form 4 decision tree are based on the braiding risk determined from the vertical rating as well as the Valley Width Index (VWI) calculated in Appendix A. If the vertical rating is high, the braiding risk is considered to be greater than 50 percent. Excessive braiding can lead to lateral bank failure. For Reach 1 the vertical rating is low, so the braiding risk is less than 50 percent. Furthermore, a VWI greater than 2 represents channels unconfined by bedrock or hillslope and, hence, subject to lateral migration. The VWI calculation in the Appendix A spreadsheet shows that the VWI for Reach 1 is 0.45. Since Reach 1 has a VWI less than 2 it has a low risk for lateral migration.

From the above steps, the lateral susceptibility rating is low (red circles are included on the Form 4: Lateral Susceptibility Field Sheet decision tree in Appendix B showing the decision path).

CONCLUSION

The SCCWRP channel screening tools were used to assess the downstream channel susceptibility analyses for the Cardiff School modernization and reconstruction project being designed by Kettler Leweck Engineering. The project's storm runoff will be conveyed to San Elijo Lagoon in hardened, non-erodible drainage facilities. The POC at the lagoon outlet is adjacent to the Pacific Ocean and below both the mean high water and mean tide elevations. This alone allows a claim for a low susceptibility to erosion. Nonetheless, a downstream channel assessment for a reach between the POC and lower lagoon water location was performed based on office analyses and field work. The results indicate a low threshold for vertical and lateral susceptibilities for the study reach within the domain of analysis.

The HMP requires that these results be compared with the critical flow calculator results outlined in the County of San Diego HMP. The critical flow calculator results are included in Appendix B for Reach 1 using the spreadsheet provided by the County. The channel dimensions were estimated from the topographic mapping. Based on these values, the critical flow results returned a low threshold. Therefore, the SCCWRP analyses and critical flow calculator demonstrate that the project can be designed assuming a low susceptibility to erosion, i.e., 0.5Q2.



Figure 1. Upper End of Reach 1 during Lower Tide (Point of Compliance)



Figure 2. Upper End of Reach 1 during Higher Tide

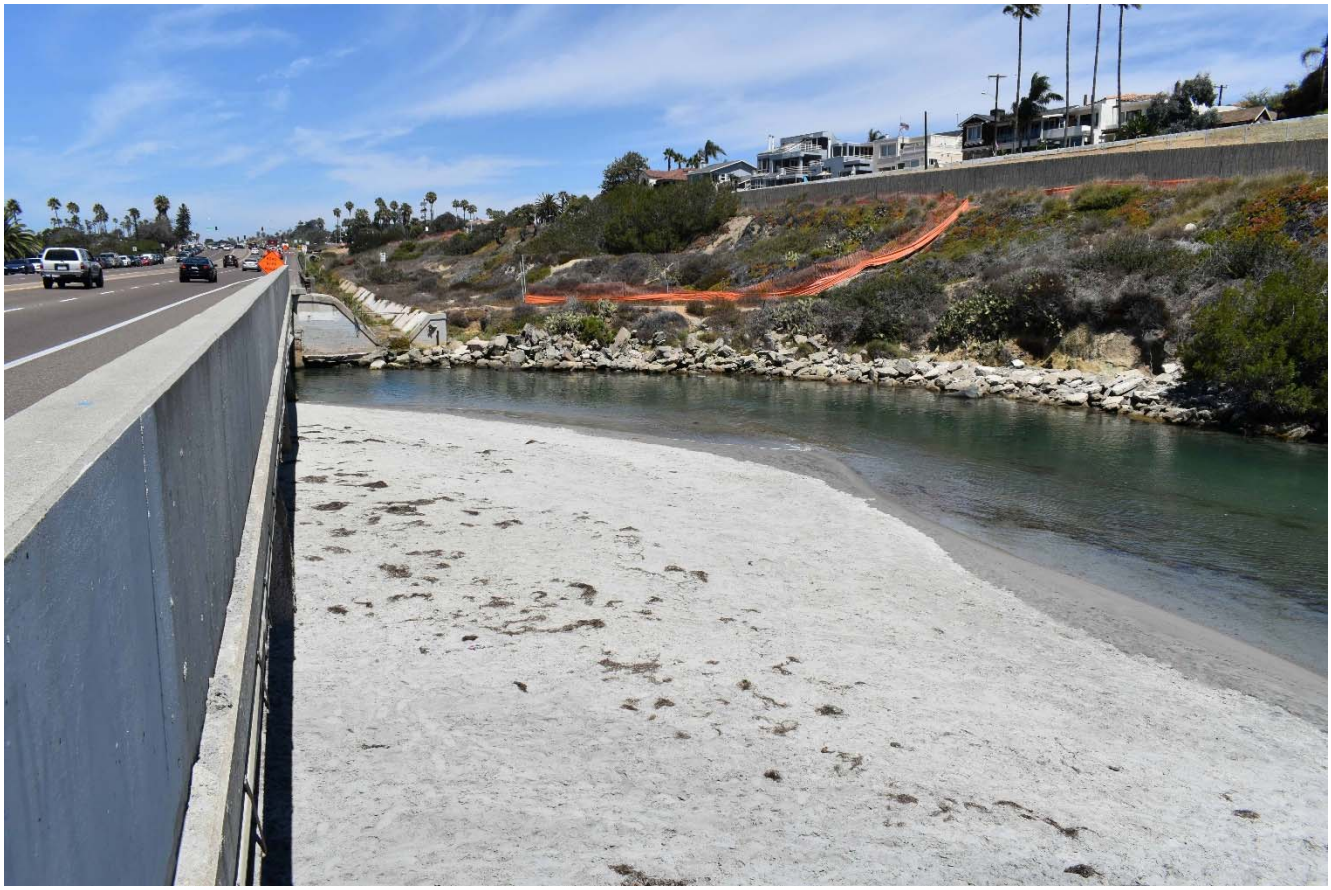


Figure 3. Looking North towards Entire Reach 1



Figure 4. Looking South towards Entire Reach 1

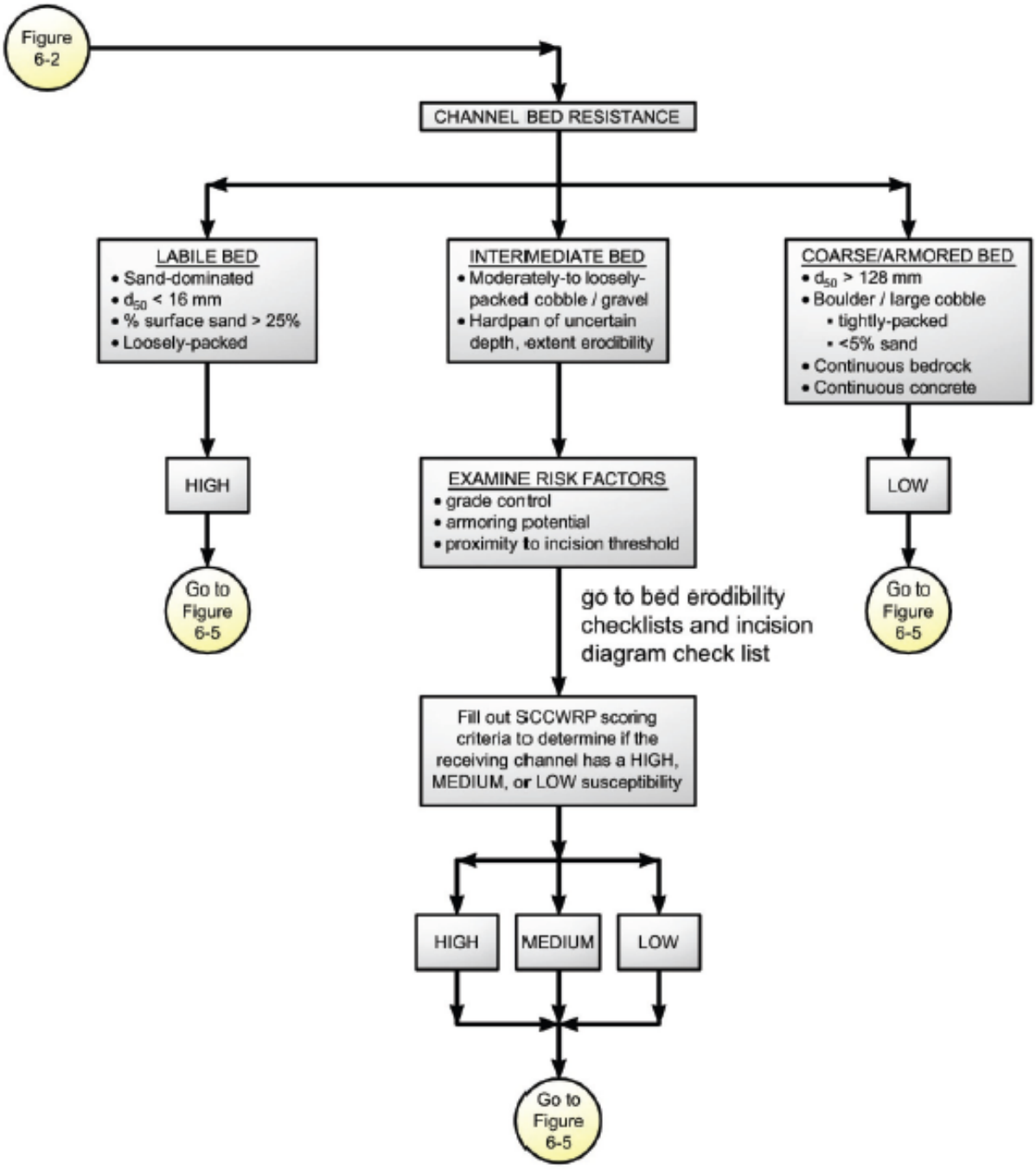


Figure 6-4. SCCWRP Vertical Susceptibility

Figure 5. SCCWRP Vertical Channel Susceptibility Matrix

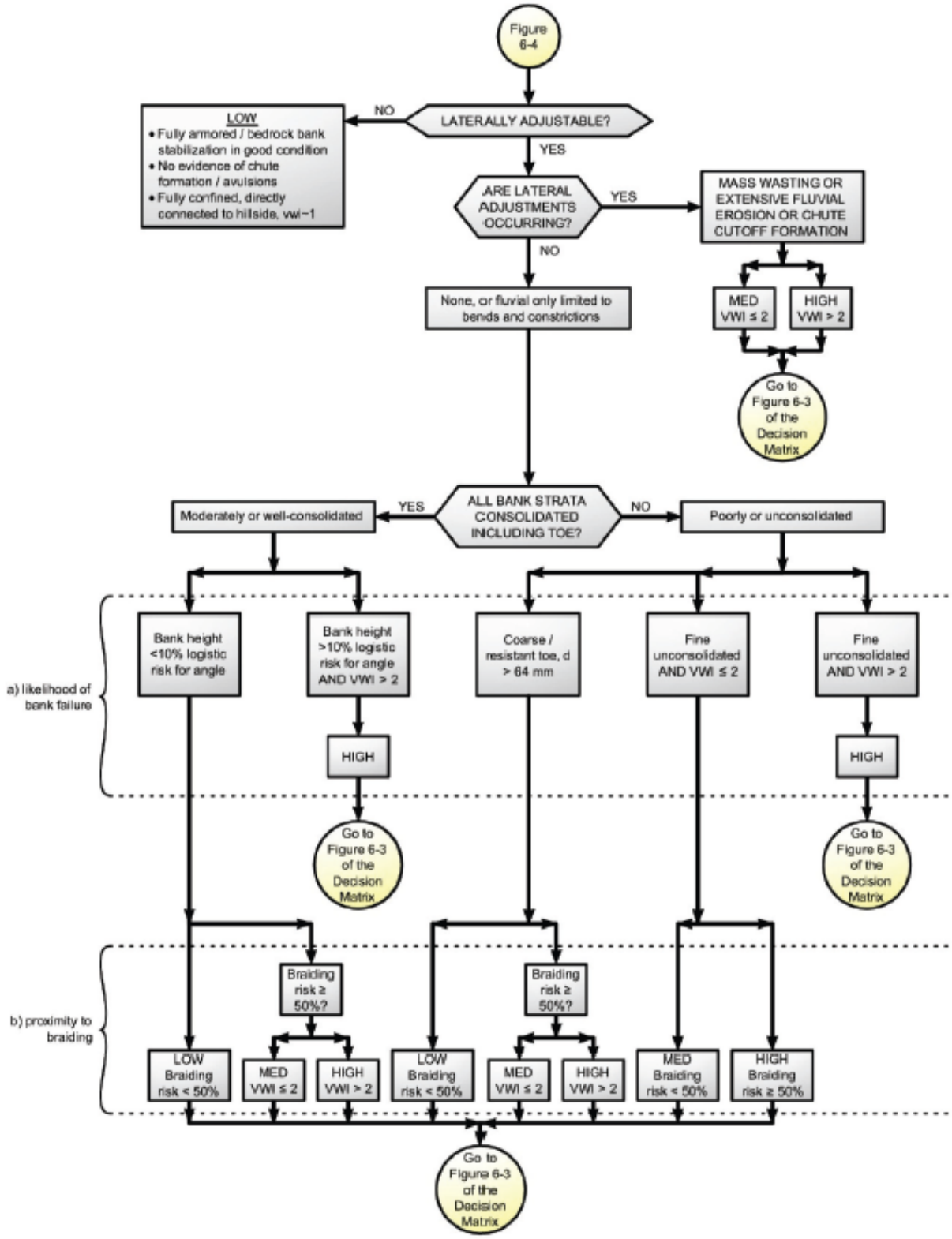


Figure 6-5. Lateral Channel Susceptibility

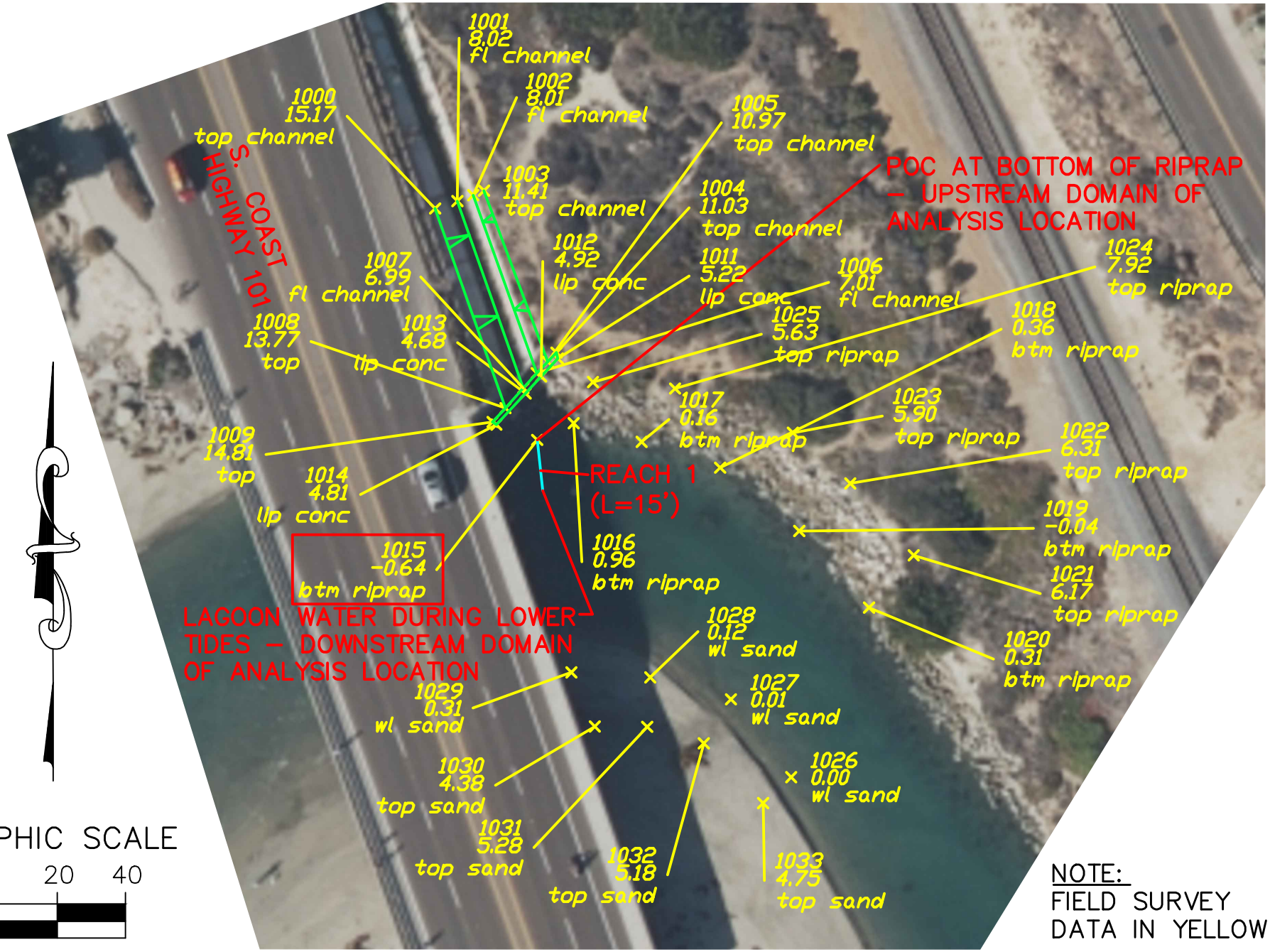
Figure 6. SCCWRP Lateral Channel Susceptibility Matrix

APPENDIX A

SCCWRP REFERENCE DOCUMENTS AND INITIAL DESKTOP ANALYSIS


SITE
Mozart Ave
Rossini Dr
Birmingham Dr
Chesterfield Dr
Norfolk Dr
Aberdeen Dr
Orvnda Dr
San Elijo Ave
S Coast Hwy 101
CURB/GUTTER/
STREET
SANDAG
CONCRETE
CHANNELS
EXISTING
CONCRETE
CHANNEL
EXISTING
CMP
EXISTING
CONCRETE
CHANNEL
S21
FLOW PATTERNS EXHIBIT
SAN ELIJO
LAGOON /
PACIFIC OCEAN

5.7-1-57



STUDY AREA EXHIBIT

FORM 1: INITIAL DESKTOP ANALYSIS

Complete all shaded sections.

IF required at multiple locations, circle one of the following site types:

Applicant Site / Upstream Extent / Downstream Extent

Location: Latitude: 33.01629 Longitude: -117.28089

Description (river name, crossing streets, etc.): Cardiff School -
1888 Montgomery Avenue, Cardiff-by-the-Sea, CA 92007

GIS Parameters: The International System of Units (SI) is used throughout the assessment as the field standard and for consistency with the broader scientific community. However, as the singular exception, US Customary units are used for contributing drainage area (A) and mean annual precipitation (P) to apply regional flow equations after the USGS. See SCCWRP Technical Report 607 for example measurements and "Screening Tool Data Entry.xls" for automated calculations.

Form 1 Table 1. Initial desktop analysis in GIS.

	Symbol	Variable	Description and Source	Value
Watershed properties (English units)	**A**	Area (mi^2)	Contributing drainage area to screening location via published Hydrologic Unit Codes (HUCs) and/or ≤ 30 m National Elevation Data (NED), USGS seamless server	See attached Form 1 table on next page for calculated values for each reach.
	P	Mean annual precipitation (in)	Area-weighted annual precipitation via USGS delineated polygons using records from 1900 to 1960 (which was more significant in hydrologic models than polygons delineated from shorter record lengths)	
Site properties (SI units)	**S_v**	Valley slope (m/m)	Valley slope at site via NED, measured over a relatively homogenous valley segment as dictated by hillslope configuration, tributary confluences, etc., over a distance of up to ~500 m or 10% of the main-channel length from site to drainage divide	
	W_v	Valley width (m)	Valley bottom width at site between natural valley walls as dictated by clear breaks in hillslope on NED raster, irrespective of potential armoring from floodplain encroachment, levees, etc. (imprecise measurements have negligible effect on rating in wide valleys where VWI is >> 2, as defined in lateral decision tree)	

Form 1 Table 2. Simplified peak flow, screening index, and valley width index. Values for this table should be calculated in the sequence shown in this table, using values from Form 1 Table 1.

Symbol	Dependent Variable	Equation	Required Units	Value
Q_{10cfs}	10-yr peak flow (ft^3/s)	$Q_{10cfs} = 18.2 * A^{0.87} * P^{0.77}$	A (mi^2) P (in)	See attached Form 1 table on next page for calculated values for each reach.
Q_{10}	10-yr peak flow (m^3/s)	$Q_{10} = 0.0283 * Q_{10cfs}$	Q_{10cfs} (ft^3/s)	
INDEX	10-yr screening index ($m^{1.5}/s^{0.5}$)	$INDEX = S_v * Q_{10}^{0.5}$	Sv (m/m) Q_{10} (m^3/s)	
W_{ref}	Reference width (m)	$W_{ref} = 6.99 * Q_{10}^{0.438}$	Q_{10} (m^3/s)	
VWI	Valley width index (m/m)	$VWI = W_v/W_{ref}$	W_v (m) W_{ref} (m)	

(Sheet 1 of 1)

SCCWRP FORM 1 ANALYSES

Reach	Area A, sq. mi.	Mean Annual Precip. P, inches	Valley Slope Sv, m/m	Valley Width Wv, m	10-Year Flow Q10cfs, cfs	10-Year Flow Q10, cms
1	0.6917	10.54	0.0010	4.57	81	2.29

Reach	10-Year Screening Index INDEX	Reference Width Wref, m	Valley Width Index VWI, m/m
1	0.0015	10.05	0.45

Drainage Area Excerpts Attached



Final Drainage Report

San Elijo Lagoon Double Track Project

SANDAG

CP Cardiff to CP Craven

March 2, 2016

The existing drainage pattern of the proposed project site is divided into eight major watershed boundaries along the existing track. In general, most of the watersheds are located offsite to the east of the project site and drain westward towards the track. Flows from the watersheds drain through various culverts that cross under the existing track or drain to ditches that run parallel to the existing track, and eventually discharge to the San Elijo Lagoon, which ultimately outlets to the Pacific Ocean.

The Offsite and Onsite Hydrology Exhibits in Appendix A shows the existing and proposed tributary areas, storm drain facilities located within the project limits, and the calculated rational method flow discharges.

Tributary Area A

Runoff from this drainage area consists of surface flow from a neighborhood approximately 8 acres in size adjacent to the project site. The runoff from the neighborhood drains westerly to a 12" Corrugated Metal Pipe (CMP) along the west side of San Elijo Avenue, and outlets to a vegetated slope east of the tracks. The runoff from the neighborhood along with runoff from a two acre vegetated area east of the track drains south to a basin at the bottom of the existing track embankment.

Tributary Area B

Runoff from this drainage area consists of surface flow from a neighborhood approximately 4.3 acres in size adjacent to the project site. The runoff drains westerly to an existing catch basin along the west side of San Elijo Avenue. The runoff travels through an 18" High-Density Polyethylene (HDPE) pipe down the existing slope where it discharges to Culvert 240.10. The catch basin and 18" HDPE pipe were constructed in August 2011 per the as-built plans SI-0087 from the City of Encinitas Engineering Department. Please see Appendix G for these as-built plans.

Additional surface flow from a vegetated area 0.63 acres in size east of the track also drains to Culvert 240.10.

Tributary Area C

Runoff from this drainage area consists of surface flow from the neighborhood approximately 47.5 acres in size adjacent to the project site. The neighborhood is primarily residential housing with areas of commercial development and a park. The majority of the runoff in this area drains westerly towards San Elijo Avenue where it is collected by two pipe culverts, an 18" CMP and a 24" Polyvinyl Chloride (PVC) pipe, on the east side of the roadway.

The two pipes cross under San Elijo Avenue and outlet to a concrete lined channel. Additional surface runoff from the southern portion of the neighborhood and a vegetated area east of the track sheet flows directly into the concrete lined channel. The runoff collected in the concrete lined channel outlets to Culvert 239.94.

Tributary Area D

Runoff from this tributary area consists of surface flow from the neighborhood approximately 31 acres in size adjacent to the project site. The neighborhood is primarily residential housing with areas of commercial development. The runoff drains westerly towards San Elijo Avenue where it is collected by a catch basin on the east side of the roadway. The runoff travels through a 24" Reinforced Concrete Pipe (RCP) to Culvert 239.87. Additional surface runoff near the existing track collects in a 2'x2' grated inlet adjacent to the tracks, which is connected to the 24" RCP.

Tributary Area E

Runoff from this tributary area consists of surface flow from residential areas adjacent to the project site. Surface runoff from a residential area approximately 86.5 acres in size, east of Interstate 5 (I-5), drains westerly towards I-5. The runoff is then captured in a drainage system that crosses under I-5 and is discharged to an open channel that runs west towards the existing track. Additional surface runoff from a residential area approximately 123.4 acres in size west of I-5 is also captured within the open channel. The runoff within the open channel is then discharged into a drainage system which runs under commercial development east of the project site. This system also collects surface runoff from a residential area approximately 60.5 acres in size. All of the runoff collected within this system is then discharged to a natural channel between San Elijo Avenue and the existing track.

North of the natural channel, surface runoff from a neighborhood approximately 89.3 acres in size drains westerly towards the existing track from the adjacent neighborhood east of the track. The runoff drains south in an existing trackside earthen swale until it discharges into the natural channel between San Elijo Avenue and the track. The runoff then drains into Culvert 239.70, and is conveyed under the railroad track into a trapezoidal concrete channel, which eventually discharges to the San Elijo Lagoon.

Tributary Area F

Runoff from this tributary area approximately 3.5 acres in size consists of surface flow from the Pacific Coast Highway, track, and the natural landscaping within the railroad right-of-way between Station 83+75.00 and Station 103+44.09 of existing MT-1. The runoff travels along side the track in a natural channel and is discharged through an 18" CMP into the concrete lined channel before it outlets to the San Elijo Lagoon.

Tributary Area G

Runoff from this tributary area consists of surface flow from the neighborhood approximately 55.0 acres in size located within the Solana Beach city limits adjacent to the project site. The neighborhood primarily consists of residential and commercial developments. The runoff generated within this tributary area discharges to an existing trapezoidal concrete channel parallel to the track which drains in the northward direction to an existing energy dissipator at the south end of the lagoon. The runoff discharges through the existing energy dissipator to an existing basin that is shaped by surrounding access roads. The runoff ponds in the basin, and during a large storm event, overtops the surrounding access roads and drains to the adjacent basin to the north and to the lagoon to the east via an existing concrete mat weir.

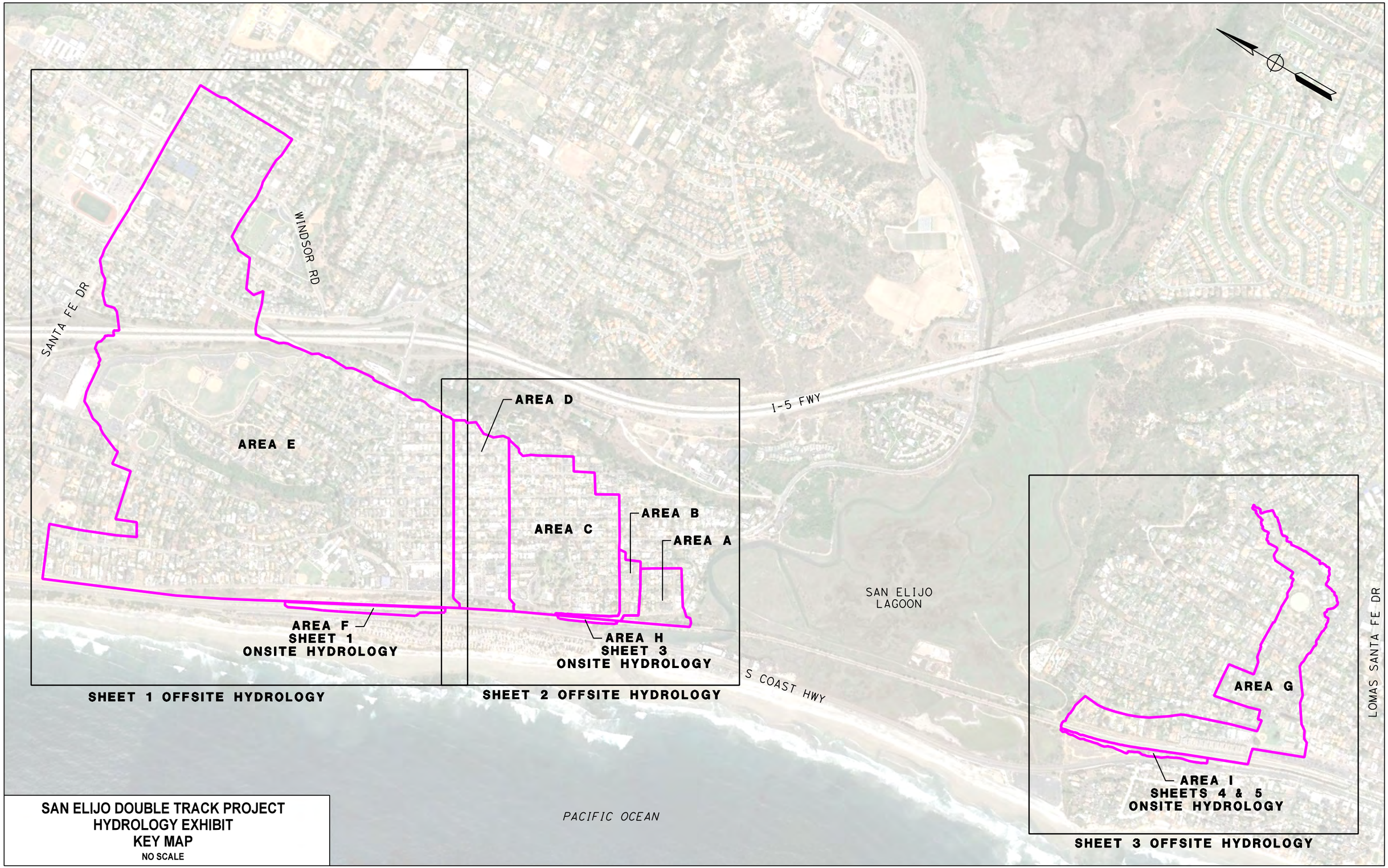
Tributary Area H

Runoff from this tributary area consists of surface flow from the proposed track bed approximately 1.0 acre in size. The runoff generated within this tributary area will discharge into a proposed earthen ditch parallel to the track, which will drain in the southerly direction and discharge directly into the lagoon.

A summary of the tributary areas is shown in Table 2 below.

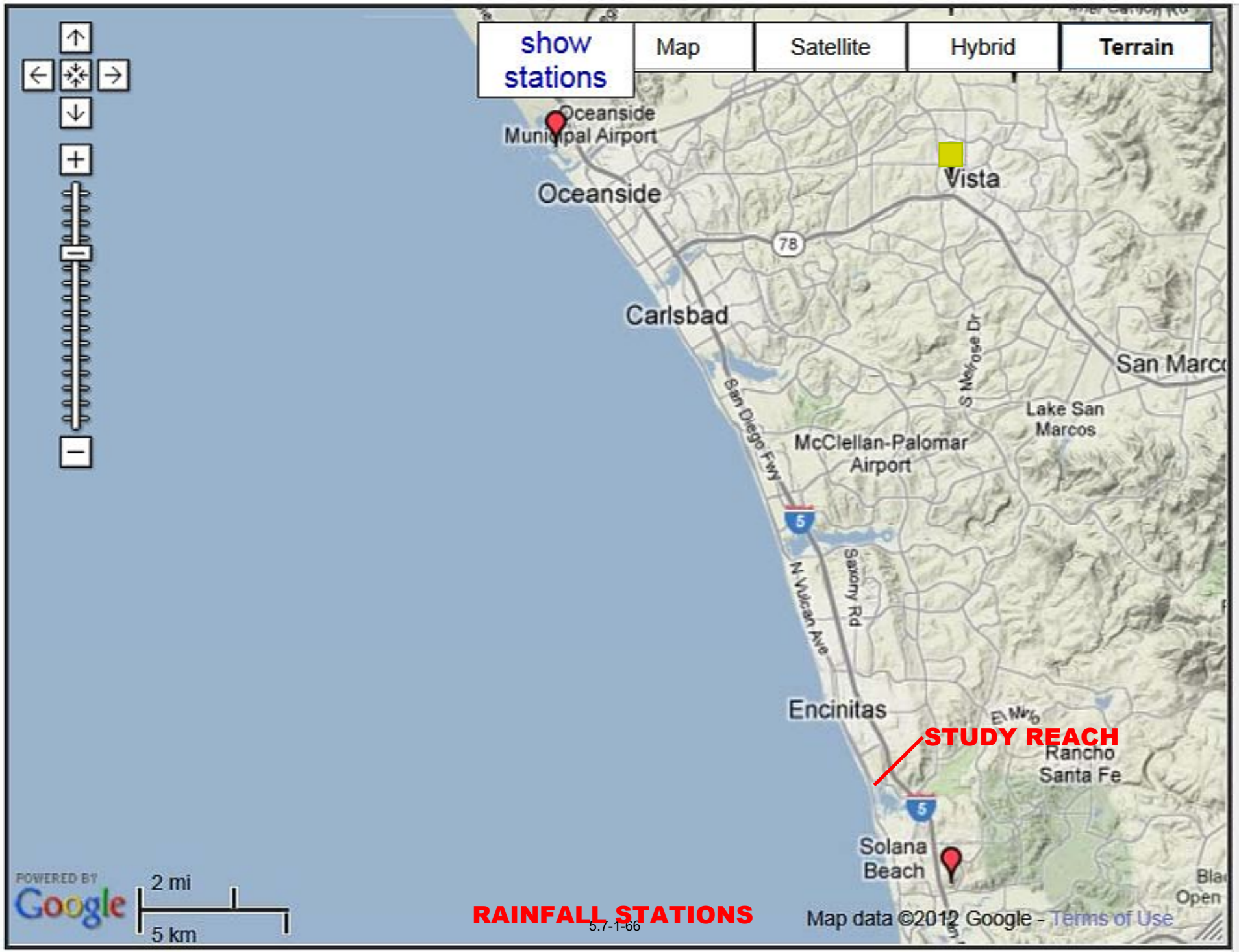
Table 2. Summary of Tributary Areas

Watershed	Area (Acres)	Q_{50} (cfs)	Q_{100} (cfs)
A	8.0	19.5	21.4
B	4.3	15.2	16.6
C	47.5	127.6	140.1
D	31.0	100.6	110.2
E	359.7	555.1	611.5
F	3.48	3.7	4.1
G	55.0	--	97.7
H	0.98	--	1.4



SAN ELIJO DOUBLE TRACK PROJECT
HYDROLOGY EXHIBIT
KEY MAP
NO SCALE

US COOP Station Map



LOCKWOOD MESA, CALIFORNIA (045023)

Period of Record Monthly Climate Summary

Period of Record : 9/ 1/1940 to 7/31/1965

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)					Insuff	icient	Data						
Average Min. Temperature (F)					Insuff	icient	Data						
Average Total Precipitation (in.)	1.84	1.43	1.65	1.06	0.29	0.05	0.01	0.08	0.19	0.45	0.95	1.65	9.66
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 0% Min. Temp.: 0% Precipitation: 97.5% Snowfall: 97.5% Snow Depth: 97.5%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

OCEANSIDE MARINA, CALIFORNIA (046377)

Period of Record Monthly Climate Summary

Period of Record : 10/1/1909 to 8/31/2012

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	63.4	62.9	63.4	64.7	66.2	68.3	71.9	73.7	73.1	71.0	67.9	64.5	67.6
Average Min. Temperature (F)	44.2	45.4	47.5	50.5	54.7	58.3	62.2	63.0	60.7	55.6	48.6	44.4	52.9
Average Total Precipitation (in.)	2.16	2.11	1.64	0.91	0.23	0.08	0.03	0.09	0.22	0.45	1.04	1.57	10.54
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 96.4% Min. Temp.: 96.2% Precipitation: 97.1% Snowfall: 97.3% Snow Depth: 97.3%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

9410230 La Jolla, CA

Datums for 9410230, La Jolla CA

NOTICE: All data values are relative to the MLLW.

Elevations on Mean Lower Low Water

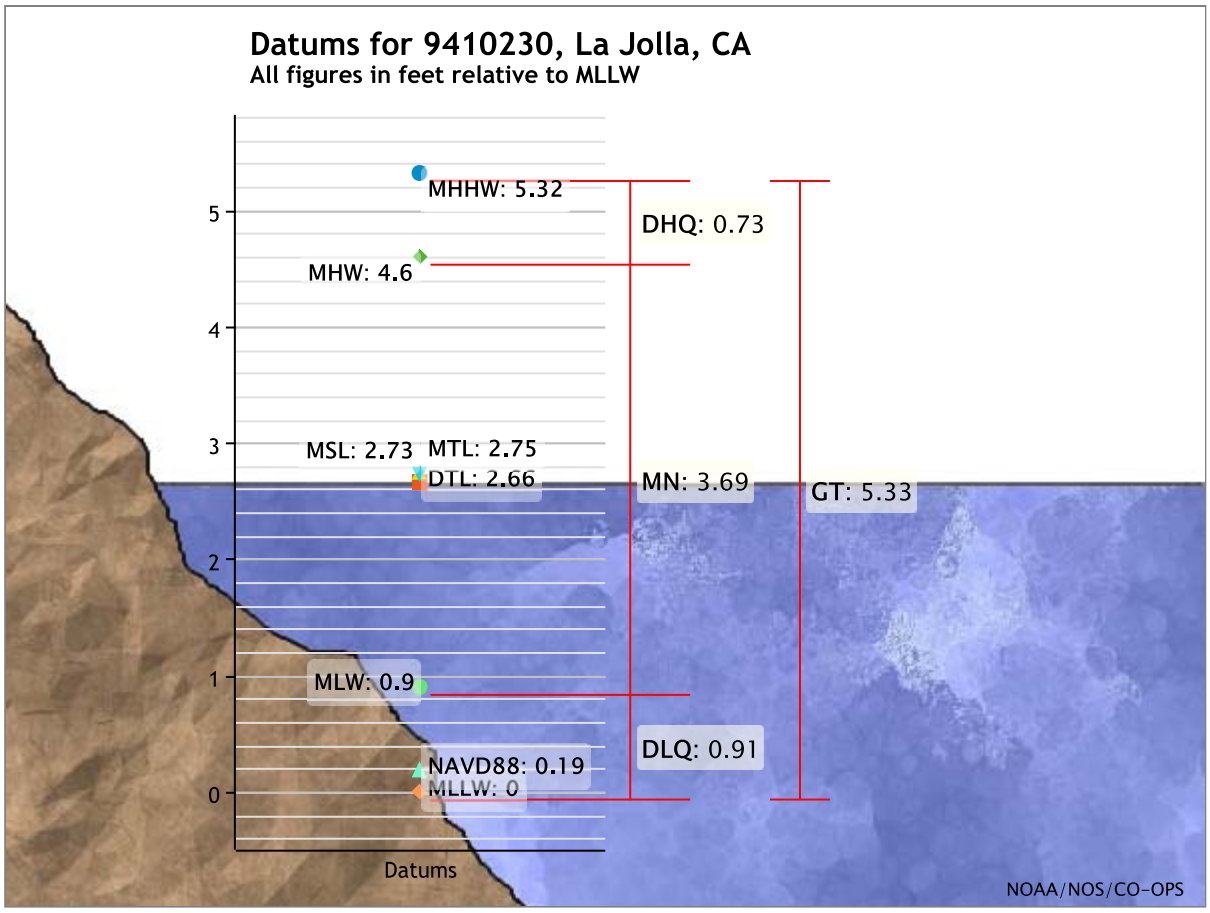
Station: 9410230, La Jolla, CA
Status: Accepted (Sep 20 2017)
Units: Feet
Control Station:
T.M.: 0
Epoch: (/datum_options.html#NTDE) 1983-2001
Datum: MLLW

Datum	Value	Description
MHHW (/datum_options.html#MHHW)	5.32	Mean Higher-High Water
MHW (/datum_options.html#MHW)	4.60	Mean High Water
MTL (/datum_options.html#MTL)	2.75	Mean Tide Level
MSL (/datum_options.html#MSL)	2.73	Mean Sea Level
DTL (/datum_options.html#DTL)	2.66	Mean Diurnal Tide Level
MLW (/datum_options.html#MLW)	0.90	Mean Low Water
MLLW (/datum_options.html#MLLW)	0.00	Mean Lower-Low Water
NAVD88 (/datum_options.html)	0.19	North American Vertical Datum of 1988
STND (/datum_options.html#STND)	-4.37	Station Datum
GT (/datum_options.html#GT)	5.33	Great Diurnal Range
MN (/datum_options.html#MN)	3.69	Mean Range of Tide

Datum	Value	Description
DHQ (/datum_options.html#DHQ)	0.73	Mean Diurnal High Water Inequality
DLQ (/datum_options.html#DLQ)	0.91	Mean Diurnal Low Water Inequality
HWI (/datum_options.html#HWI)	5.01	Greenwich High Water Interval (in hours)
LWI (/datum_options.html#LWI)	11.07	Greenwich Low Water Interval (in hours)
Max Tide (/datum_options.html#MAXTIDE)	7.81	Highest Observed Tide
Max Tide Date & Time (/datum_options.html#MAXTIDEDT)	11/25/2015 15:42	Highest Observed Tide Date & Time
Min Tide (/datum_options.html#MINTIDE)	-2.87	Lowest Observed Tide
Min Tide Date & Time (/datum_options.html#MINTIDEDT)	12/17/1933 23:36	Lowest Observed Tide Date & Time
HAT (/datum_options.html#HAT)	7.14	Highest Astronomical Tide
HAT Date & Time	08/09/1987 03:54	HAT Date and Time
LAT (/datum_options.html#LAT)	-1.88	Lowest Astronomical Tide
LAT Date & Time	01/28/1987 22:48	LAT Date and Time

Tidal Datum Analysis Periods

01/01/1983 - 12/31/2001



Showing datums for

Office

Project

2 September 2018

INPUT	OUTPUT
Geographic, NAD83	Geographic, NAD83
Vertical - NGVD29 (Vertcon94), U.S. Feet	Vertical - NAVD88, U.S. Feet

Latitude:	33.01629	**Latitude:**	33.016290000
Longitude:	117.28089	**Longitude:**	117.280890000
Elevation/Z:	0.96	**Elevation/Z:**	3.112

Remark:

APPENDIX B

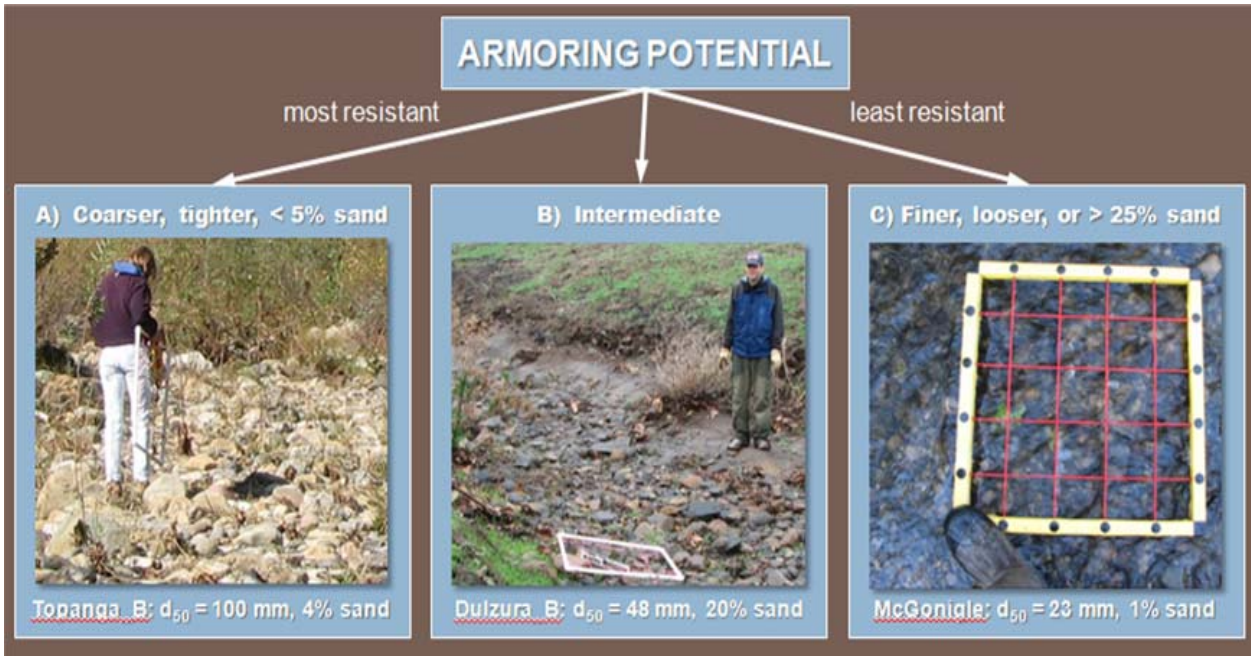
SCCWRP FIELD SCREENING DATA

Form 3 Support Materials

Form 3 Checklists 1 and 2, along with information recording in Form 3 Table 1, are intended to support the decisions pathways illustrated in Form 3 Overall Vertical Rating for Intermediate/Transitional Bed.

Form 3 Checklist 1: Armoring Potential

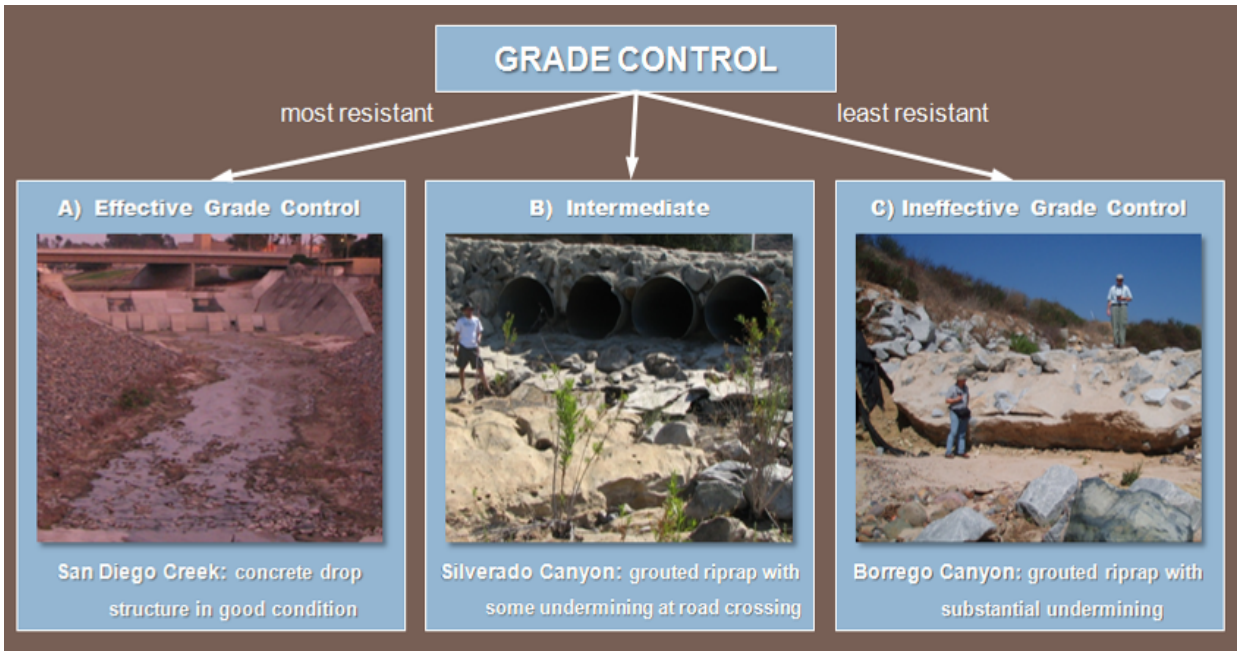
□	A	A mix of coarse gravels and cobbles that are tightly packed with <5% surface material of diameter <2 mm
□	B	Intermediate to A and C or hardpan of unknown resistance, spatial extent (longitudinal and depth), or unknown armoring potential due to surface veneer covering gravel or coarser layer encountered with probe
X	C	Gravels/cobbles that are loosely packed or >25% surface material of diameter <2 mm



Form 3 Figure 2. Armoring potential photographic supplement for assessing intermediate beds (16 < d_{50} < 128 mm) to be used i**n conjunction with Form 3 Checklist 1.**

Form 3 Checklist 2: Grade Control

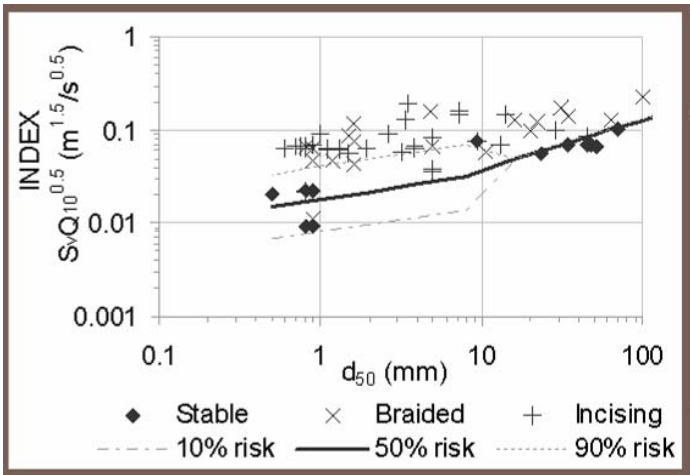
x	A	Grade control is present with spacing <50 m or $2/S_v$ m • No evidence of failure/ineffectiveness, e.g., no headcutting (>30 cm), no active mass wasting (analyst cannot say grade control sufficient if mass-wasting checklist indicates presence of bank failure), no exposed bridge pilings, no culverts/structures undermined • Hard points in serviceable condition at decadal time scale, e.g., no apparent undermining, flanking, failing grout • If geologic grade control, rock should be resistant igneous and/or metamorphic; For sedimentary/hardpan to be classified as 'grade control', it should be of demonstrable strength as indicated by field testing such as hammer test/borings and/or inspected by appropriate stakeholder
□	B	Intermediate to A and C – artificial or geologic grade control present but spaced 2/Sv m to 4/Sv m or potential evidence of failure or hardpan of uncertain resistance
□	C	Grade control absent, spaced >100 m or $>4/S_v$ m, or clear evidence of ineffectiveness



Form 3 Figure 3. Grade-control (condition) photographic supplement for assessing intermediate beds ($16 < d_{50} < 128$ mm) to be used in conjunction with Form 3 Checklist 2.

Regionally-Calibrated Screening Index Threshold for Incising/Braiding

For transitional bed channels (d_{50} between 16 and 128 mm) or labile beds (channel not incised past critical bank height), use Form 3 Figure 3 to determine Screening Index Score and complete Form 3 Table 1.



Model Type	d_{50} (mm)	50% Risk $S_vQ_{10}^{0.5}$ ($m^{1.5}/s^{0.5}$)
Logistic Regression $d_{50} \geq 16$ mm	128	0.145
	96	0.125
	80	0.114
	64	0.101
	48	0.087
	32	0.070
	16	0.049
Logistic Reg. $d_{50} < 16$ mm	8	0.031
	4	0.026
	2	0.022
	1	0.018
	0.5	0.015

Form 3 Figure 4. Probability of incising/braiding based on logistic regression of Screening Index and d_{50} to be used in conjunction with Form 3 Table 1.

Form 3 Table 1. Values for Screening Index Threshold (probability of incising/braiding) to be used in conjunction with Form 3 Figure 4 (above) to complete Form 3 Overall Vertical Rating for Intermediate/Transitional Bed (below).. Screening Index Score: A = <50% probability of incision for current Q_{10}, valley slope, and d_{50}; B = Hardpan/d_{50} indeterminate; and C = ≥50% probability of incising/braiding for current Q_{10}, valley slope, and d_{50}.

d_{50} (mm) *From Form 2*	$S_v*Q_{10}^{0.5}$ ($m^{1.5}/s^{0.5}$) *From Form 1*	$S_v*Q_{10}^{0.5}$ ($m^{1.5}/s^{0.5}$) *50% risk of incising/braiding from table in Form 3 Figure 3 above*	Screening Index Score (A, B, C)

Overall Vertical Rating for Intermediate/Transitional Bed

Calculate the overall Vertical Rating for Transitional Bed channels using the formula below. Numeric values for responses to Form 3 Checklists and Table 1 as follows: A = 3, B = 6, C = 9.

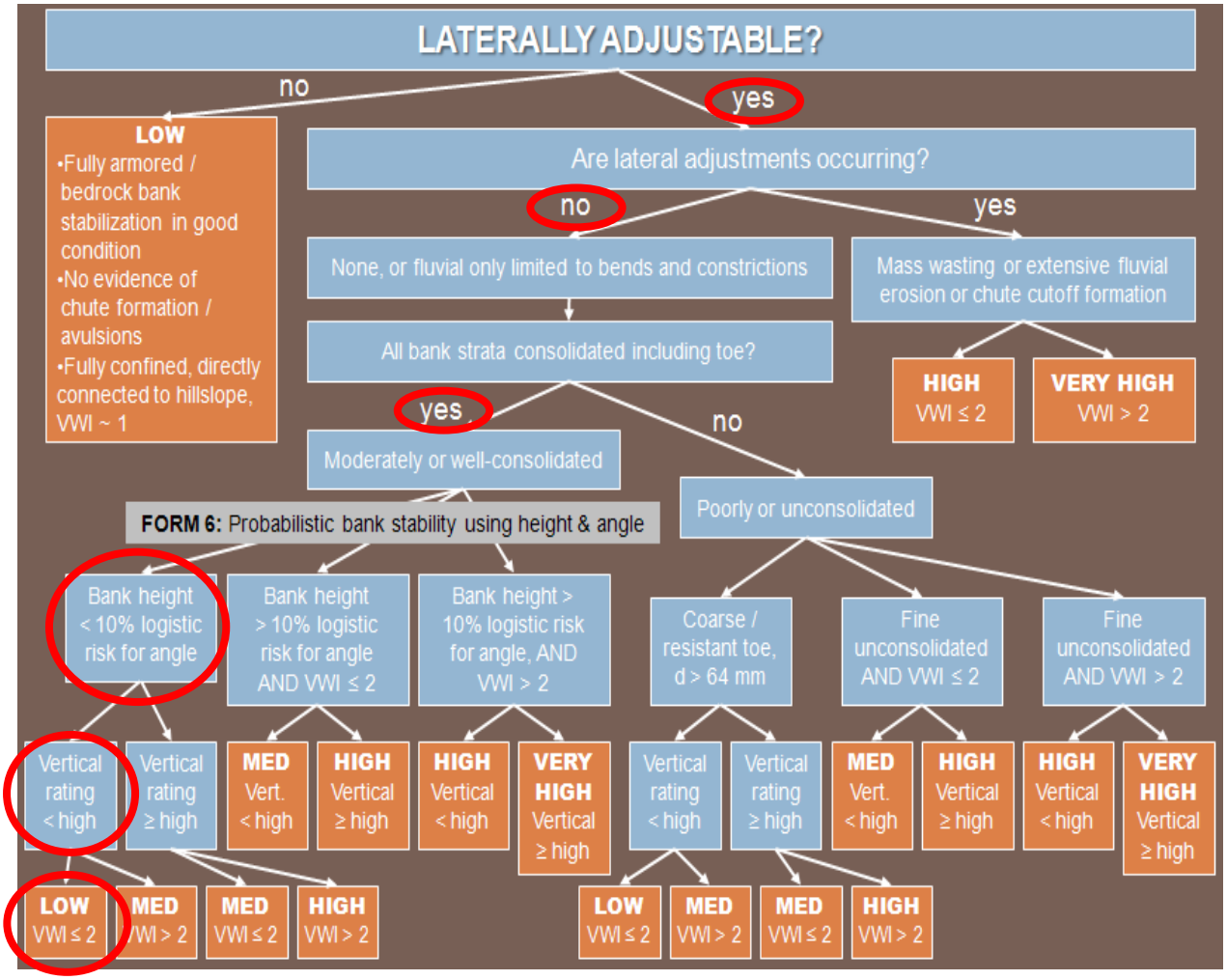
$$Vertical\ Rating = \sqrt{\{(\sqrt{armoring} * grade\ control) * screening\ index\ score\}}$$

9 x 3 x 3 = 3.9

Vertical Susceptibility based on Vertical Rating: <4.5 = LOW; 4.5 to 7 = MEDIUM; and >7 = HIGH.

FORM 4: LATERAL SUSCEPTIBILTY FIELD SHEET

Circle appropriate nodes/pathway for proposed site
OR use sequence of questions provided in Form 5.



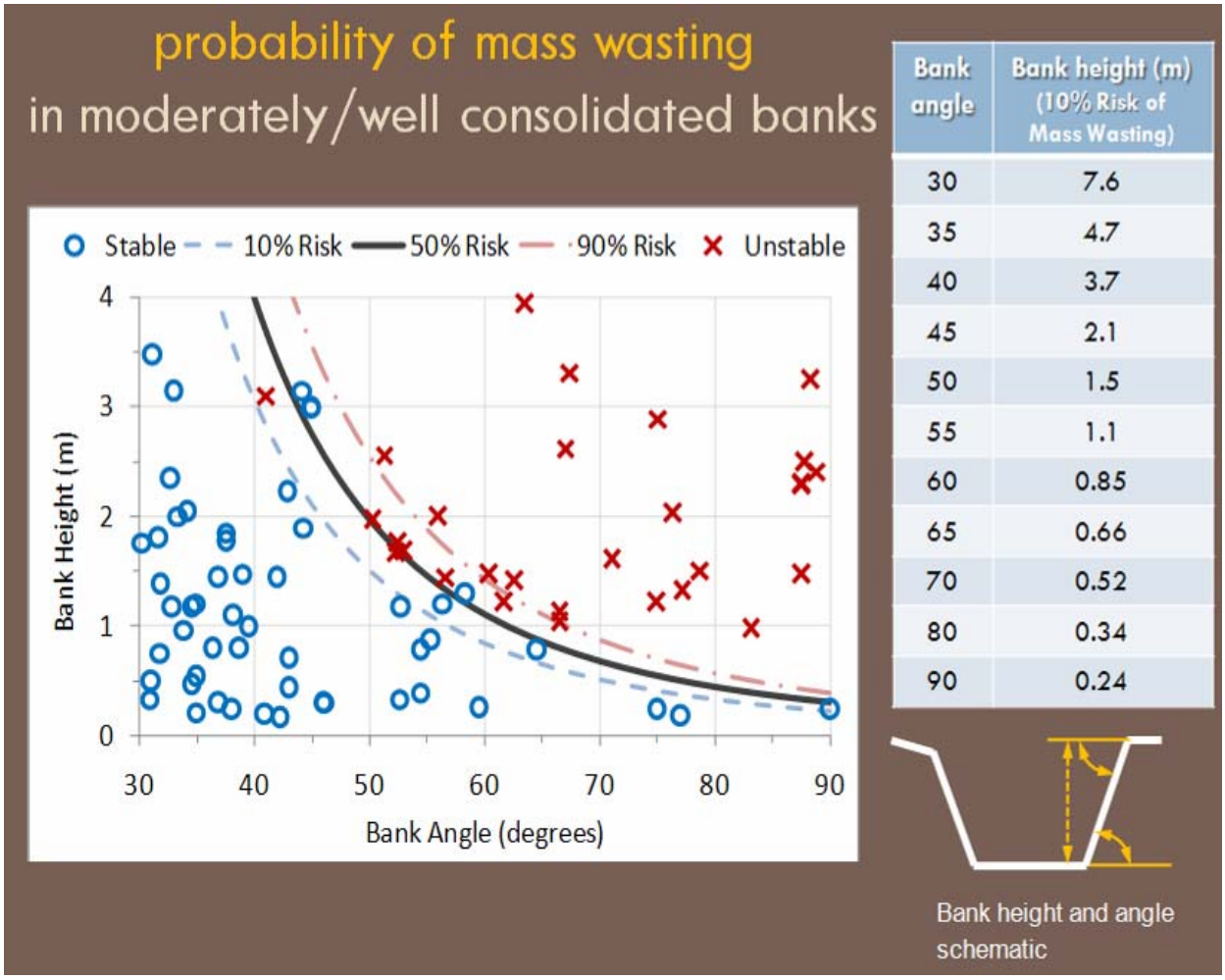
(Sheet 1 of 1)

REACH 1 RESULTS

FORM 6: PROBABILITY OF MASS WASTING BANK FAILURE

If mass wasting is not currently extensive and the banks are moderately- to well-consolidated, measure bank height and angle at several locations (i.e., at least three locations that capture the range of conditions present in the study reach) to estimate representative values for the reach. Use Form 6 Figure 1 below to determine if risk of bank failure is >10% and complete Form 6 Table 1. Support your results with photographs that include a protractor/rod/tape/person for scale.

	Bank Angle (degrees) *(from Field)*	**Bank Height (m)** *(from Field)*	**Corresponding Bank Height for 10% Risk of Mass Wasting (m)** *(from Form 6 Figure 1 below)*	**Bank Failure Risk** *(<10% Risk)* *(>10% Risk)*
Left Bank	2:1 (26.6)	---	---	<10%
Right Bank	2:1 (26.6)	---	---	<10%

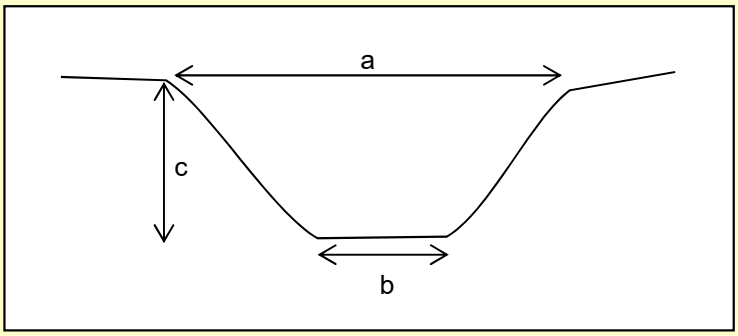


Form 6 Figure 1. Probability Mass Wasting diagram, Bank Angle:Height/% Risk table, and Band Height:Angle schematic.

Critical Flow Calculator

Reach 1

enter all values in green cells
and drop down boxes



Inputs

a) Receiving channel width at top of bank (ft) - see figure on right	25.0
b) Channel width at bed (ft)	15.0
c) Bank height at top of bank (ft)	0.5
Channel gradient (ft/ft)	0.0010
Receiving channel roughness	Smooth planar bed (sand or finer), no vegetation n=0.02
Channel materials (use weakest of bed or banks). If materials are varied use weakest material covering more than 20% of channel.	unconsolidated sandy loam 0.035 lb/sq ft
	alluvial silt (non coloidal) 0.045 lb/sq ft
	medium gravel 0.12 lb/sq ft
	alluvial silt/clay 0.26 lb/sq ft
	2.5 inch cobble 1.1 lb/sq ft
	enter own d50 (variable)
	vegetation (bed and banks) 0.6 lb/sq ft
Select method of calculating Q2	Input own Q2
	Calculate Q2 using USGS regression

Receiving water watershed annual precip (inches)	10.54	Receiving water watershed area at PoC (sq mi)	0.6917
Project watershed annual precipitation (inches)	10.54	Project watershed area draining to PoC (sq mi)	0.6917

Outputs - Flow control range

Receiving water Q2	4.9	**Point of Compliance low flow rate (cfs)**	**2.4**
Project site Q2	4.9	**Low flow class**	**0.5Q2**
		Channel vulnerability	**Low**

Attachment 2d

FLOW CONTROL FACILITY DESIGN AND STRUCTURAL BMP DRAWDOWN CALCULATIONS

The proposed biofiltration basins are intended to meet both the pollutant control (from Attachment 1e) and flow control (hydromodification) sizing requirements. Clear Creek Solutions San Diego Hydrology Model (SDHM version 3.1) was used for the analyses of the two proposed biofiltration basins. The input parameters are as follows and supporting documents are attached:

- The impervious and pervious areas within DMA 1 and DMA 2 are shown on Attachment 1a.

- The project's geotechnical engineer, Construction Testing & Engineering, Inc. has determined that the hydrologic soil group is C based on their on-site percolation testing. They have also determined that full infiltration is not feasible, but partial infiltration is feasible. The infiltration rates closest to BMP 1 and BMP 2 are 0.3407 and 0.3471, respectively. The basin bottom does not contain an impervious liner, but two of the sides do to prevent lateral groundwater migration towards the proposed buildings.

- A low susceptibility to erosion ($0.5Q_2$) was used based on the channel assessment in Attachment 2c.

- The Encinitas rain gage is closest to the site, so was used.

- The biofiltration basin cross-section was modeled with 3:1 side slopes, a 12-inch high riser, 3 inches of mulch, 18 inches of engineered soil, 25 inches of gravel to the underdrain invert, a 6-inch diameter perforated underdrain, and 3 inches of gravel below the invert.

The SDHM results are attached for BMP 1 and BMP 2 and show that the minimum required floor areas are 3,364 and 4,356 square feet, respectively. The site plan provides for these areas.

Wayne W. Chang

From: Jay Lynch <jay@cte-inc.net>
Sent: Tuesday, August 28, 2018 10:21 AM
To: Wayne W. Chang
Cc: steve@kettlerleweck.com; mike@kettlerleweck.com
Subject: RE: Cardiff School Infiltration and Soil Types

Wayne,

Based on the calculated infiltration rates and subsurface conditions documented during the geotechnical investigation, Hydrologic Group C is considered to be most applicable for site design purposes for the proposed improvements at the Cardiff School.

Thank you,

Jay Lynch, CEG
Principal
1441 Montiel Rd Ste 115, Escondido, CA 92026 | Ph (760) 746-4955 | Fax (760) 746-9806
Construction Testing & Engineering, Inc.
Inspection • Testing • Geotechnical • Environmental & Construction Engineering • Civil Engineering • Surveying
http://www.cte-inc.net/

Relevant Excerpts Attached

GEOTECHNICAL INVESTIGATION
PROPOSED IMPROVEMENTS TO CARDIFF SCHOOL
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CALIFORNIA

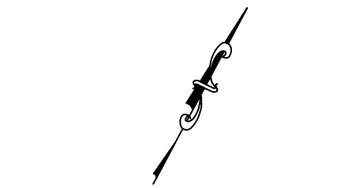
Prepared for:

CARDIFF SCHOOL DISTRICT
ATTENTION: MR. RANDY PETERSON
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CALIFORNIA 92007

Prepared by:

CONSTRUCTION TESTING & ENGINEERING, INC.
1441 MONTIEL ROAD, SUITE 115
ESCONDIDO, CALIFORNIA 92026

CTE JOB NO.: 10-14226G MAY 25, 2018



0 50' 100' 200'

1 inch = 100 ft.

EXPLANATION

B-1 ⊕ APPROXIMATE BORING LOCATION

P-1 ⊕ APPROXIMATE PERCOLATION TEST LOCATION

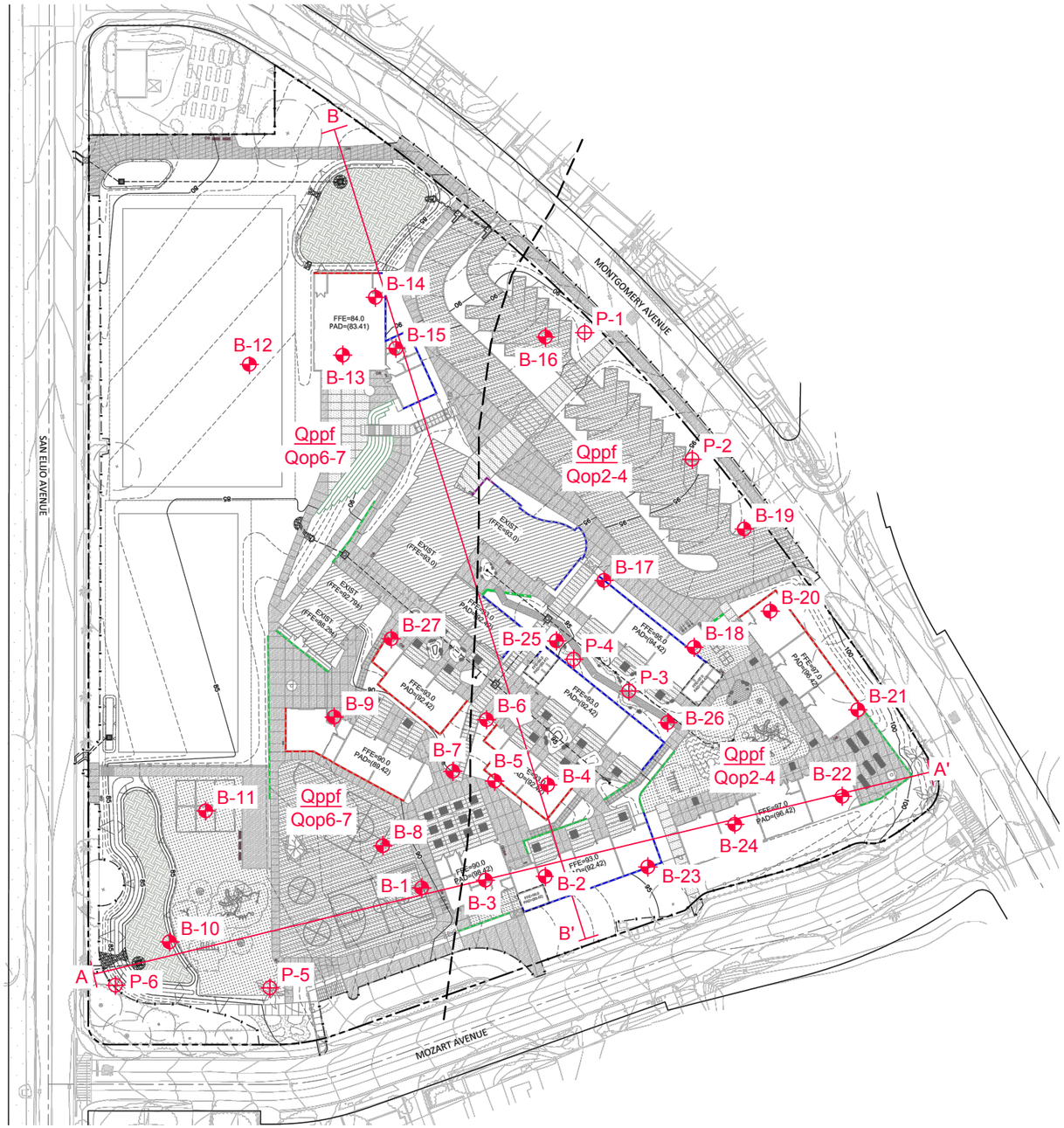
A A' GEOLOGIC CROSS SECTION

Qppf QUATERNARY PREVIOUSLY PLACED FILL

Qop2-4 QUATERNARY OLD PARALIC DEPOSITS, UNITS 2-4

Qop6-7 QUATERNARY OLD PARALIC DEPOSITS, UNITS 6-7

APPROXIMATE GEOLOGIC CONTACT



CTE INC. Construction Testing & Engineering, Inc.
1441 Montiel Rd Ste 115, Escondido, CA 92026 Ph (760) 746-4955

EXPLORATION LOCATION MAP

PROPOSED IMPROVEMENTS TO CARDIFF SCHOOL
1888 MONTGOMERY AVENUE
CARDIFF-BY-THE-SEA, CALIFORNIA

CTE JOB NO:	10-14226G
SCALE:	1" ~ 100'
DATE:	5/18
FIGURE:	2

\\ESC_SERVER\Projects\10-14226G\Fig 2 (Explor Map).dwg

Percolation Rate Conversion P-5				Percolation Rate Conversion P-6			
			Inches				Inches
Time Interval,	$\Delta t =$	30		Time Interval,	$\Delta t =$	30	
Final Depth of Water,	$D_f =$	51.25		Final Depth of Water,	$D_f =$	33.9375	
Test Hole Radius,	r =	3		Test Hole Radius,	r =	3	
Initial Depth to Water,	$D_0 =$	49.4375		Initial Depth to Water,	$D_0 =$	32	
Total Depth of Test Hole,	$D_T =$	56		Total Depth of Test Hole,	$D_T =$	40	
$H_o =$	6.5625	in		$H_o =$	8	in	
$H_f =$	4.75	in		$H_f =$	6.0625	in	
$\Delta H = \Delta D =$	1.8125	in		$\Delta H = \Delta D =$	1.9375	in	
$H_{avg} =$	5.65625	in		$H_{avg} =$	7.03125	in	
$I_t =$	0.7598	in/hr =	**IF-1**	$I_t =$	0.6813	in/hr =	**IF-2**

1.5 Summary of Percolation and Infiltration Test Results

The following Table 1.5 presents the percolation rates observed in the field, the converted infiltration rates as discussed in Section 1.4 and as shown in Table 1.4, and the recommended rate for design (with safety factor applied).

TABLE 1.5
SUMMARY OF PERCOLATION AND INFILTRATION TEST RESULTS

Test Location	Soil Type	Soil Type (USCS)	Treatment Area	San Diego County Percolation Procedure	Depth (inches)	Percolation Rate (inches/hour)	Infiltration Rate (inches/hour)	Recommended Rate for Design* (inches/hour)
P-1	Qop	SM	BMP1	Case 3	43	3.5	0.6942	0.3471
P-2	Qop	SM/SC	Proposed Parking/Drive	Case 3	65	0.5	0.1597	0.0799
P-3	Qop	SM	Campus	Case 3	41	12.5**	2.3810**	1.1905**
P-4	Qop	SM	Campus	Case 3	63	2.75	0.4125	0.2063
P-5	Qop	SM	BMP2	Case 3	56	3.625	0.7598	0.3799
P-6	Qop	SM	BMP2	Case 3	40	3.875	0.6813	0.3407

Qop: Quaternary Old Paralic Deposits

* A safety factor of two (2) was applied to the calculated design infiltration rate

As stated in Appendix C of the City of Encinitas BMP Design Manual (February, 2016), and Worksheet C.4-1, sites with full infiltration potential should have infiltration rates at or above 0.5 inches per hour. It is our understanding that draft revisions of the BMP Design Manual consider infiltration rates of 0.05 inches per hour to be the cutoff between sites with partial infiltration potential and sites not suited for infiltration. Based on these parameters, the infiltration rates of the soils near the BMP areas are considered suitable for partial infiltration. We suggest the design to

utilize the lower rate of the tests performed nearest the proposed basin(s). As stated, the calculated rates support a partial infiltration condition.

As indicated, the tests were performed in areas originally anticipated to be utilized for infiltration. Recent plans showing the proposed basin locations indicate that the design infiltration rate obtained from Test P-1 of **0.3471 inches/hour** should be considered applicable to BMP2 due to the proximity of the test in relation to the BMP. The conservative lower result from Tests P-5 and P-6 of **0.3407 inches/hour** should be considered applicable for BMP1. Based on the geotechnical borings performed during the investigation, soils are anticipated to remain relatively consistent across the site. However, CTE could provide a more specific evaluation of soils within the BMP's if necessary, based on the specific location determination.

2.0 FEASIBILITY OF INFILTRATION

2.1 Groundwater

Static groundwater was not encountered to the maximum explored depth of 31.5 feet bgs at the site and to a depth of ten feet below the bottom of the proposed basins based on borings advanced within 50 feet of the proposed BMP's. Based on regional information, and a review of nearby groundwater data (Geotracker online at Geotracker.waterboards.ca.gov) groundwater depths in the area are expected to range from approximately 25 to 40 feet bgs. Therefore groundwater is not anticipated to be within ten feet of the bottom of the proposed BMP's.

2.2 Slope Stability

Significant slopes or changes to the existing slopes are not proposed. Existing site slopes and proposed minor slopes surrounding BMP's are not anticipated to be significantly affected by infiltration. However, at the design rates of partial infiltration, ponded water within the BMP may destabilize the berm at BMP 2. Therefore, as an added precaution it may be prudent to line the sidewalls of this basin with an impermeable membrane to a depth below the bottom of the slope/berm.

The slope/bluff across San Elijo to the west which descends to the railroad tracks is generally not anticipated to be affected by site infiltration. However, constant discharge into the subsoils during periods of sustained precipitation may contribute to lateral migration beyond the anticipated migrational distance of 100 feet from the basin resulting in seepage along the bluff/slope face.

2.3 Settlement and Volume Change

Settlement and volume change of soils underlying biofiltration basins can limit the amount of infiltration of water into those soils. Less than one percent settlement of site soils once fully saturated would be anticipated.

2.4 Utility Considerations

Infiltration has the potential to damage subsurface utilities, and geotechnical hazards can result from the introduction of infiltrated water. Proposed utilities should be setback a minimum of 10 feet from basin locations, where practical.

SDHM 3.1

PROJECT REPORT

BMP 1 BIOFILTRATION BASIN

General Model Information

Project Name:	BMP1LD
Site Name:	Cardiff School
Site Address:	1888 Montgomery Ave.
City:	Cardiff
Report Date:	9/3/2018
Gage:	ENCINITA
Data Start:	10/01/1963
Data End:	09/30/2004
Timestep:	Hourly
Precip Scale:	1.000
Version Date:	2018/06/15

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	10 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
C,NatVeg,Flat	3.03
Pervious Total	3.03
Impervious Land Use	acre
Impervious Total	0
Basin Total	3.03

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C,Urban,Flat	1.31
Pervious Total	1.31

Impervious Land Use	acre
IMPERVIOUS-FLAT	1.72
Impervious Total	1.72
Basin Total	3.03

Element Flows To:

Surface	Interflow	Groundwater
Surface Biofilter 1	Surface Biofilter 1	

Routing Elements
Predeveloped Routing

Mitigated Routing

Biofilter 1

Bottom Length:	58.00 ft.
Bottom Width:	58.00 ft.
Material thickness of first layer:	0.25
Material type for first layer:	Mulch
Material thickness of second layer:	1.5
Material type for second layer:	ESM
Material thickness of third layer:	2.333
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.3407
Infiltration safety factor:	1
Total Volume Infiltrated (ac-ft.):	34.079
Total Volume Through Riser (ac-ft.):	1.432
Total Volume Through Facility (ac-ft.):	50.97
Percent Infiltrated:	66.86
Total Precip Applied to Facility:	2.587
Total Evap From Facility:	2.516
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	2.34229749999989
Offset (in.):	6
Flow Through Underdrain (ac-ft.):	15.459
Total Outflow (ac-ft.):	50.97
Percent Through Underdrain:	30.33
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Flows To:	
Outlet 1	Outlet 2

3,364 sf of basin floor area required.

Biofilter Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.1133	0.0000	0.0000	0.0000
0.0668	0.1132	0.0016	0.0000	0.0000
0.1337	0.1126	0.0031	0.0000	0.0000
0.2005	0.1119	0.0047	0.0000	0.0003
0.2674	0.1113	0.0063	0.0000	0.0012
0.3342	0.1107	0.0079	0.0000	0.0019
0.4011	0.1100	0.0095	0.0000	0.0041
0.4679	0.1094	0.0111	0.0000	0.0056
0.5348	0.1088	0.0127	0.0000	0.0096
0.6016	0.1081	0.0144	0.0000	0.0120
0.6685	0.1075	0.0160	0.0000	0.0173
0.7353	0.1069	0.0177	0.0000	0.0181
0.8022	0.1062	0.0194	0.0000	0.0257
0.8690	0.1056	0.0211	0.0000	0.0265
0.9358	0.1050	0.0227	0.0000	0.0265
1.0027	0.1044	0.0245	0.0000	0.0265
1.0695	0.1037	0.0262	0.0000	0.0265
1.1364	0.1031	0.0279	0.0000	0.0265
1.2032	0.1025	0.0296	0.0000	0.0265
1.2701	0.1019	0.0314	0.0000	0.0265

1.3369	0.1013	0.0332	0.0000	0.0265
1.4038	0.1007	0.0349	0.0000	0.0265
1.4706	0.1001	0.0367	0.0000	0.0265
1.5375	0.0995	0.0385	0.0000	0.0265
1.6043	0.0989	0.0403	0.0000	0.0265
1.6712	0.0982	0.0422	0.0000	0.0265
1.7380	0.0976	0.0440	0.0000	0.0265
1.8048	0.0970	0.0465	0.0000	0.0265
1.8717	0.0965	0.0491	0.0000	0.0265
1.9385	0.0959	0.0517	0.0000	0.0265
2.0054	0.0953	0.0543	0.0000	0.0265
2.0722	0.0947	0.0569	0.0000	0.0265
2.1391	0.0941	0.0596	0.0000	0.0265
2.2059	0.0935	0.0622	0.0000	0.0265
2.2728	0.0929	0.0649	0.0000	0.0265
2.3396	0.0923	0.0676	0.0154	0.0265
2.4065	0.0917	0.0703	0.0325	0.0265
2.4733	0.0912	0.0730	0.0476	0.0265
2.5402	0.0906	0.0757	0.0607	0.0265
2.6070	0.0900	0.0785	0.0720	0.0265
2.6738	0.0894	0.0812	0.0819	0.0265
2.7407	0.0888	0.0840	0.0908	0.0265
2.8075	0.0883	0.0868	0.0988	0.0265
2.8744	0.0877	0.0896	0.1062	0.0265
2.9412	0.0871	0.0925	0.1131	0.0265
3.0081	0.0866	0.0953	0.1196	0.0265
3.0749	0.0860	0.0982	0.1257	0.0265
3.1418	0.0854	0.1011	0.1316	0.0265
3.2086	0.0849	0.1040	0.1372	0.0265
3.2755	0.0843	0.1069	0.1425	0.0265
3.3423	0.0838	0.1098	0.1477	0.0265
3.4092	0.0832	0.1128	0.1527	0.0265
3.4760	0.0827	0.1158	0.1575	0.0265
3.5428	0.0821	0.1188	0.1622	0.0265
3.6097	0.0816	0.1218	0.1667	0.0265
3.6765	0.0810	0.1248	0.1712	0.0265
3.7434	0.0805	0.1278	0.1755	0.0265
3.8102	0.0799	0.1309	0.1797	0.0265
3.8771	0.0794	0.1340	0.1838	0.0265
3.9439	0.0788	0.1371	0.1879	0.0265
4.0108	0.0783	0.1402	0.1919	0.0265
4.0776	0.0778	0.1433	0.1960	0.0265
4.0830	0.0772	0.1436	0.2818	0.0265

Biofilter Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
4.0830	0.1133	0.1436	0.0000	0.2225	0.0000
4.1498	0.1139	0.1512	0.0000	0.2225	0.0000
4.2167	0.1146	0.1588	0.0000	0.2225	0.0000
4.2835	0.1152	0.1665	0.0000	0.2225	0.0000
4.3504	0.1159	0.1742	0.0000	0.2225	0.0000
4.4172	0.1165	0.1820	0.0000	0.2225	0.0000
4.4841	0.1172	0.1898	0.0000	0.2225	0.0000
4.5509	0.1179	0.1977	0.0000	0.2225	0.0000
4.6178	0.1185	0.2056	0.0000	0.2225	0.0000
4.6846	0.1192	0.2135	0.0000	0.2225	0.0000
4.7515	0.1199	0.2215	0.0000	0.2225	0.0000
4.8183	0.1205	0.2295	0.0000	0.2225	0.0000

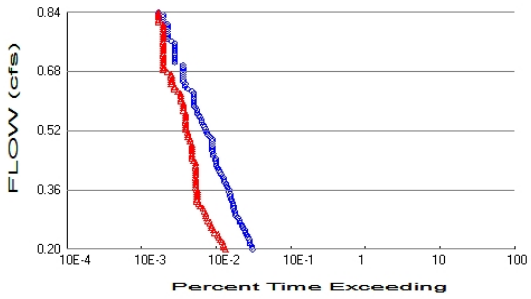
4.8852	0.1212	0.2376	0.0000	0.2225	0.0000
4.9520	0.1219	0.2457	0.0000	0.2225	0.0000
5.0188	0.1225	0.2539	0.0000	0.2225	0.0000
5.0857	0.1232	0.2621	0.0015	0.2225	0.0000
5.1525	0.1239	0.2704	0.1941	0.2225	0.0000
5.2194	0.1246	0.2787	0.5268	0.2225	0.0000
5.2862	0.1252	0.2870	0.9278	0.2225	0.0000
5.3531	0.1259	0.2954	1.3383	0.2225	0.0000
5.4199	0.1266	0.3038	1.7009	0.2225	0.0000
5.4868	0.1273	0.3123	1.9726	0.2225	0.0000
5.5536	0.1280	0.3209	2.1465	0.2225	0.0000
5.6205	0.1287	0.3294	2.3090	0.2225	0.0000
5.6873	0.1293	0.3381	2.4484	0.2225	0.0000
5.7542	0.1300	0.3467	2.5803	0.2225	0.0000
5.8210	0.1307	0.3554	2.7058	0.2225	0.0000
5.8878	0.1314	0.3642	2.8256	0.2225	0.0000
5.9547	0.1321	0.3730	2.9406	0.2225	0.0000
6.0215	0.1328	0.3819	3.0513	0.2225	0.0000
6.0830	0.1335	0.3901	3.1581	0.2225	0.0000

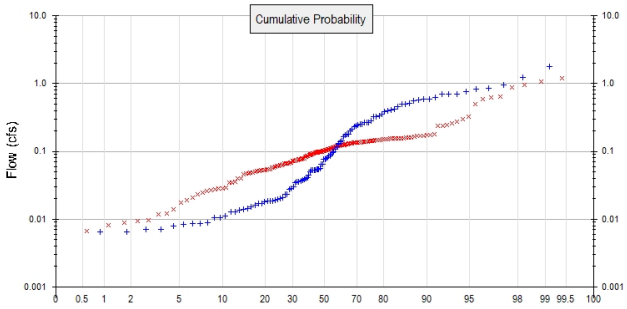
Surface Biofilter 1

Element Flows To:

Outlet 1	Outlet 2
	Biofilter 1

Analysis Results
POC 1





+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 3.03
Total Impervious Area: 0

Mitigated Landuse Totals for POC #1
Total Pervious Area: 1.31
Total Impervious Area: 1.72

Flow Frequency Method: Weibull

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	**Flow(cfs)**
2 year	0.397568
5 year	0.701979
10 year	0.844321
25 year	1.33194

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	0.167299
5 year	0.426158
10 year	0.818972
25 year	1.090842

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.1988	110	48	43	Pass
0.2053	108	46	42	Pass
0.2118	103	45	43	Pass
0.2183	101	43	42	Pass
0.2249	99	41	41	Pass
0.2314	96	39	40	Pass
0.2379	92	38	41	Pass
0.2444	88	34	38	Pass
0.2509	86	33	38	Pass
0.2575	82	31	37	Pass
0.2640	80	31	38	Pass
0.2705	75	30	40	Pass
0.2770	74	28	37	Pass
0.2836	71	27	38	Pass
0.2901	66	26	39	Pass
0.2966	65	26	40	Pass
0.3031	63	25	39	Pass
0.3096	62	24	38	Pass
0.3162	61	22	36	Pass
0.3227	60	21	35	Pass
0.3292	58	20	34	Pass
0.3357	57	20	35	Pass
0.3422	55	20	36	Pass
0.3488	55	20	36	Pass
0.3553	54	20	37	Pass
0.3618	53	20	37	Pass
0.3683	51	19	37	Pass
0.3748	49	19	38	Pass
0.3814	47	19	40	Pass
0.3879	46	19	41	Pass
0.3944	45	19	42	Pass
0.4009	42	19	45	Pass
0.4074	41	19	46	Pass
0.4140	39	19	48	Pass
0.4205	38	19	50	Pass
0.4270	36	19	52	Pass
0.4335	36	19	52	Pass
0.4400	35	18	51	Pass
0.4466	35	17	48	Pass
0.4531	33	17	51	Pass
0.4596	33	17	51	Pass
0.4661	32	17	53	Pass
0.4726	32	17	53	Pass
0.4792	32	17	53	Pass
0.4857	32	17	53	Pass
0.4922	32	16	50	Pass
0.4987	32	16	50	Pass
0.5053	30	15	50	Pass
0.5118	28	15	53	Pass
0.5183	27	15	55	Pass
0.5248	26	14	53	Pass
0.5313	25	14	56	Pass
0.5379	24	14	58	Pass

0.5444	23	14	60	Pass
0.5509	23	14	60	Pass
0.5574	22	14	63	Pass
0.5639	21	14	66	Pass
0.5705	20	14	70	Pass
0.5770	20	13	65	Pass
0.5835	19	13	68	Pass
0.5900	18	13	72	Pass
0.5965	18	13	72	Pass
0.6031	18	12	66	Pass
0.6096	18	12	66	Pass
0.6161	18	12	66	Pass
0.6226	18	12	66	Pass
0.6291	17	11	64	Pass
0.6357	15	10	66	Pass
0.6422	14	10	71	Pass
0.6487	14	9	64	Pass
0.6552	13	9	69	Pass
0.6617	13	9	69	Pass
0.6683	13	9	69	Pass
0.6748	13	9	69	Pass
0.6813	13	8	61	Pass
0.6878	13	7	53	Pass
0.6943	13	7	53	Pass
0.7009	13	7	53	Pass
0.7074	10	7	70	Pass
0.7139	10	7	70	Pass
0.7204	10	7	70	Pass
0.7270	10	7	70	Pass
0.7335	10	7	70	Pass
0.7400	10	7	70	Pass
0.7465	10	7	70	Pass
0.7530	10	7	70	Pass
0.7596	10	7	70	Pass
0.7661	9	7	77	Pass
0.7726	8	7	87	Pass
0.7791	8	7	87	Pass
0.7856	8	7	87	Pass
0.7922	8	7	87	Pass
0.7987	8	7	87	Pass
0.8052	8	7	87	Pass
0.8117	8	7	87	Pass
0.8182	7	6	85	Pass
0.8248	7	6	85	Pass
0.8313	7	6	85	Pass
0.8378	7	6	85	Pass
0.8443	6	6	100	Pass

Water Quality

Model Default Modifications

Total of 0 changes have been made.

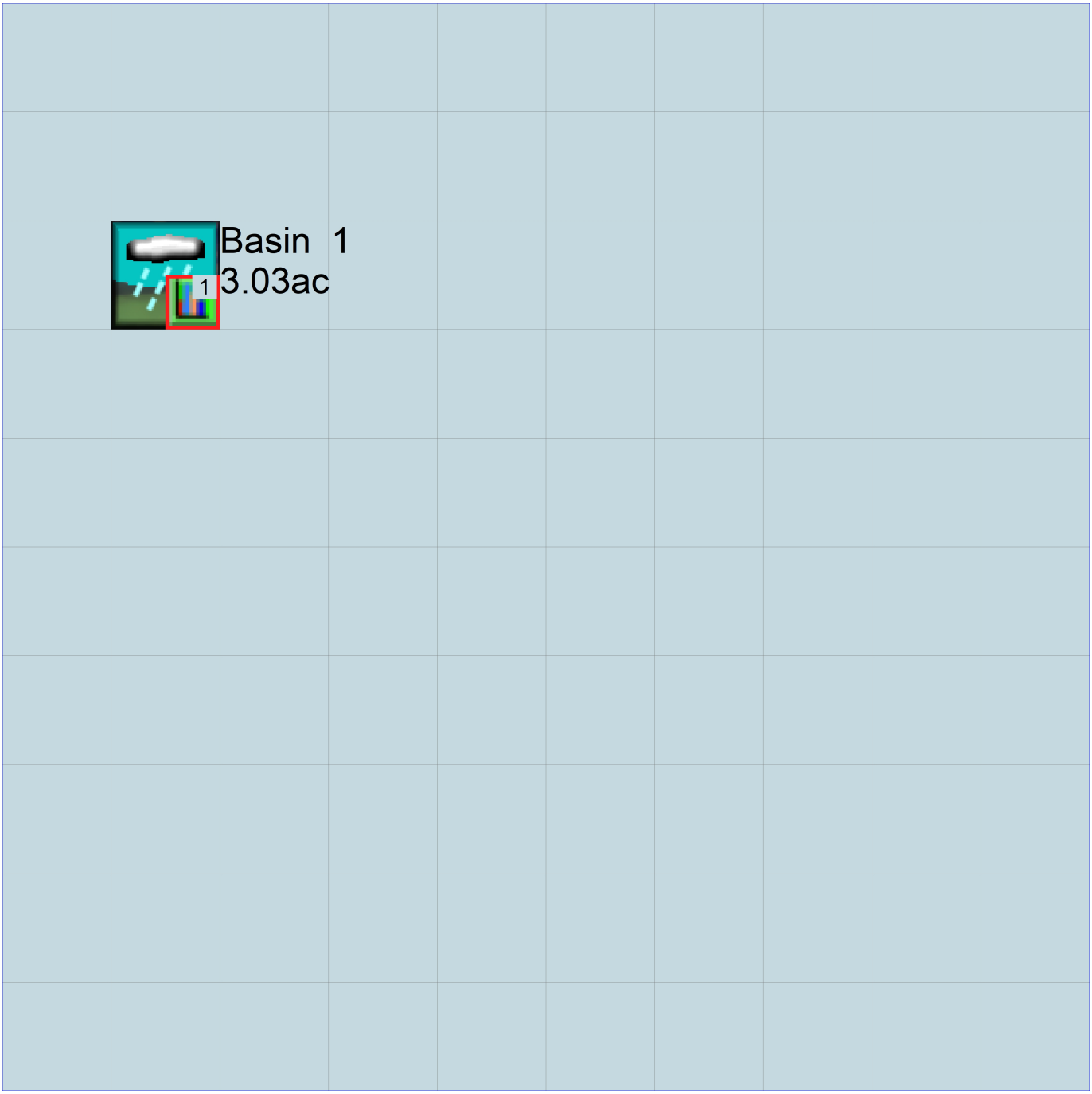
PERLND Changes

No PERLND changes have been made.

IMPLND Changes

No IMPLND changes have been made.

Appendix
Predeveloped Schematic



Mitigated Schematic



Predeveloped UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1963 10 01        END    2004 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                   UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   BMP1LD.wdm
MESSU       25   PreBMP1LD.MES
            27   PreBMP1LD.L61
            28   PreBMP1LD.L62
            30   POCBMP1LD1.dat
END FILES

OPN SEQUENCE
    INGRP              INDELT 00:60
      PERLND      19
      COPY       501
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title----------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Basin  1                   MAX                     1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                         User  t-series Engl Metr ***
                                      in  out           ***
   19      C,NatVeg,Flat          1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
   19         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
   19         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO
```

```
  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
   19         0    1    1    1    0    0    0    0    1    1    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
   19              0       3.8     0.035       100      0.05       2.5     0.915
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
   19             0         0         2         2         0      0.05      0.05
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                            ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
   19             0       0.6      0.04         1       0.3         0
  END PWAT-PARM4
  MON-LZETPARM
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   19       0.4  0.4  0.4  0.4  0.6  0.6  0.6  0.6  0.6  0.4  0.4  0.4
  END MON-LZETPARM
  MON-INTERCEP
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   19       0.1  0.1  0.1  0.1 0.06 0.06 0.06 0.06 0.06  0.1  0.1  0.1
  END MON-INTERCEP

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS      AGWS      GWVS
   19             0         0      0.01         0       0.4      0.01         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                     in  out           ***
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
  END IWAT-PARM2
```

```
  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
Basin  1***
PERLND  19                        3.03     COPY   501     12
PERLND  19                        3.03     COPY   501     13

******Routing******
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   12.1        DISPLY   1     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<------------------><---> User T-series  Engl Metr LKFG           ***
                                       in  out                              ***
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ******************* PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                  ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
            FG FG FG FG  possible  exit  *** possible  exit      possible  exit
             *  *  *  *    *  *  *  *  *       *  *  *  *  *         ***
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><-------->       ***
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                     ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><
```

```
SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    1              PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    1              IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    1              PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    1              IMPLND   1 999 EXTNL  PETINP

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
COPY   501 OUTPUT MEAN   1 1     12.1      WDM    501 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>            <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13


END MASS-LINK

END RUN
```

Mitigated UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1963 10 01        END    2004 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                    UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   BMP1LD.wdm
MESSU       25   MitBMP1LD.MES
            27   MitBMP1LD.L61
            28   MitBMP1LD.L62
            30   POCBMP1LD1.dat
END FILES

OPN SEQUENCE
    INGRP              INDELT 00:60
      PERLND      43
      IMPLND       1
      RCHRES       1
      RCHRES       2
      COPY         1
      COPY       501
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title----------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Surface Biofilter  1        MAX                    1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                          User  t-series Engl Metr ***
                                          in  out           ***
   43      C,Urban,Flat           1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
   43         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
```

```
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
   43         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
   43         0    1    1    1    0    0    0    0    1    1    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
   43              0       3.8      0.04        50      0.05       2.5     0.915
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
   43              0         0         2         2         0      0.05      0.05
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                              ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
   43             0       0.6      0.03         1       0.3         0
  END PWAT-PARM4
  MON-LZETPARM
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   43       0.6  0.6  0.6  0.6  0.7  0.7  0.7  0.7  0.7  0.6  0.6  0.6
  END MON-LZETPARM
  MON-INTERCEP
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   43       0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1
  END MON-INTERCEP

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS      AGWS      GWVS
   43             0         0      0.15         0         1      0.05         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                    in  out           ***
    1      IMPERVIOUS-FLAT        1    1    1   27    0
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
    1         0    0    1    0    0    0
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
    1         0    0    4    0    0    0    1    9
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
```

```
    1         0    0    0    0    1
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
    1            100      0.05     0.011       0.1
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
    1              0         0
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
    1              0         0
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
Basin  1***
PERLND  43                       1.31     RCHRES   1      2
PERLND  43                       1.31     RCHRES   1      3
IMPLND   1                       1.72     RCHRES   1      5

******Routing******
PERLND  43                       1.31     COPY     1     12
IMPLND   1                       1.72     COPY     1     15
PERLND  43                       1.31     COPY     1     13
RCHRES   1                          1     RCHRES   2      8
RCHRES   2                          1     COPY   501     17
RCHRES   1                          1     COPY   501     17
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   12.1        DISPLY   1     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<------------------><---> User T-series  Engl Metr LKFG           ***
                                       in  out                              ***
    1     Surface Biofilte-004    3    1    1    1   28    0    1
    2     Biofilter  1            2    1    1    1   28    0    1
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
    1         1    0    0    0    0    0    0    0    0    0
    2         1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ****************** PIVL  PYR
```

```
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
    1         4    0    0    0    0    0    0    0    0    0    1    9
    2         4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                    ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
           FG FG FG FG  possible  exit  *** possible  exit      possible  exit
            *  *  *  *    *  *  *  *  *      *  *  *  *  *         ***
    1        0  1  0  0    4  5  6  0  0       0  0  0  0  0       2  2  2  2  2
    2        0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><-------->       ***
    1              1      0.01       0.0       0.0       0.5       0.0
    2              2      0.01       0.0       0.0       0.5       0.0
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                       ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><---><--->
    1            0         4.0  5.0  6.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0  0.0
    2            0         4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0  0.0
  END HYDR-INIT
END RCHRES

SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
  FTABLE      2
   63    5
     Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
      (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
  0.000000  0.113290  0.000000  0.000000  0.000000
  0.066846  0.113238  0.001554  0.000000  0.000000
  0.133692  0.112592  0.003119  0.000000  0.000000
  0.200538  0.111948  0.004694  0.000000  0.000318
  0.267385  0.111306  0.006281  0.000000  0.001168
  0.334231  0.110666  0.007878  0.000000  0.001897
  0.401077  0.110028  0.009486  0.000000  0.004093
  0.467923  0.109391  0.011105  0.000000  0.005607
  0.534769  0.108757  0.012735  0.000000  0.009565
  0.601615  0.108124  0.014377  0.000000  0.012046
  0.668462  0.107493  0.016029  0.000000  0.017340
  0.735308  0.106864  0.017692  0.000000  0.018097
  0.802154  0.106237  0.019366  0.000000  0.025702
  0.869000  0.105611  0.021052  0.000000  0.026530
  0.935846  0.104987  0.022748  0.000000  0.026530
  1.002692  0.104366  0.024456  0.000000  0.026530
  1.069538  0.103746  0.026175  0.000000  0.026530
  1.136385  0.103128  0.027906  0.000000  0.026530
  1.203231  0.102512  0.029647  0.000000  0.026530
  1.270077  0.101897  0.031401  0.000000  0.026530
  1.336923  0.101285  0.033165  0.000000  0.026530
  1.403769  0.100674  0.034941  0.000000  0.026530
  1.470615  0.100065  0.036729  0.000000  0.026530
  1.537462  0.099458  0.038528  0.000000  0.026530
  1.604308  0.098853  0.040338  0.000000  0.026530
  1.671154  0.098250  0.042161  0.000000  0.026530
  1.738000  0.097648  0.043994  0.000000  0.026530
  1.804846  0.097049  0.046547  0.000000  0.026530
  1.871692  0.096451  0.049116  0.000000  0.026530
  1.938538  0.095855  0.051702  0.000000  0.026530
  2.005385  0.095261  0.054304  0.000000  0.026530
  2.072231  0.094669  0.056922  0.000000  0.026530
  2.139077  0.094079  0.059556  0.000000  0.026530
```

```
  2.205923  0.093490  0.062207  0.000000  0.026530
  2.272769  0.092904  0.064874  0.000000  0.026530
  2.339615  0.092319  0.067558  0.015434  0.026530
  2.406462  0.091736  0.070259  0.032468  0.026530
  2.473308  0.091155  0.072976  0.047646  0.026530
  2.540154  0.090575  0.075710  0.060709  0.026530
  2.607000  0.089998  0.078461  0.071998  0.026530
  2.673846  0.089422  0.081228  0.081909  0.026530
  2.740692  0.088849  0.084013  0.090765  0.026530
  2.807538  0.088277  0.086814  0.098809  0.026530
  2.874385  0.087707  0.089632  0.106217  0.026530
  2.941231  0.087139  0.092467  0.113115  0.026530
  3.008077  0.086572  0.095320  0.119597  0.026530
  3.074923  0.086008  0.098189  0.125730  0.026530
  3.141769  0.085445  0.101076  0.131569  0.026530
  3.208615  0.084884  0.103980  0.137152  0.026530
  3.275462  0.084325  0.106901  0.142512  0.026530
  3.342308  0.083768  0.109839  0.147674  0.026530
  3.409154  0.083213  0.112795  0.152661  0.026530
  3.476000  0.082659  0.115768  0.157488  0.026530
  3.542846  0.082108  0.118759  0.162172  0.026530
  3.609692  0.081558  0.121767  0.166726  0.026530
  3.676538  0.081010  0.124793  0.171160  0.026530
  3.743385  0.080464  0.127837  0.175485  0.026530
  3.810231  0.079920  0.130898  0.179711  0.026530
  3.877077  0.079378  0.133977  0.183848  0.026530
  3.943923  0.078837  0.137073  0.187905  0.026530
  4.010769  0.078299  0.140188  0.191904  0.026530
  4.077615  0.077762  0.143320  0.195965  0.026530
  4.083000  0.077227  0.301504  0.281816  0.026530
  END FTABLE  2
  FTABLE      1
   31    6
     Depth      Area    Volume  Outflow1  Outflow2  outflow 3 Velocity  Travel
Time***
      (ft)   (acres) (acre-ft)   (cfs)      (cfs)     (cfs)   (ft/sec)
(Minutes)***
  0.000000  0.077227  0.000000  0.000000  0.000000  0.000000
  0.066846  0.113938  0.007595  0.000000  0.222495  0.000000
  0.133692  0.114588  0.015233  0.000000  0.222495  0.000000
  0.200538  0.115239  0.022914  0.000000  0.222495  0.000000
  0.267385  0.115892  0.030639  0.000000  0.222495  0.000000
  0.334231  0.116547  0.038408  0.000000  0.222495  0.000000
  0.401077  0.117204  0.046221  0.000000  0.222495  0.000000
  0.467923  0.117863  0.054078  0.000000  0.222495  0.000000
  0.534769  0.118524  0.061978  0.000000  0.222495  0.000000
  0.601615  0.119186  0.069923  0.000000  0.222495  0.000000
  0.668462  0.119851  0.077913  0.000000  0.222495  0.000000
  0.735308  0.120517  0.085947  0.000000  0.222495  0.000000
  0.802154  0.121185  0.094025  0.000000  0.222495  0.000000
  0.869000  0.121855  0.102148  0.000000  0.222495  0.000000
  0.935846  0.122527  0.110316  0.000000  0.222495  0.000000
  1.002692  0.123200  0.118529  0.001484  0.222495  0.000000
  1.069538  0.123876  0.126787  0.194093  0.222495  0.000000
  1.136385  0.124553  0.135090  0.526774  0.222495  0.000000
  1.203231  0.125232  0.143439  0.927757  0.222495  0.000000
  1.270077  0.125913  0.151833  1.338322  0.222495  0.000000
  1.336923  0.126596  0.160273  1.700899  0.222495  0.000000
  1.403769  0.127280  0.168758  1.972587  0.222495  0.000000
  1.470615  0.127967  0.177289  2.146502  0.222495  0.000000
  1.537462  0.128655  0.185866  2.309049  0.222495  0.000000
  1.604308  0.129346  0.194489  2.448435  0.222495  0.000000
  1.671154  0.130038  0.203159  2.580302  0.222495  0.000000
  1.738000  0.130732  0.211874  2.705750  0.222495  0.000000
  1.804846  0.131427  0.220637  2.825634  0.222495  0.000000
  1.871692  0.132125  0.229445  2.940635  0.222495  0.000000
  1.938538  0.132824  0.238301  3.051305  0.222495  0.000000
  2.000000  0.133469  0.246484  3.158098  0.222495  0.000000
  END FTABLE  1
END FTABLES
```

```
EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    1              PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    1              IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    1              PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    1              IMPLND   1 999 EXTNL  PETINP
WDM     22 IRRG     ENGL    0.7       SAME PERLND  43     EXTNL  SURLI
WDM      2 PREC     ENGL    1              RCHRES   1     EXTNL  PREC
WDM      1 EVAP     ENGL    0.5            RCHRES   1     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.7            RCHRES   2     EXTNL  POTEV

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
RCHRES   2 HYDR   RO     1 1        1      WDM   1000 FLOW     ENGL      REPL
RCHRES   2 HYDR   O      1 1        1      WDM   1001 FLOW     ENGL      REPL
RCHRES   2 HYDR   O      2 1        1      WDM   1002 FLOW     ENGL      REPL
RCHRES   2 HYDR   STAGE  1 1        1      WDM   1003 STAG     ENGL      REPL
RCHRES   1 HYDR   STAGE  1 1        1      WDM   1004 STAG     ENGL      REPL
RCHRES   1 HYDR   O      1 1        1      WDM   1005 FLOW     ENGL      REPL
COPY     1 OUTPUT MEAN   1 1     12.1      WDM    701 FLOW     ENGL      REPL
COPY   501 OUTPUT MEAN   1 1     12.1      WDM    801 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>             <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK        2
PERLND     PWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    2

  MASS-LINK        3
PERLND     PWATER IFWO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    3

  MASS-LINK        5
IMPLND     IWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    5

  MASS-LINK        8
RCHRES     OFLOW  OVOL   2                 RCHRES         INFLOW IVOL
  END MASS-LINK    8

  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13

  MASS-LINK       15
IMPLND     IWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   15

  MASS-LINK       17
RCHRES     OFLOW  OVOL   1                 COPY           INPUT  MEAN
  END MASS-LINK   17


END MASS-LINK

END RUN
```

Predeveloped HSPF Message File

Mitigated HSPF Message File

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SDHM 3.1

PROJECT REPORT

BMP 2 BIOFILTRATION BASIN

General Model Information

Project Name:	BMP2LD
Site Name:	Cardiff School
Site Address:	1888 Montgomery Ave.
City:	Cardiff
Report Date:	9/3/2018
Gage:	ENCINITA
Data Start:	10/01/1963
Data End:	09/30/2004
Timestep:	Hourly
Precip Scale:	1.000
Version Date:	2018/06/15

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	10 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
C,NatVeg,Flat	4.13
Pervious Total	4.13
Impervious Land Use	acre
Impervious Total	0
Basin Total	4.13

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C,Urban,Flat	1.82
Pervious Total	1.82

Impervious Land Use	acre
IMPERVIOUS-FLAT	2.31
Impervious Total	2.31
Basin Total	4.13

Element Flows To:

Surface	Interflow	Groundwater
Surface Biofilter 1	Surface Biofilter 1	

Mitigated Routing

Biofilter 1

Bottom Length:	66.00 ft.
Bottom Width:	66.00 ft.
Material thickness of first layer:	0.25
Material type for first layer:	Mulch
Material thickness of second layer:	1.5
Material type for second layer:	ESM
Material thickness of third layer:	2.333
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.3471
Infiltration safety factor:	1
Total Volume Infiltrated (ac-ft.):	44.962
Total Volume Through Riser (ac-ft.):	2.25
Total Volume Through Facility (ac-ft.):	68.647
Percent Infiltrated:	65.5
Total Precip Applied to Facility:	3.236
Total Evap From Facility:	3.223
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	2.70292699999985
Offset (in.):	6
Flow Through Underdrain (ac-ft.):	21.435
Total Outflow (ac-ft.):	68.647
Percent Through Underdrain:	31.22
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Flows To:	
Outlet 1	Outlet 2

4,356 sf of basin floor area required.

Biofilter Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.1406	0.0000	0.0000	0.0000
0.0668	0.1405	0.0020	0.0000	0.0000
0.1337	0.1398	0.0040	0.0000	0.0000
0.2005	0.1391	0.0061	0.0000	0.0004
0.2674	0.1384	0.0081	0.0000	0.0015
0.3342	0.1376	0.0102	0.0000	0.0025
0.4011	0.1369	0.0123	0.0000	0.0053
0.4679	0.1362	0.0143	0.0000	0.0073
0.5348	0.1355	0.0164	0.0000	0.0124
0.6016	0.1348	0.0185	0.0000	0.0156
0.6685	0.1341	0.0207	0.0000	0.0225
0.7353	0.1334	0.0228	0.0000	0.0234
0.8022	0.1327	0.0250	0.0000	0.0333
0.8690	0.1320	0.0271	0.0000	0.0350
0.9358	0.1313	0.0293	0.0000	0.0350
1.0027	0.1306	0.0315	0.0000	0.0350
1.0695	0.1299	0.0337	0.0000	0.0350
1.1364	0.1292	0.0359	0.0000	0.0350
1.2032	0.1285	0.0381	0.0000	0.0350
1.2701	0.1278	0.0403	0.0000	0.0350

1.3369	0.1272	0.0426	0.0000	0.0350
1.4038	0.1265	0.0449	0.0000	0.0350
1.4706	0.1258	0.0471	0.0000	0.0350
1.5375	0.1251	0.0494	0.0000	0.0350
1.6043	0.1244	0.0517	0.0000	0.0350
1.6712	0.1237	0.0540	0.0000	0.0350
1.7380	0.1231	0.0564	0.0000	0.0350
1.8048	0.1224	0.0596	0.0000	0.0350
1.8717	0.1217	0.0629	0.0000	0.0350
1.9385	0.1211	0.0661	0.0000	0.0350
2.0054	0.1204	0.0694	0.0000	0.0350
2.0722	0.1197	0.0727	0.0000	0.0350
2.1391	0.1191	0.0761	0.0000	0.0350
2.2059	0.1184	0.0794	0.0000	0.0350
2.2728	0.1177	0.0828	0.0000	0.0350
2.3396	0.1171	0.0862	0.0206	0.0350
2.4065	0.1164	0.0896	0.0432	0.0350
2.4733	0.1158	0.0930	0.0634	0.0350
2.5402	0.1151	0.0964	0.0808	0.0350
2.6070	0.1145	0.0999	0.0959	0.0350
2.6738	0.1138	0.1034	0.1091	0.0350
2.7407	0.1132	0.1069	0.1209	0.0350
2.8075	0.1125	0.1104	0.1316	0.0350
2.8744	0.1119	0.1139	0.1414	0.0350
2.9412	0.1112	0.1175	0.1506	0.0350
3.0081	0.1106	0.1211	0.1593	0.0350
3.0749	0.1100	0.1247	0.1674	0.0350
3.1418	0.1093	0.1283	0.1752	0.0350
3.2086	0.1087	0.1319	0.1826	0.0350
3.2755	0.1081	0.1356	0.1898	0.0350
3.3423	0.1074	0.1392	0.1966	0.0350
3.4092	0.1068	0.1429	0.2033	0.0350
3.4760	0.1062	0.1466	0.2097	0.0350
3.5428	0.1055	0.1504	0.2160	0.0350
3.6097	0.1049	0.1541	0.2220	0.0350
3.6765	0.1043	0.1579	0.2279	0.0350
3.7434	0.1037	0.1617	0.2337	0.0350
3.8102	0.1031	0.1655	0.2393	0.0350
3.8771	0.1024	0.1693	0.2448	0.0350
3.9439	0.1018	0.1732	0.2502	0.0350
4.0108	0.1012	0.1770	0.2555	0.0350
4.0776	0.1006	0.1809	0.2610	0.0350
4.0830	0.1000	0.1812	0.3753	0.0350

Biofilter Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
4.0830	0.1406	0.1812	0.0000	0.2960	0.0000
4.1498	0.1413	0.1907	0.0000	0.2960	0.0000
4.2167	0.1420	0.2001	0.0000	0.2960	0.0000
4.2835	0.1427	0.2096	0.0000	0.2960	0.0000
4.3504	0.1435	0.2192	0.0000	0.2960	0.0000
4.4172	0.1442	0.2288	0.0000	0.2960	0.0000
4.4841	0.1449	0.2385	0.0000	0.2960	0.0000
4.5509	0.1457	0.2482	0.0000	0.2960	0.0000
4.6178	0.1464	0.2580	0.0000	0.2960	0.0000
4.6846	0.1471	0.2678	0.0000	0.2960	0.0000
4.7515	0.1479	0.2776	0.0000	0.2960	0.0000
4.8183	0.1486	0.2875	0.0000	0.2960	0.0000

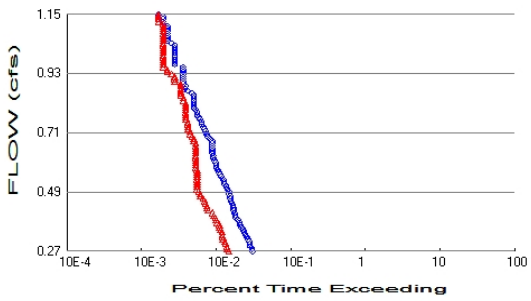
4.8852	0.1493	0.2975	0.0000	0.2960	0.0000
4.9520	0.1501	0.3075	0.0000	0.2960	0.0000
5.0188	0.1508	0.3176	0.0000	0.2960	0.0000
5.0857	0.1516	0.3277	0.0015	0.2960	0.0000
5.1525	0.1523	0.3378	0.1941	0.2960	0.0000
5.2194	0.1531	0.3480	0.5268	0.2960	0.0000
5.2862	0.1538	0.3583	0.9278	0.2960	0.0000
5.3531	0.1546	0.3686	1.3383	0.2960	0.0000
5.4199	0.1553	0.3789	1.7009	0.2960	0.0000
5.4868	0.1561	0.3894	1.9726	0.2960	0.0000
5.5536	0.1569	0.3998	2.1465	0.2960	0.0000
5.6205	0.1576	0.4103	2.3090	0.2960	0.0000
5.6873	0.1584	0.4209	2.4484	0.2960	0.0000
5.7542	0.1592	0.4315	2.5803	0.2960	0.0000
5.8210	0.1599	0.4422	2.7058	0.2960	0.0000
5.8878	0.1607	0.4529	2.8256	0.2960	0.0000
5.9547	0.1615	0.4637	2.9406	0.2960	0.0000
6.0215	0.1622	0.4745	3.0513	0.2960	0.0000
6.0830	0.1629	0.4845	3.1581	0.2960	0.0000

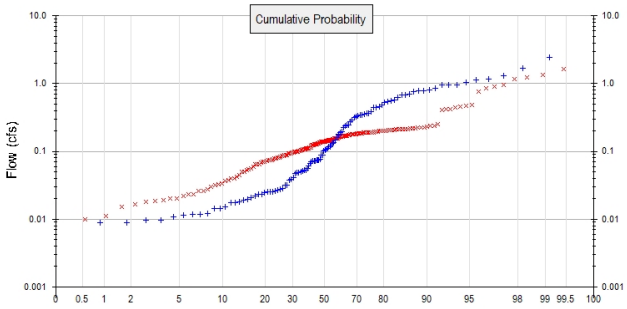
Surface Biofilter 1

Element Flows To:

Outlet 1	Outlet 2
	Biofilter 1

Analysis Results
POC 1





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 4.13
Total Impervious Area: 0

Mitigated Landuse Totals for POC #1
Total Pervious Area: 1.82
Total Impervious Area: 2.31

Flow Frequency Method: Weibull

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	**Flow(cfs)**
2 year	0.5419
5 year	0.956823
10 year	1.15084
25 year	1.815483

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	0.226602
5 year	0.638182
10 year	1.117617
25 year	1.40161

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.2710	110	53	48	Pass
0.2798	108	51	47	Pass
0.2887	103	50	48	Pass
0.2976	101	48	47	Pass
0.3065	99	47	47	Pass
0.3154	96	44	45	Pass
0.3243	92	44	47	Pass
0.3332	88	43	48	Pass
0.3421	85	43	50	Pass
0.3509	82	41	50	Pass
0.3598	79	40	50	Pass
0.3687	75	40	53	Pass
0.3776	74	37	50	Pass
0.3865	71	36	50	Pass
0.3954	66	35	53	Pass
0.4043	65	33	50	Pass
0.4132	63	32	50	Pass
0.4220	62	28	45	Pass
0.4309	61	27	44	Pass
0.4398	60	27	45	Pass
0.4487	58	26	44	Pass
0.4576	56	25	44	Pass
0.4665	55	24	43	Pass
0.4754	55	22	40	Pass
0.4843	54	22	40	Pass
0.4931	53	21	39	Pass
0.5020	51	20	39	Pass
0.5109	49	20	40	Pass
0.5198	47	20	42	Pass
0.5287	46	20	43	Pass
0.5376	45	20	44	Pass
0.5465	42	20	47	Pass
0.5554	41	20	48	Pass
0.5642	39	20	51	Pass
0.5731	38	20	52	Pass
0.5820	36	19	52	Pass
0.5909	36	19	52	Pass
0.5998	35	19	54	Pass
0.6087	34	19	55	Pass
0.6176	33	19	57	Pass
0.6265	33	19	57	Pass
0.6353	32	19	59	Pass
0.6442	32	19	59	Pass
0.6531	32	19	59	Pass
0.6620	32	19	59	Pass
0.6709	32	19	59	Pass
0.6798	32	18	56	Pass
0.6887	30	18	60	Pass
0.6976	28	17	60	Pass
0.7065	27	16	59	Pass
0.7153	26	16	61	Pass
0.7242	25	15	60	Pass
0.7331	24	15	62	Pass

0.7420	23	15	65	Pass
0.7509	23	15	65	Pass
0.7598	22	14	63	Pass
0.7687	21	14	66	Pass
0.7776	20	14	70	Pass
0.7864	20	14	70	Pass
0.7953	19	14	73	Pass
0.8042	18	14	77	Pass
0.8131	18	14	77	Pass
0.8220	18	14	77	Pass
0.8309	18	13	72	Pass
0.8398	18	13	72	Pass
0.8487	18	12	66	Pass
0.8575	17	12	70	Pass
0.8664	15	12	80	Pass
0.8753	14	12	85	Pass
0.8842	14	12	85	Pass
0.8931	13	12	92	Pass
0.9020	13	10	76	Pass
0.9109	13	10	76	Pass
0.9198	13	10	76	Pass
0.9286	13	9	69	Pass
0.9375	13	8	61	Pass
0.9464	13	8	61	Pass
0.9553	13	7	53	Pass
0.9642	10	7	70	Pass
0.9731	10	7	70	Pass
0.9820	10	7	70	Pass
0.9909	10	7	70	Pass
0.9997	10	7	70	Pass
1.0086	10	7	70	Pass
1.0175	10	7	70	Pass
1.0264	10	7	70	Pass
1.0353	10	7	70	Pass
1.0442	9	7	77	Pass
1.0531	8	7	87	Pass
1.0620	8	7	87	Pass
1.0709	8	7	87	Pass
1.0797	8	7	87	Pass
1.0886	8	7	87	Pass
1.0975	8	7	87	Pass
1.1064	8	7	87	Pass
1.1153	7	7	100	Pass
1.1242	7	6	85	Pass
1.1331	7	6	85	Pass
1.1420	7	6	85	Pass
1.1508	6	6	100	Pass

Water Quality

Model Default Modifications

Total of 0 changes have been made.

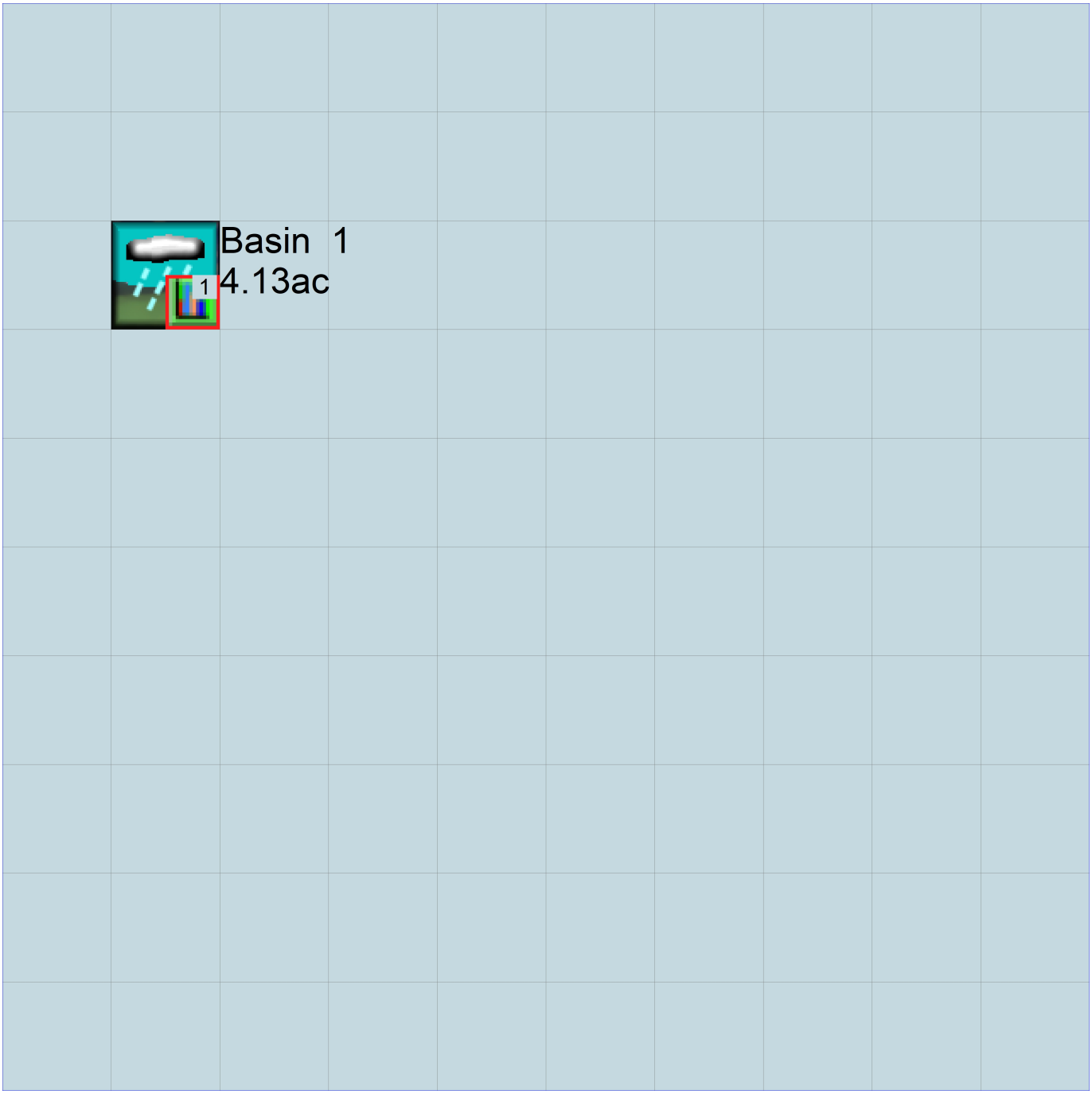
PERLND Changes

No PERLND changes have been made.

IMPLND Changes

No IMPLND changes have been made.

Appendix
Predeveloped Schematic



Mitigated Schematic



Predeveloped UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1963 10 01        END    2004 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                   UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   BMP2LD.wdm
MESSU       25   PreBMP2LD.MES
            27   PreBMP2LD.L61
            28   PreBMP2LD.L62
            30   POCBMP2LD1.dat
END FILES

OPN SEQUENCE
    INGRP              INDELT 00:60
      PERLND      19
      COPY       501
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title----------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Basin  1                   MAX                     1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                          User  t-series Engl Metr ***
                                       in  out           ***
   19      C,NatVeg,Flat          1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
   19         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
   19         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO
```

```
  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
   19         0    1    1    1    0    0    0    0    1    1    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
   19              0       3.8     0.035       100      0.05       2.5     0.915
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
   19             0         0         2         2         0      0.05      0.05
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                            ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
   19             0       0.6      0.04         1       0.3         0
  END PWAT-PARM4
  MON-LZETPARM
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   19       0.4  0.4  0.4  0.4  0.6  0.6  0.6  0.6  0.6  0.4  0.4  0.4
  END MON-LZETPARM
  MON-INTERCEP
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   19       0.1  0.1  0.1  0.1 0.06 0.06 0.06 0.06 0.06  0.1  0.1  0.1
  END MON-INTERCEP

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS      AGWS      GWVS
   19             0         0      0.01         0       0.4      0.01         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                     in  out           ***
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
  END IWAT-PARM2
```

```
  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
Basin  1***
PERLND  19                        4.13     COPY   501     12
PERLND  19                        4.13     COPY   501     13

******Routing******
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   12.1        DISPLY   1     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<------------------><---> User T-series  Engl Metr LKFG           ***
                                      in  out                               ***
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ******************** PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                 ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
            FG FG FG FG  possible  exit  *** possible  exit      possible  exit
             *  *  *  *    *  *  *  *  *       *  *  *  *  *         ***
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><-------->       ***
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                        ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><--->
  END HYDR-INIT
END RCHRES
```

```
SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    1              PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    1              IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    1              PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    1              IMPLND   1 999 EXTNL  PETINP

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
COPY   501 OUTPUT MEAN   1 1     12.1      WDM    501 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>            <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13


END MASS-LINK

END RUN
```

Mitigated UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1963 10 01        END    2004 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                    UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM         26   BMP2LD.wdm
MESSU       25   MitBMP2LD.MES
            27   MitBMP2LD.L61
            28   MitBMP2LD.L62
            30   POCBMP2LD1.dat
END FILES

OPN SEQUENCE
    INGRP              INDELT 00:60
      PERLND      43
      IMPLND       1
      RCHRES       1
      RCHRES       2
      COPY         1
      COPY       501
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title----------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Surface Biofilter  1        MAX                    1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                          User  t-series Engl Metr ***
                                          in  out           ***
   43      C,Urban,Flat           1    1    1    1   27    0
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
   43         0    0    1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
```

```
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
   43         0    0    4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
   43         0    1    1    1    0    0    0    0    1    1    0
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
   43              0       3.8      0.04        50      0.05       2.5     0.915
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
   43              0         0         2         2         0      0.05      0.05
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                              ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
   43             0       0.6      0.03         1       0.3         0
  END PWAT-PARM4
  MON-LZETPARM
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   43       0.6  0.6  0.6  0.6  0.7  0.7  0.7  0.7  0.7  0.6  0.6  0.6
  END MON-LZETPARM
  MON-INTERCEP
    <PLS >      PWATER input info: Part 3         ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   43       0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1
  END MON-INTERCEP

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS      IFWS       LZS      AGWS      GWVS
   43             0         0      0.15         0         1      0.05         0
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                    in  out           ***
    1      IMPERVIOUS-FLAT        1    1    1   27    0
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL   ***
    1         0    0    1    0    0    0
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
    1         0    0    4    0    0    0    1    9
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
```

```
    1         0    0    0    0    1
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
    1            100      0.05     0.011       0.1
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
    1              0         0
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
    1              0         0
  END IWAT-STATE1

END IMPLND

SCHEMATIC
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
Basin  1***
PERLND  43                       1.82     RCHRES   1      2
PERLND  43                       1.82     RCHRES   1      3
IMPLND   1                       2.31     RCHRES   1      5

******Routing******
PERLND  43                       1.82     COPY     1     12
IMPLND   1                       2.31     COPY     1     15
PERLND  43                       1.82     COPY     1     13
RCHRES   1                          1     RCHRES   2      8
RCHRES   2                          1     COPY   501     17
RCHRES   1                          1     COPY   501     17
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   12.1        DISPLY   1     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<------------------><---> User T-series  Engl Metr LKFG           ***
                                        in  out                             ***
    1     Surface Biofilte-004    3    1    1    1   28    0    1
    2     Biofilter  1            2    1    1    1   28    0    1
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
    1         1    0    0    0    0    0    0    0    0    0
    2         1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ****************** PIVL  PYR
```

```
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
    1         4    0    0    0    0    0    0    0    0    0    1    9
    2         4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                    ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
           FG FG FG FG  possible  exit  *** possible  exit      possible  exit
            *  *  *  *    *  *  *  *  *      *  *  *  *  *         ***
    1        0  1  0  0    4  5  6  0  0       0  0  0  0  0       2  2  2  2  2
    2        0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN      DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><-------->       ***
    1              1      0.01       0.0       0.0       0.5       0.0
    2              2      0.01       0.0       0.0       0.5       0.0
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                       ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><---><--->
    1            0         4.0  5.0  6.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0  0.0
    2            0         4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0  0.0
  END HYDR-INIT
END RCHRES

SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
  FTABLE      2
   63    5
     Depth      Area    Volume  Outflow1  Outflow2  Velocity  Travel Time***
      (ft)   (acres) (acre-ft)   (cfs)      (cfs)   (ft/sec)    (Minutes)***
  0.000000  0.140563  0.000000  0.000000  0.000000
  0.066846  0.140505  0.002011  0.000000  0.000000
  0.133692  0.139785  0.004035  0.000000  0.000000
  0.200538  0.139068  0.006071  0.000000  0.000412
  0.267385  0.138352  0.008119  0.000000  0.001513
  0.334231  0.137638  0.010180  0.000000  0.002456
  0.401077  0.136926  0.012253  0.000000  0.005300
  0.467923  0.136216  0.014338  0.000000  0.007260
  0.534769  0.135508  0.016436  0.000000  0.012386
  0.601615  0.134801  0.018547  0.000000  0.015599
  0.668462  0.134096  0.020669  0.000000  0.022453
  0.735308  0.133394  0.022805  0.000000  0.023434
  0.802154  0.132693  0.024953  0.000000  0.033281
  0.869000  0.131994  0.027113  0.000000  0.034999
  0.935846  0.131296  0.029287  0.000000  0.034999
  1.002692  0.130601  0.031473  0.000000  0.034999
  1.069538  0.129907  0.033671  0.000000  0.034999
  1.136385  0.129216  0.035883  0.000000  0.034999
  1.203231  0.128526  0.038107  0.000000  0.034999
  1.270077  0.127838  0.040344  0.000000  0.034999
  1.336923  0.127152  0.042594  0.000000  0.034999
  1.403769  0.126467  0.044857  0.000000  0.034999
  1.470615  0.125785  0.047133  0.000000  0.034999
  1.537462  0.125104  0.049422  0.000000  0.034999
  1.604308  0.124425  0.051724  0.000000  0.034999
  1.671154  0.123749  0.054039  0.000000  0.034999
  1.738000  0.123073  0.056368  0.000000  0.034999
  1.804846  0.122400  0.059606  0.000000  0.034999
  1.871692  0.121729  0.062864  0.000000  0.034999
  1.938538  0.121059  0.066139  0.000000  0.034999
  2.005385  0.120392  0.069433  0.000000  0.034999
  2.072231  0.119726  0.072745  0.000000  0.034999
  2.139077  0.119062  0.076075  0.000000  0.034999
```

```
  2.205923  0.118400  0.079424  0.000000  0.034999
  2.272769  0.117739  0.082792  0.000000  0.034999
  2.339615  0.117081  0.086178  0.020553  0.034999
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  2.473308  0.115769  0.093007  0.063447  0.034999
  2.540154  0.115116  0.096449  0.080842  0.034999
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  2.740692  0.113169  0.106889  0.120866  0.034999
  2.807538  0.112523  0.110407  0.131578  0.034999
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  2.941231  0.111238  0.117500  0.150628  0.034999
  3.008077  0.110598  0.121075  0.159259  0.034999
  3.074923  0.109959  0.124669  0.167427  0.034999
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  3.208615  0.108689  0.131915  0.182636  0.034999
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  4.010769  0.101219  0.177028  0.255546  0.034999
  4.077615  0.100609  0.180916  0.260953  0.034999
  4.083000  0.100000  0.380583  0.375276  0.034999
  END FTABLE  2
  FTABLE      1
   31    6
     Depth      Area    Volume  Outflow1  Outflow2  outflow 3 Velocity  Travel
Time***
      (ft)   (acres) (acre-ft)   (cfs)      (cfs)     (cfs)   (ft/sec)
(Minutes)***
  0.000000  0.100000  0.000000  0.000000  0.000000  0.000000
  0.066846  0.141284  0.009420  0.000000  0.295952  0.000000
  0.133692  0.142007  0.018889  0.000000  0.295952  0.000000
  0.200538  0.142732  0.028406  0.000000  0.295952  0.000000
  0.267385  0.143459  0.037971  0.000000  0.295952  0.000000
  0.334231  0.144188  0.047585  0.000000  0.295952  0.000000
  0.401077  0.144919  0.057248  0.000000  0.295952  0.000000
  0.467923  0.145651  0.066960  0.000000  0.295952  0.000000
  0.534769  0.146385  0.076720  0.000000  0.295952  0.000000
  0.601615  0.147122  0.086530  0.000000  0.295952  0.000000
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  1.938538  0.162233  0.293240  3.051305  0.295952  0.000000
  2.000000  0.162945  0.303233  3.158098  0.295952  0.000000
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END FTABLES
```

```
EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL    1              PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL    1              IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    1              PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    1              IMPLND   1 999 EXTNL  PETINP
WDM     22 IRRG     ENGL    0.7       SAME PERLND  43     EXTNL  SURLI
WDM      2 PREC     ENGL    1              RCHRES   1     EXTNL  PREC
WDM      1 EVAP     ENGL    0.5            RCHRES   1     EXTNL  POTEV
WDM      1 EVAP     ENGL    0.7            RCHRES   2     EXTNL  POTEV

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
RCHRES   2 HYDR   RO     1 1        1      WDM   1000 FLOW     ENGL      REPL
RCHRES   2 HYDR   O      1 1        1      WDM   1001 FLOW     ENGL      REPL
RCHRES   2 HYDR   O      2 1        1      WDM   1002 FLOW     ENGL      REPL
RCHRES   2 HYDR   STAGE  1 1        1      WDM   1003 STAG     ENGL      REPL
RCHRES   1 HYDR   STAGE  1 1        1      WDM   1004 STAG     ENGL      REPL
RCHRES   1 HYDR   O      1 1        1      WDM   1005 FLOW     ENGL      REPL
COPY     1 OUTPUT MEAN   1 1     12.1      WDM    701 FLOW     ENGL      REPL
COPY   501 OUTPUT MEAN   1 1     12.1      WDM    801 FLOW     ENGL      REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>             <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK        2
PERLND     PWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    2

  MASS-LINK        3
PERLND     PWATER IFWO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    3

  MASS-LINK        5
IMPLND     IWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    5

  MASS-LINK        8
RCHRES     OFLOW  OVOL   2                 RCHRES         INFLOW IVOL
  END MASS-LINK    8

  MASS-LINK       12
PERLND     PWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   12

  MASS-LINK       13
PERLND     PWATER IFWO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   13

  MASS-LINK       15
IMPLND     IWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   15

  MASS-LINK       17
RCHRES     OFLOW  OVOL   1                 COPY           INPUT  MEAN
  END MASS-LINK   17


END MASS-LINK

END RUN
```

Predeveloped HSPF Message File

Mitigated HSPF Message File

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ATTACHMENT 3 - STRUCTURAL BMP MAINTENANCE INFORMATION

This is the cover sheet for Attachment 3.

Indicate which items are included behind this cover sheet:

Attachment	Contents	Checklist
Attachment 3a	Structural BMP Maintenance Thresholds and Actions (Required)	X Included See Structural BMP Maintenance Information Checklist on the back of this Attachment cover sheet.
Attachment 3b	Draft Maintenance Agreement (when applicable)	□ Included X Not Applicable

Use this checklist to ensure the required information has been included in the Structural BMP Maintenance Information Attachment:

X Preliminary Design / Planning / CEQA level submittal:

Attachment 3a must identify:

X Typical maintenance indicators and actions for proposed structural BMP(s) based on Section 7.7 of the BMP Design Manual

Attachment 3b is not required for preliminary design / planning / CEQA level submittal.

□ **Final Design level submittal:**

Attachment 3a must identify:

- □ Specific maintenance indicators and actions for proposed structural BMP(s). This shall be based on Section 7.7 of the BMP Design Manual and enhanced to reflect actual proposed components of the structural BMP(s)
- □ How to access the structural BMP(s) to inspect and perform maintenance
- □ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
- □ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
- □ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
- □ Recommended equipment to perform maintenance
- □ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management

Attachment 3b: For private entity operation and maintenance, Attachment 3b shall include a draft maintenance agreement in the local jurisdiction's standard format (PDP applicant to contact the City Engineer to obtain the current maintenance agreement forms).

Attachment 3a

STRUCTURAL BMP MAINTENANCE

The project proposes two biofiltration basins for its structural BMPs. The biofiltration basins will contain overflow catch basins set approximately 12" above each basin floor (or other approved outlet) to convey the flow rates in excess of the water quality flows.

Biofiltration basins are shallow, vegetated basins underlain by an engineered soil media and gravel. Healthy plant and biological activity in the root zone maintain and renew the macro-pore space in the soil and maximize plant uptake of pollutants and runoff. This keeps the BMP from becoming clogged and allows more of the soil column to function as both a sponge (retaining water) and a highly effective and self-maintaining biofilter.

The landscape maintenance staff shall inspect each basin during routine weekly landscaping maintenance visits. Access will be from adjacent walkways, landscape areas, or paved areas. The vegetation shall be replanted, trimmed, pruned, removed, as needed, to maintain proper coverage and growth. The irrigation system shall be maintained, as needed. The drainage overflow from the basins and interconnecting pipes shall be inspected monthly and after large storm events. Debris, sediment, and other obstructions shall be removed immediately from each basin, its outlet, and the interconnecting pipes. The infiltration rate shall be reviewed during storm events and the underlying soil/gravel shall be replaced as needed to maintain the required drawdown time.

During inspection, the inspector checks the maintenance indicators. If one or more thresholds are met or exceeded, maintenance must be performed to ensure the structural BMP will function as designed during the next storm event. At a minimum, maintenance shall be performed once annually.

7.7.1 Maintenance of Vegetated Infiltration or Filtration BMPs

"Vegetated infiltration or filtration BMPs" are BMPs that include vegetation as a component of the BMP. Applicable Fact Sheets may include INF-2 (bioretention), PR-1 (biofiltration with partial retention), BF-1 (biofiltration) or FT-1 (vegetated swale). The vegetated BMP may or may not include amended soils, subsurface gravel layer, underdrain, and/or impermeable liner. Maintenance indicators and associated actions for vegetated infiltration and filtration BMPs are presented below.

TABLE 7-3. Maintenance Indicators and Actions for Vegetated BMPs

Typical Maintenance Indicator(s) for Vegetated BMPs	Maintenance Actions
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation. Examine the DMA draining to the BMP to determine the source of the sediment. Implement corrective measures as applicable to minimize the sediment supply.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans. Evaluate proper functioning of irrigation system, if applicable.
Overgrown vegetation	Mow or trim as appropriate, but not less than the design height of the vegetation per original plans when applicable (e.g. a vegetated swale may require a minimum vegetation height).
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas. If necessary, perform minor re-grading to restore proper drainage according to the original plan. Adjust the irrigation system to prevent further erosion.
Erosion due to concentrated stormwater runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, contact the City Engineer prior to any additional repairs or reconstruction.
Standing water in vegetated swales	Make appropriate corrective measures such as adjusting the irrigation system, removing obstructions of debris or invasive vegetation, loosening or replacing top soil to allow for better infiltration, or minor re-grading, to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, contact the City Engineer prior to any additional repairs or reconstruction. Repair/re-seed/re-plant per the original plans any damaged vegetation in need of replacement.

Typical Maintenance Indicator(s) for Vegetated BMPs	Maintenance Actions
Standing water in bioretention, biofiltration with partial retention, or biofiltration areas, or flow-through planter boxes for longer than 96 hours following a storm event*	Make appropriate corrective measures such as adjusting the irrigation system, removing obstructions of debris or invasive vegetation, loosening or replacing top soil to allow for better infiltration, clearing any underdrains, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, contact the City Engineer prior to any additional repairs or reconstruction. Repair/re-seed/re-plant per the original plans any damaged vegetation in need of replacement.
Obstructed inlet or outlet structure	Clear obstructions.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as appropriate.
*These BMPs typically include a surface ponding layer as part of their function which may take 96 hours to drain following a storm event.	

7.7.2 Maintenance of Non-Vegetated Infiltration BMPs

"Non-vegetated infiltration BMPs" are BMPs that store stormwater runoff until it infiltrates into the ground, and do not include vegetation as a component of the BMP (refer to the "vegetated BMPs" category for infiltration BMPs that include vegetation). Non-vegetated infiltration BMPs generally include non-vegetated infiltration trenches and infiltration basins, dry wells, underground infiltration galleries, and permeable pavement with underground infiltration gallery. Applicable Fact Sheets may include INF-1 (infiltration basin) or INF-3 (permeable pavement). The non-vegetated infiltration BMP may or may not include a pre-treatment device, and may or may not include above-ground storage of runoff. Maintenance indicators and associated actions for non-vegetated infiltration BMPs are presented below.

TABLE 7-4. Maintenance Indicators and Actions for Non-Vegetated Infiltration BMPs

Typical Maintenance Indicator(s) for Non-Vegetated Infiltration BMPs	Maintenance Actions
Accumulation of sediment, litter, or debris in infiltration basin, pre-treatment device, or on permeable pavement surface	Remove and properly dispose accumulated materials. Examine the DMA draining to the BMP to determine the source of the sediment. Implement corrective measures as applicable to minimize the sediment supply.
Standing water in infiltration basin without subsurface infiltration gallery for longer than 96 hours following a storm event	Remove and replace clogged surface soils.

E.12 BF-1 Biofiltration



Location: 43rd Street and Logan Avenue, San Diego, California

MS4 Permit Category
Biofiltration

Manual Category
Biofiltration

Applicable Performance Standard
Pollutant Control
Flow Control

Primary Benefits
Treatment
Volume Reduction (Incidental)
Peak Flow Attenuation (Optional)

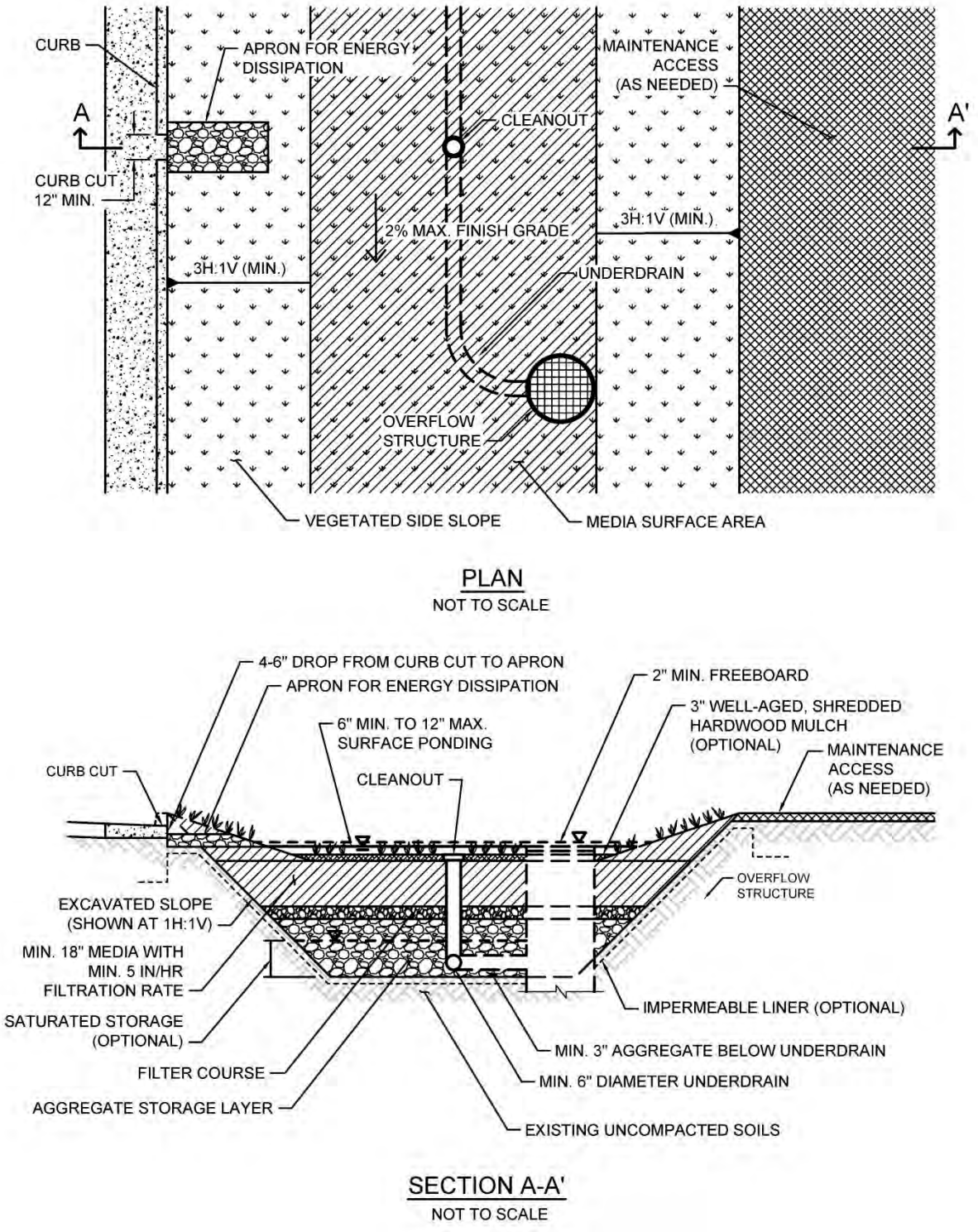
Description

Biofiltration (Bioretention with underdrain) facilities are vegetated surface water systems that filter water through vegetation, and soil or engineered media prior to discharge via underdrain or overflow to the downstream conveyance system. Bioretention with underdrain facilities are commonly incorporated into the site within parking lot landscaping, along roadsides, and in open spaces. Because these types of facilities have limited or no infiltration, they are typically designed to provide enough hydraulic head to move flows through the underdrain connection to the storm drain system. Treatment is achieved through filtration, sedimentation, sorption, biochemical processes and plant uptake.

Typical bioretention with underdrain components include:

- Inflow distribution mechanisms (e.g, perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Shallow surface ponding for captured flows
- Side slope and basin bottom vegetation selected based on expected climate and ponding depth
- Non-floating mulch layer (Optional)
- Media layer (planting mix or engineered media) capable of supporting vegetation growth
- Filter course layer consisting of aggregate to prevent the migration of fines into uncompacted native soils or the aggregate storage layer
- Aggregate storage layer with underdrain(s)
- Impermeable liner or uncompacted native soils at the bottom of the facility

- Overflow structure



Typical plan and Section view of a Biofiltration BMP

Design Adaptations for Project Goals

Biofiltration Treatment BMP for stormwater pollutant control. The system is lined or un-lined to provide incidental infiltration, and an underdrain is provided at the bottom to carry away filtered runoff. This configuration is considered to provide biofiltration treatment via flow through the media layer. Storage provided above the underdrain within surface ponding, media, and aggregate storage is considered included in the biofiltration treatment volume. Saturated storage within the aggregate storage layer can be added to this design by raising the underdrain above the bottom of the aggregate storage layer or via an internal weir structure designed to maintain a specific water level elevation.

Integrated stormwater flow control and pollutant control configuration. The system can be designed to provide flow rate and duration control by primarily providing increased surface ponding and/or having a deeper aggregate storage layer above the underdrain. This will allow for significant detention storage, which can be controlled via inclusion of an outlet structure at the downstream end of the underdrain.

Design Criteria and Considerations

Bioretention with underdrain must meet the following design criteria. Deviations from the below criteria may be approved at the discretion of the City Engineer if it is determined to be appropriate:

Siting and Design		*Intent/Rationale*
☐	Placement observes geotechnical recommendations regarding potential hazards (e.g., slope stability, landslides, liquefaction zones) and setbacks (e.g., slopes, foundations, utilities).	Must not negatively impact existing site geotechnical concerns.
☐	An impermeable liner or other hydraulic restriction layer is included if site constraints indicate that infiltration or lateral flows should not be allowed.	Lining prevents stormwater from impacting groundwater and/or sensitive environmental or geotechnical features. Incidental infiltration, when allowable, can aid in pollutant removal and groundwater recharge.
☐	Contributing tributary area shall be ≤ 5 acres (≤ 1 acre preferred).	Bigger BMPs require additional design features for proper performance. Contributing tributary area greater than 5 acres may be allowed at the discretion of the City Engineer if the following conditions are met: 1) incorporate design features (e.g. flow spreaders) to

Siting and Design		*Intent/Rationale*
		minimizing short circuiting of flows in the BMP and 2) incorporate additional design features requested by the City Engineer for proper performance of the regional BMP.
☐	Finish grade of the facility is ≤ 2%.	Flatter surfaces reduce erosion and channelization within the facility.
Surface Ponding		
☐	Surface ponding is limited to a 24-hour drawdown time.	Surface ponding limited to 24 hour for plant health.
☐	Surface ponding depth is ≥ 6 and ≤ 12 inches.	Surface ponding capacity lowers subsurface storage requirements. Deep surface ponding raises safety concerns. Surface ponding depth greater than 12 inches (for additional pollutant control or surface outlet structures or flow-control orifices) may be allowed at the discretion of the City Engineer if the following conditions are met: 1) surface ponding depth drawdown time is less than 24 hours; and 2) safety issues and fencing requirements are considered (typically ponding greater than 18" will require a fence and/or flatter side slopes) and 3) potential for elevated clogging risk is considered.
☐	A minimum of 2 inches of freeboard is provided.	Freeboard provides room for head over overflow structures and minimizes risk of uncontrolled surface discharge.
☐	Side slopes are stabilized with vegetation and are = 3H:1V or shallower.	Gentler side slopes are safer, less prone to erosion, able to establish vegetation more quickly and easier to maintain.
Vegetation		
☐	Plantings are suitable for the climate and expected ponding depth. A plant list to aid in selection can be found in Appendix E.20.	Plants suited to the climate and ponding depth are more likely to survive.

Siting and Design		*Intent/Rationale*
☐	An irrigation system with a connection to water supply should be provided as needed.	Seasonal irrigation might be needed to keep plants healthy.
Mulch (Optional or Mandatory – Dependent on jurisdiction)		
☐	A minimum of 3 inches of well-aged, shredded hardwood mulch that has been stockpiled or stored for at least 12 months is provided.	Mulch will suppress weeds and maintain moisture for plant growth. Aging mulch kills pathogens and weed seeds and allows the beneficial microbes to multiply.
Media Layer		
☐	Media maintains a minimum filtration rate of 5 in/hr over lifetime of facility. An initial filtration rate of 8 to 12 in/hr is recommended to allow for clogging over time; the initial filtration rate should not exceed 12 inches per hour.	A filtration rate of at least 5 inches per hour allows soil to drain between events. The initial rate should be higher than long term target rate to account for clogging over time. However an excessively high initial rate can have a negative impact on treatment performance, therefore an upper limit is needed.
☐	Media is a minimum 18 inches deep, meeting either of these two media specifications: City of San Diego Low Impact Development Design Manual (page B-18) (July 2011, unless superseded by more recent edition) **or** County of San Diego Low Impact Development Handbook: Appendix G -Bioretention Soil Specification (June 2014, unless superseded by more recent edition). Alternatively, for proprietary designs and custom media mixes not meeting the media specifications contained in the City or County LID Manual, the media meets the pollutant treatment performance criteria in Section F.1.	A deep media layer provides additional filtration and supports plants with deeper roots. Standard specifications shall be followed. For non-standard or proprietary designs, compliance with F.1 ensures that adequate treatment performance will be provided.
☐	Media surface area is 3% of contributing area times adjusted runoff factor or greater.	Greater surface area to tributary area ratios: a) maximizes volume retention as required by the MS4 Permit and b) decrease loading rates per square foot and therefore increase longevity. Adjusted runoff factor is to account for site design BMPs implemented upstream of the BMP (such as rain barrels,

Siting and Design		*Intent/Rationale*
		impervious area dispersion, etc.). Refer to Appendix B.2 guidance. Use Worksheet B.5-1 Line 26 to estimate the minimum surface area required per this criteria.
☐	Where receiving waters are impaired or have a TMDL for nutrients, the system is designed with nutrient sensitive media design (see fact sheet BF-2).	Potential for pollutant export is partly a function of media composition; media design must minimize potential for export of nutrients, particularly where receiving waters are impaired for nutrients.
Filter Course Layer		
☐	A filter course is used to prevent migration of fines through layers of the facility. Filter fabric is not used.	Migration of media can cause clogging of the aggregate storage layer void spaces or subgrade. Filter fabric is more likely to clog.
☐	Filter course is washed and free of fines.	Washing aggregate will help eliminate fines that could clog the facility and impede infiltration.
☐	Filter course calculations assessing suitability for particle migration prevention have been completed.	Gradation relationship between layers can evaluate factors (e.g., bridging, permeability, and uniformity) to determine if particle sizing is appropriate or if an intermediate layer is needed.
Aggregate Storage Layer		
☐	Class 2 Permeable per Caltrans specification 68-1.025 is recommended for the storage layer. Washed, open-graded crushed rock may be used, however a 4-6 inch washed pea gravel filter course layer at the top of the crushed rock is required.	Washing aggregate will help eliminate fines that could clog the aggregate storage layer void spaces or subgrade.
☐	The depth of aggregate provided (12-inch typical) and storage layer configuration is adequate for providing conveyance for underdrain flows to the outlet structure.	Proper storage layer configuration and underdrain placement will minimize facility drawdown time.
Inflow, Underdrain, and Outflow Structures		
☐	Inflow, underdrains and outflow structures are accessible for inspection and maintenance.	Maintenance will prevent clogging and ensure proper operation of the flow

Siting and Design		*Intent/Rationale*
		control structures.
☐	Inflow velocities are limited to 3 ft/s or less or use energy dissipation methods. (e.g., riprap, level spreader) for concentrated inflows.	High inflow velocities can cause erosion, scour and/or channeling.
☐	Curb cut inlets are at least 12 inches wide, have a 4-6 inch reveal (drop) and an apron and energy dissipation as needed.	Inlets must not restrict flow and apron prevents blockage from vegetation as it grows in. Energy dissipation prevents erosion.
☐	Underdrain outlet elevation should be a minimum of 3 inches above the bottom elevation of the aggregate storage layer.	A minimal separation from subgrade or the liner lessens the risk of fines entering the underdrain and can improve hydraulic performance by allowing perforations to remain unblocked.
☐	Minimum underdrain diameter is 6 inches.	Smaller diameter underdrains are prone to clogging.
☐	Underdrains are made of slotted, PVC pipe conforming to ASTM D 3034 or equivalent or corrugated, HDPE pipe conforming to AASHTO 252M or equivalent.	Slotted underdrains provide greater intake capacity, clog resistant drainage, and reduced entrance velocity into the pipe, thereby reducing the chances of solids migration.
☐	An underdrain cleanout with a minimum 6-inch diameter and lockable cap is placed every 250 to 300 feet as required based on underdrain length.	Properly spaced cleanouts will facilitate underdrain maintenance.
☐	Overflow is safely conveyed to a downstream storm drain system or discharge point Size overflow structure to pass 100-year peak flow for on-line infiltration basins and water quality peak flow for off-line basins.	Planning for overflow lessens the risk of property damage due to flooding.

Conceptual Design and Sizing Approach for Stormwater Pollutant Control Only

To design bioretention with underdrain for stormwater pollutant control only (no flow control required), the following steps should be taken:

1. Verify that siting and design criteria have been met, including placement requirements, contributing tributary area, maximum side and finish grade slopes, and the recommended media surface area tributary ratio.
2. Calculate the DCV per Appendix B based on expected site design runoff for tributary areas.

3. Use the sizing worksheet presented in Appendix B.5 to size biofiltration BMPs.

Conceptual Design and Sizing Approach when Stormwater Flow Control is Applicable

Control of flow rates and/or durations will typically require significant surface ponding and/or aggregate storage volumes, and therefore the following steps should be taken prior to determination of stormwater pollutant control design. Pre-development and allowable post-project flow rates and durations should be determined as discussed in Chapter 6 of the manual.

1. Verify that siting and design criteria have been met, including placement requirements, contributing tributary area, maximum side and finish grade slopes, and the recommended media surface area tributary ratio.
2. Iteratively determine the facility footprint area, surface ponding and/or aggregate storage layer depth required to provide detention storage to reduce flow rates and durations to allowable limits. Flow rates and durations can be controlled from detention storage by altering outlet structure orifice size(s) and/or water control levels. Multi-level orifices can be used within an outlet structure to control the full range of flows.
3. If bioretention with underdrain cannot fully provide the flow rate and duration control required by this manual, an upstream or downstream structure with significant storage volume such as an underground vault can be used to provide remaining controls.
4. After bioretention with underdrain has been designed to meet flow control requirements, calculations must be completed to verify if stormwater pollutant control requirements to treat the DCV have been met.

ATTACHMENT 4 - COPY OF PLAN SHEETS SHOWING PERMANENT STORM WATER BMPS

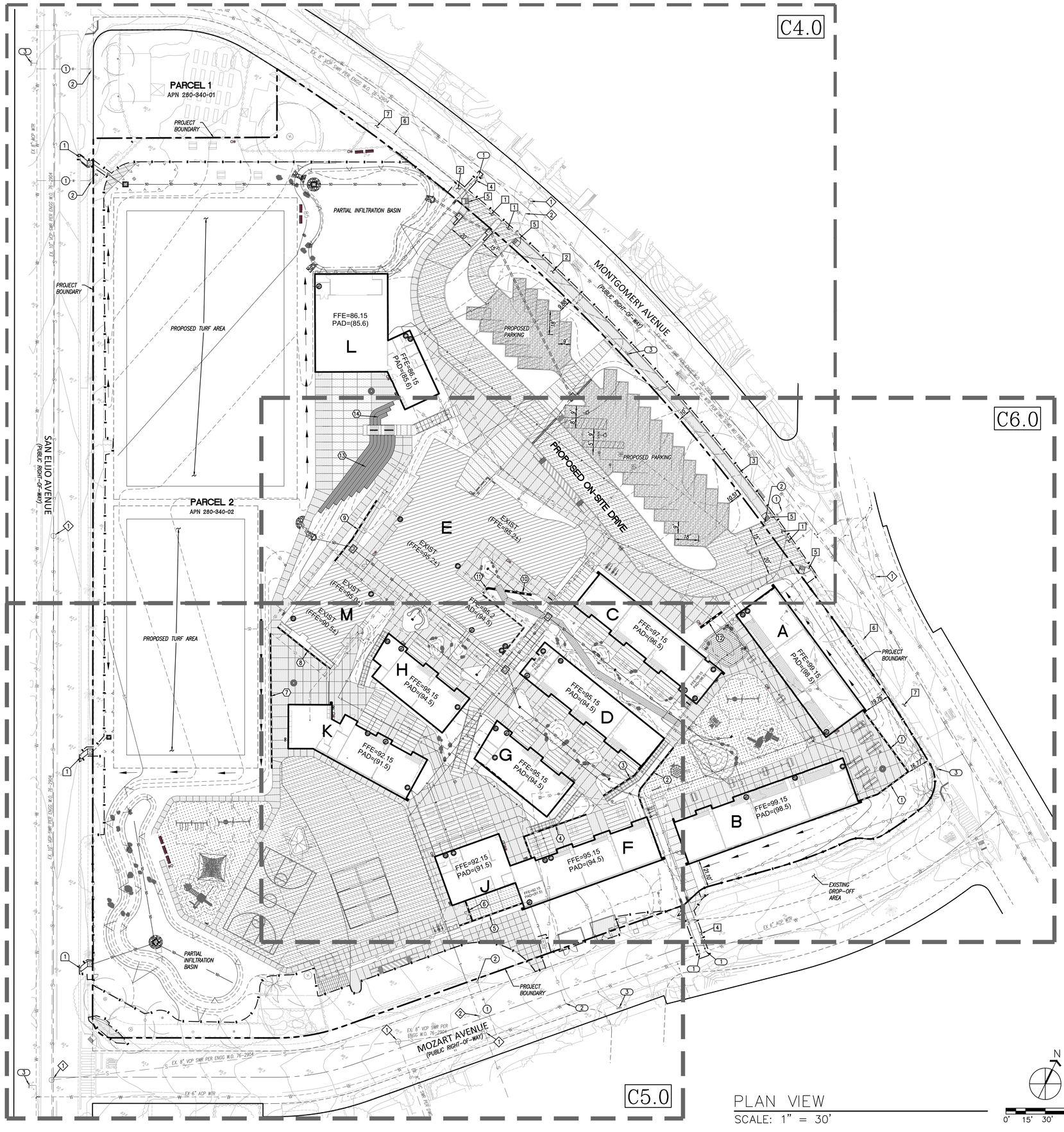
This is the cover sheet for Attachment 4.

Use this checklist to ensure the required information has been included on the plans:

The plans must identify:

X Structural BMP(s) with ID numbers matching Form I-6 Summary of PDP Structural BMPs
X The grading and drainage design shown on the plans must be consistent with the delineation of DMAs shown on the DMA exhibit
X Details and specifications for construction of structural BMP(s)
X Signage indicating the location and boundary of structural BMP(s) as required by the [City Engineer]
X How to access the structural BMP(s) to inspect and perform maintenance
X Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
□ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
X Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
X Recommended equipment to perform maintenance
X When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management
X Include landscaping plan sheets showing vegetation requirements for vegetated structural BMP(s)
X All BMPs must be fully dimensioned on the plans
X When proprietary BMPs are used, site-specific cross section with outflow, inflow, and model number shall be provided. Photocopies of general brochures are not acceptable.

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PLAN VIEW
SCALE: 1" = 30'

LEGEND

PROPOSED PUBLIC IMPROVEMENTS

ITEM	SYMBOL
PROJECT BOUNDARY	
EXISTING RIGHT-OF-WAY	R/W
PROPOSED LIMIT OF WORK (LIMITS OF GRADING)	
DRAINAGE FLOW	
TOP OF GRATE ELEVATION	TG 180.25
FLOW LINE ELEVATION	FL 180.00
FINISH SURFACE ELEVATION	FS 180.00
PROPOSED CURB & GUTTER	
PROPOSED DRIVEWAY	
PROPOSED SIDEWALK	
PROPOSED CURB RAMP WITH TRUNCATED DOMES	
PROPOSED FIRE SERVICE	FS
PROPOSED CURB OUTLET	
TRENCH RESURFACING	

PROPOSED PRIVATE IMPROVEMENTS

ITEM	SYMBOL
PROPOSED RETAINING WALL (HEIGHT VARIES – SEE TABLE THIS SHEET) SEE LANDSCAPE PLANS	
PROPOSED SEAT WALL – SEE LANDSCAPE PLANS	
PROPOSED PARTIAL INFILTRATION BASIN (SEE DETAIL SHEET C3.0)	
PROPOSED WATER SERVICE	W
PROPOSED FIRE SERVICE	FS
PROPOSED SEWER LATERAL	S
PROPOSED STORM DRAIN	SD
PROPOSED BACKFLOW PREVENTER REDUCED PRINCIPLE DETECTOR ASSEMBLY	FS
PROPOSED STORM DRAIN CURB INLET	
PROPOSED STORM DRAIN BROOKS BOX	
PROPOSED STORM DRAIN HEADWALL	
PROPOSED STORM DRAIN RIP RAP	
PROPOSED STORM DRAIN CONCRETE SPILLWAY/SWALE	
PROPOSED CURB	
PROPOSED HARDSCAPE	
PROPOSED PERMEABLE PAVERS	
RAMP W/HANDRAILS (PER LANDSCAPE PLANS)	

GENERAL NOTES:

1. THE PROPOSED FINISH GRADING SHOWN HEREON IS PRELIMINARY ONLY AND NOT FOR CONSTRUCTION.
2. THE EXISTING IMPROVEMENTS LOCATED ON-SITE ARE ALL PRIVATE.

DRAINAGE NOTES:

1. ALL EXISTING ON-SITE DRAINAGE FACILITIES ARE PRIVATE AND ARE TO REMAIN.
2. ALL PROPOSED ON-SITE DRAINAGE FACILITIES ARE PRIVATE.
3. THE PROJECT'S DEVELOPED STORM WATER RUNOFF IS MORE THAN THE EXISTING CONDITION (I.E. THERE IS AN INCREASE IN STORM RUNOFF DUE TO THE DEVELOPMENT OF THE PROJECT). THIS INCREASE IN RUNOFF WILL BE MITIGATED IN THE PARTIAL INFILTRATION BASINS.

STORM WATER NOTES

1. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, THE OWNER/PERMITTEE SHALL ENTER INTO A MAINTENANCE AGREEMENT FOR THE ONGOING PERMANENT BMP MAINTENANCE.
2. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, THE OWNER/PERMITTEE SHALL INCORPORATE ANY CONSTRUCTION BEST MANAGEMENT PRACTICES NECESSARY TO COMPLY WITH THE MS4 PERMIT.
3. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT THE OWNER/PERMITTEE SHALL SUBMIT A STORMWATER POLLUTION PREVENTION PLAN (SWPPP).

PRIVATE WATER, FIRE, AND SEWER NOTES:

1. THE SUBJECT PROPERTY WILL MAINTAIN THE TWO PUBLIC SEWER LATERALS. ALL ADDITIONAL ON-SITE SEWER LATERALS SHALL BE PRIVATE.
2. REFER TO SHEET C1.0 FOR THE EXISTING SEWER, WATER, FIRE SERVICE AND STORM DRAIN FACILITIES.
3. PRIOR TO CONNECTING TO ANY EXISTING SEWER LATERAL(s), THE LATERAL SHALL BE INSPECTED USING A CLOSED-CIRCUIT TELEVISION (CCTV) BY A CALIFORNIA LICENSED PLUMBING CONTRACTOR TO VERIFY THE LATERAL IS IN GOOD WORKING CONDITION AND FREE OF ALL DEBRIS.
4. A PLUMBING PERMIT SHALL BE REQUIRED FOR THE INSTALLATION OF APPROPRIATE PRIVATE BACK FLOW PREVENTION DEVICES (BPPDs) ON EACH WATER SERVICE (DOMESTIC, FIRE, AND IRRIGATION). THE BFPDs SHALL BE LOCATED ABOVE GROUND ON PRIVATE PROPERTY, IN LINE WITH THE SERVICE AND IMMEDIATELY ADJACENT TO THE RIGHT-OF-WAY.
5. NO TREES OR SHRUBS EXCEEDING THREE FEET IN HEIGHT AT MATURITY SHALL BE INSTALLED WITHIN TEN FEET OF ANY PUBLIC SEWER AND FIVE FEET OF ANY PUBLIC WATER FACILITY.

GEOTECHNICAL NOTES

ALL GRADING MUST BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS SET FORTH IN THE SOILS REPORT OR GEOLOGICAL/GEOTECHNICAL INVESTIGATION ENTITLED:

1. GEOTECHNICAL INVESTIGATION, PROPOSED IMPROVEMENTS TO CARDIFF SCHOOL, 1888 MONTGOMERY AVENUE, CARDIFF-BY-THE-SEA, CALIFORNIA, PREPARED BY CONSTRUCTION TESTING AND ENGINEERING, INC. DATED MAY 15, 2018

GRADING INFORMATION

1. THE TOTAL SITE AREA IS---------- 312,046.43 SQ-FT (7.16± AC)
2. THE TOTAL AMOUNT OF SITE TO BE GRADED---------- 297,576.59 SQ-FT (6.83± AC)
3. THE TOTAL AMOUNT OF SITE AREA---------- 95.4%
4. THE AMOUNT OF GEOMETRIC CUT IS---------- 4870 C.Y.
5. THE MAXIMUM DEPTH OF CUT IS---------- 3.0 FEET
6. THE AMOUNT OF GEOMETRIC FILL IS---------- 3750 C.Y.
7. THE MAXIMUM DEPTH OF FILL IS---------- 4.0 FEET
8. THE MAXIMUM HEIGHT OF CUT SLOPE IS---------- 2.0 FEET
9. THE MAXIMUM HEIGHT OF FILL SLOPE IS---------- 3.0 FEET
10. THE MAXIMUM GRADIENT OF ALL CUT AND FILL SLOPES– 2:1
11. THE AMOUNT OF GEOMETRIC EXPORT IS---------- 1120 C.Y.
12. THE LENGTH OF PROPOSED RETAINING WALLS----------575 FEET
13. THE MAXIMUM HEIGHT OF PROPOSED RETAINING WALL (MEASURED FROM TW TO TF) IS---------- 4.5–FEET

GRADING QUANTITY NOTES:
1. ASSUMES 7" SLAB-ON-GRADE SECTION (STRUCTURAL TO CONFIRM).
2. THE CUT AND FILL QUANTITIES SHOWN ABOVE ARE GEOMETRIC ONLY AND DO NOT INCLUDE ADJUSTMENTS FOR BULKING, SHRINKING, PAVEMENT UNDERCUTS, FOUNDATION SPOILS, ETC.
3. REFER TO GEOTECHNICAL REPORT FOR REMEDIAL GRADING REQUIREMENTS (IF REQUIRED).

KEY NOTES - PUBLIC IMPROVEMENTS

WATER
1. EXISTING WATER SERVICE
2. EXISTING METER (SEE SHEET C1.0)

FIRE SERVICE
1. PROPOSED FIRE SERVICE CONNECTION
2. EXISTING FIRE SERVICE CONNECTION
3. EXISTING FIRE HYDRANT

SEWER
1. EXISTING SEWER MANHOLE
2. EXISTING SEWER LATERAL

STORM DRAIN
1. PROPOSED CURB OULET

SURFACE IMPROVEMENTS
1. PROPOSED DRIVEWAY
2. PROPOSED SIDEWALK
3. PROPOSED CURB AND GUTTER
4. PROPOSED TRENCH RESURFACING
5. PROPOSED CURB RAMP WITH TRUNCATED DOMES
6. EXISTING CURB AND GUTTER
7. EXISTING SIDEWALK

RETAINING WALL DATA

RETAINING WALL NO.	LENGTH	MAX EXPOSED HEIGHT (*)
1	104 LF	4–FEET
2	56 LF	3.5–FEET
3	37 LF	2–FEET
4	68 LF	3.5–FEET
5	51 LF	2.5–FEET
6	16 LF	N/A – FREESTANDING
7	103 LF	3.2–FEET
8	52 LF	2–FEET
9	57 LF	4.5–FEET
10	21 LF	2–FEET
11	11 LF	2–FEET

12 – 14 SEATWALL (SEE LANDSCAPE PLANS)

* DENOTES MAX HEIGHT TOP OF WALL TO FINISH SURFACE (I.E. EXPOSED HEIGHT ONLY). DEPTH OF TOOTING UNKNOWN AT THIS TIME PENDING RECOMMENDATIONS FROM THE STRUCTURAL AND GEOTECHNICAL ENGINEERS.

CDP ONLY

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Cardiff School D

Pro 17110

06.08.18 100 D.D

REGISTERED PROFESSIONAL ENGINEER
STEVEN C. KETTLER
No. C48358
Exp. 6-30-2016
CIVIL
STATE OF CALIFORNIA

OVERALL GRADING AND DRAINAGE PLAN

C2.0

5.7-1-157

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LEGEND

PROPERTY LINE .....
DRAINAGE PATTERN/FLOW DIRECTION .....
DAYLIGHT/LIMIT OF WORK .....
DRAINAGE MANAGEMENT AREA (DMA) .....
BEST MANAGEMENT PRACTICE ..... BMP#
DRAINAGE MANAGEMENT AREA ..... DMA#
PARTIAL INFILTRATION BASIN ..... (TOTAL COMBINED BOTTOM AREA=8,850SF)
(SEE DETAIL THIS SHEET)
PERMEABLE PAVEMENT ..... (TOTAL AREA=10,500SF)
(SEE LANDSCAPE PLANS)
SELF MITIGATING AREA ..... (TOTAL AREA=78,625SF)
(NON-CONTIGUOUS SIDEWALK)

WATER QUALITY AND HYDROMODIFICATION NOTES:

1. THE PROPOSED PROJECT SHALL RESULT IN NO INCREASE IN PEAK STORM RUNOFF. REFER TO THE PROJECT'S PRELIMINARY DRAINAGE STUDY.
2. THE PROJECT IS EXEMPT FROM THE STATE'S HYDROMODIFICATION REQUIREMENTS AS THE SITE IS HARD-LINED DIRECTLY TO THE OCEAN
3. THE PROPOSED FINISH GRADING AND DRAINAGE DESIGN INCLUDES DIRECTING RUNOFF ON TO PARTIAL INFILTRATION BASINS WHERE IT WILL BE TREATED BEFORE DISCHARGING OFFSITE IN TO THE ADJACENT PUBLIC STREETS.
4. THE FINAL DESIGN OF THE BMPS WILL OCCUR DURING THE FORMAL DSA BUILDING PERMIT PHASE.
5. THERE IS NO PUBLIC STORM DRAIN AVAILABLE WITHIN THE ADJACENT PUBLIC STREETS (I.E. MONTGOMERY AVENUE, SAN ELIJO AVENUE, MOZART AVENUE) AS RUNOFF CURRENTLY SHEETS OVERLAND.



PLAN VIEW
SCALE: 1" = 40'
0' 20' 40' 80'
N

WATER QUALITY AND HYDROMODIFICATION DESIGN CRITERIA:

Table 5-1. Permanent Structural BMPs for PDPs

	MS4 Permit Category	Manual Category	BMPs
NOT APPLICABLE	Retention	Harvest and Use (HU)	HU-1: Cistern
NOT APPLICABLE	Retention	Infiltration (INF)	INF-1: Infiltration basin INF-2: Bioretention INF-3: Permeable pavement INF-4: Dry Wells
NOT APPLICABLE	NA	Partial Retention (PR)	PR-1: Biofiltration with partial retention
SELECTED BMP	Biofiltration	Biofiltration (BF)	BF-1: Biofiltration BF-2: Nutrient Sensitive Media Design BF-3: Proprietary Biofiltration
	Flow-thru treatment control	Flow-thru treatment control with Alternative Compliance (FT)	FT-1: Vegetated swales FT-2: Media filters FT-3: Sand filters FT-4: Dry extended detention basins FT-5: Proprietary flow-thru treatment control

SUMMARY OF WATER QUALITY AND HYDROMODIFICATION PRELIMINARY DESIGN CRITERIA:

1. HARVEST AND REUSE NOT APPLICABLE TO THIS PROJECT.
2. PARTIAL INFILTRATION DEEMED FEASIBLE (SEE WORKSHEET C4.1-1 ON SHEET C5.0 PROVIDED BY THE GEOTECHNICAL ENGINEER (EEI)).
3. BIO-FILTRATION SELECTED (I.E. PARTIAL INFILTRATION BASINS - SEE DETAIL THIS SHEET)
4. PROJECT IS HYDROMODIFICATION EXEMPT (I.E. IS NOT HARD-LINED TO OCEAN).
5. PROJECT IS SUBJECT TO 50% RULE (SEE CALCULATIONS THIS SHEET).

STORM WATER PROTECTION NOTES

1. THIS PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT ORDER NO. R9-2013-0001 & RISK LEVEL/TYPE;
   - ■ SWPPP
   - □ COP RISK LEVEL 1 □ COP LUP TYPE 1
   - □ COP RISK LEVEL 2 □ COP LUP TYPE 2
   - □ COP RISK LEVEL 3 □ COP LUP TYPE 3
2. WDID NO.: TBD (FINAL ENGINEERING/BUILDING PERMITS)
3. CHECK ONE
   - □ THIS PROJECT WILL EXCEED THE MAXIMUM DISTURBED AREA LIMIT, THEREFORE A WEATHER TRIGGERED ACTION PLAN (WTAP) IS REQUIRED.
   - □ THIS PROJECT WILL FOLLOW PHASED GRADING NOT TO EXCEED FIVE (5) ACRES PER PHASE.
   - ■ NOT APPLICABLE
4. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE SWPPP AS APPLICABLE.
5. WATERSHED: CARLSBAD HYDROLOGIC UNIT (904.00)
6. HYDRAULIC SUB AREA NAME: ESCONDIDO CREEK HYDROLOGIC UNIT (904.60)
7. HYDRAULIC SUB AREA NUMBER: SAN ELIJO HYDROLOGIC SUBAREA (904.61)

DCV FOR DMA 1

Design Capture Volume (Draft June Manual)

DMA 1		
85th %	0.54 in	*Appendix B, Figure B.1-1*
Area	2.11 ac	*Total DMA Area (acres)*
C	0.81	*C=(Imp*0.9+Per*.01)/Total DMA*
DCV	3,362 cf	*DCV=C*(85%/12)*(Total DMA*43560)*
Pervious, sf	10,019	*Per Plan*
Impervious, sf	81,893	*Per Plan*
Total	91,912	*Per Plan*

Biofiltration (Worksheet B.5-1)

DMA1		
1	3,362	*See Worksheet*
10	3,362	*See Worksheet*
11	12	*See Worksheet*
12	18	*See Worksheet*
13	12	*See Worksheet*
14	0.2	*See Worksheet*
15	5	*See Worksheet*
16	6	*See Worksheet*
17	30	*See Worksheet*
18	20.4	*See Worksheet*
19	50.4	*See Worksheet*
20	5,043	*See Worksheet*
21	1,451	*See Worksheet*
22	2,521	*See Worksheet*
23	1,482	*See Worksheet*
24	91,912	*See Worksheet*
25	0.81	*See Worksheet*
26	2,241	*See Worksheet*
27	2,241	*See Worksheet*

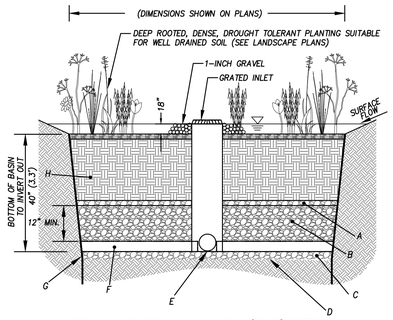
DCV FOR DMA 2

Design Capture Volume (Draft June Manual)

DMA2		
85th %	0.54 in	*Appendix B, Figure B.1-1*
Area	3.09 ac	*Total DMA Area (acres)*
C	0.76	*C=(Imp*0.9+Per*.01)/Total DMA*
DCV	4,605 cf	*DCV=C*(85%/12)*(Total DMA*43560)*
Pervious, sf	23,522	*Per Plan*
Impervious, sf	111,078	*Per Plan*
Total	134,600	*Per Plan*

Biofiltration (Worksheet B.5-1)

DMA2		
1	4,605	*See Worksheet*
10	4,605	*See Worksheet*
11	12	*See Worksheet*
12	18	*See Worksheet*
13	12	*See Worksheet*
14	0.2	*See Worksheet*
15	5	*See Worksheet*
16	6	*See Worksheet*
17	30	*See Worksheet*
18	20.4	*See Worksheet*
19	50.4	*See Worksheet*
20	6,907	*See Worksheet*
21	1,843	*See Worksheet*
22	3,453	*See Worksheet*
23	2,031	*See Worksheet*
24	134,600	*See Worksheet*
25	0.76	*See Worksheet*
26	3,070	*See Worksheet*
27	3,070	*See Worksheet*



PARTIAL INFILTRATION BASIN (PVT.) DETAIL

NTS

A. 2" OF 3/8" GRAVEL
B. 3/4" CRUSHED ROCK
C. 3" DEAD STORAGE
D. UNLINED BOTTOM
E. CONNECT TO SOLID WALLED PVC PIPE (SEE PLAN) SEE NOTE 4
F. 8" PERFORATED PVC PIPE WRAPPED IN FILTER FABRIC (NOTE: PLACE WITH PERFORATIONS AT THE INVERT)
G. IMPERMEABLE LINER (SIDES ONLY) EXTEND VERTICALLY TO A DEPTH GREATER THAN ADJACENT FOOTINGS
H. 18" MIN. ENGINEERED SOIL (SEE NOTE 1 BELOW)

NOTES

1. ENGINEERED SOIL LAYER SHALL BE MINIMUM 18"DEEP "SANDY LOAM" SOIL MIX WITH NO MORE THAN 5% CLAY CONTENT. THE MIX SHALL CONTAIN 50-60% SAND, 20-30% COMPOST OR HARDWOOD MULCH, AND 20-30% TOPSOIL.
2. 3/4" CRUSHED ROCK LAYER SHALL BE A MINIMUM OF 12" BUT MAY BE DEEPENED TO INCREASE THE INFILTRATION AND STORAGE ABILITY OF THE BASIN.
3. THE EFFECTIVE AREA OF THE BASIN SHALL BE LEVEL. SEE PLAN FOR BOTTOM AREA AND ELEVATION.
4. CONTRACTOR TO PROVIDE WATERTIGHT SEAL BETWEEN OUTLET PIPE AND BASIN IMPERMEABLE LINER.

50% RULE CRITERIA:

Chapter 1: Policies and Procedural Requirements

Redevelopment PDPs (PDPs on previously developed sites) may need to meet stormwater management requirements for ALL impervious areas (collectively) within the ENTIRE project site.

If the project is a redevelopment project, the structural BMP performance requirements and hydromodification management requirements apply to redevelopment PDPs as follows:

(a) Where redevelopment results in the creation or replacement of impervious surface in an amount of less than fifty percent of the surface area of the previously existing development, then the structural BMP performance requirements of Provision E.3.c [of the MS4 Permit] apply only to the creation or replacement of impervious surface, and not the entire development; or

(b) Where redevelopment results in the creation or replacement of impervious surface in an amount of more than fifty percents of the surface area of the previously existing development, then the structural BMP performance requirements of Provision E.3.c [of the MS4 Permit] apply to the entire development.

SITE AREA:
312,046 SF

These requirements for managing stormwater on an entire redevelopment project site are commonly referred to as the "50% rule". For the purpose of calculating the ratio, the surface area of the previously existing development shall be the area of impervious surface within the previously existing development. The following steps shall be followed to estimate the area that requires treatment to satisfy the MS4 Permit requirements:

139,400 SF 1. How much total impervious area currently exists on the site?
87,845 SF 2. How much existing impervious area will be replaced with new impervious area?
62,104 SF 3. How much new impervious area will be created in areas that are pervious in the existing condition?
149,949 SF 4. Total created and/or replaced impervious surface = Step 2 + Step 3.
(YES) OR NO 5. **50% rule test**: Is step 4 more than 50% of Step 1? If yes, treat all impervious surface on the site. If no, then treat only Step 4 impervious surface and any area that comingles with created and/or replaced impervious surface area.

149,949 SF > 69,750 SF
(STEP 4 > 50% STEP 1)



City of Encinitas
Stormwater Intake Form for All Developments and Standard / Basic Project SWQMP

Project Identification	
Project/Applicant Name:	Cardiff School District (Cardiff School)
Permit/Application Number:	Date: 6-4-18
Site Address: 1888 Montgomery Avenue	APN: 260-340-01 and 02

Scope of work/project description: Demolition of five 1-story buildings, a portion of another building, and eight relocatable classrooms; construction of ten 1-story buildings and a two classroom addition to an existing building; and modernization of two existing buildings. The project also includes on-site loading & parking.

Determination of Project Status and Requirements

This form will identify permanent, post construction BMP requirements. Refer to City of Encinitas Stormwater BMP Design Manual for guidance.

Step 1: Is the project a "development project"? Development projects are defined as "construction, rehabilitation, redevelopment, or reconstruction of any public or private projects". See Section 1.3 and Table 1-2 of the manual for guidance. For example, interior remodels, roof replacements, and electrical and plumbing work are not development projects.

☒ Yes — ***Go to Step 2.***
□ No — ***Stop.*** Permanent BMP requirements do not apply. No SWQMP will be required. Provide discussion below.

If "No", provide discussion / justification explaining why the project is not a "development project":

Step 2: Complete questions below for Project Type Determination.

The project is (select one): □ New Development ☒ Redevelopment

The total proposed, newly created or replaced impervious area is: 149,949 ft²

Is the project in any of the following categories, (a) through (f) below?

Yes ☒	No □	(a)	New development projects or redevelopment projects that create and/or replaced 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects.
Yes ☒	No □	(b)	Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects.
Yes ☒	No □	(c)	New and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses: (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812).



Stormwater Intake Form for All Developments and Standard / Basic Project SWQMP — Page 3 of 5

Step 3: Source Control BMP Checklist – All "Development Projects" Must Complete

All development projects must implement source control BMPs SC-1 through SC-6 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement source control BMPs shown in this checklist.

Answer each category below pursuant to the following.
- "Yes" means the project will implement the source control BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification may be provided.

Source Control Requirement	Applied?		
SC-1 Prevention of Illicit Discharges into the storm drain	☒Yes	□ No	□ N/A
SC-2 Storm Drain Stenciling or Signage	☒Yes	□ No	□ N/A
SC-3 Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☒Yes	□ No	□ N/A
SC-4 Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☒Yes	□ No	□ N/A
SC-5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☒Yes	□ No	□ N/A
SC-6 Additional BMPs Based on Potential Sources of Runoff Pollutants (must answer for each source listed below)			
□ Onsite storm drain inlets	☒Yes	□ No	□ N/A
□ Interior floor drains and elevator shaft sump pumps drain to sewer	☒Yes	□ No	□ N/A
□ Interior parking garages drain to sewer	□ Yes	☒ No	□ N/A
□ Need for future indoor & structural pest control	□ Yes	☒ No	□ N/A
□ Landscape/outdoor pesticide use	☒ Yes	□ No	□ N/A
□ Pools, spas, ponds, decorative fountains, and other water features	□ Yes	☒No	□ N/A
□ Food service	☒Yes	□ No	□ N/A
□ Refuse/Trash areas must be covered	☒Yes	□ No	□ N/A
□ Industrial processes	□ Yes	☒ No	□ N/A
□ Outdoor storage of equipment or materials must be covered	☒Yes	□ No	□ N/A
□ Vehicle and equipment cleaning	□ Yes	☒No	□ N/A
□ Vehicle/equipment repair and maintenance	□ Yes	☒No	□ N/A
□ Fuel dispensing areas	□ Yes	☒No	□ N/A
□ Loading docks	□ Yes	☒ No	□ N/A
□ Fire sprinkler test water	☒Yes	□ No	□ N/A
□ Miscellaneous drain or wash water	□ Yes	☒No	□ N/A
□ Plazas, sidewalks, and parking lots	☒Yes	□ No	□ N/A

Discussion / justification if SC-1 through SC-6 not implemented. Justification must be provided for ALL "No" answers shown above.
SC-6, No interior parking garages are proposed;need for future indoor & structural pest controls not anticipated; No pools, spas, etc. proposed; no industrial processes anticipated; no vehicle and equipment cleaning, vehicle/equipment repair & maintenance and fuel dispensing are proposed; no formal loading docks proposed; and misc.drain and wash water not anticipated.

Stormwater Intake Form for All Developments and Standard / Basic Project SWQMP — Page 2 of 5

(ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater.
(iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
(iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

Yes □	No ☒	(d)	New or redevelopment projects that create and/or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharge directly to an Environmentally Sensitive Area (ESA). "Discharge directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands). Note: ESAs are areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Board and SDRWQCB; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and SDRWQCB; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees. See manual Section 1.4.2 for additional guidance.
Yes □	No ☒	(e)	New development projects, or redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, that support one or more of the following uses: (i) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following SIC codes: 5013, 5014, 5541, 7532-7534, or 7536-7539. (ii) Retail gasoline outlets. This category includes retail gasoline outlets that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic of 100 or more vehicles per day.
Yes ☒	No □	(f)	New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction. *Note: See BMP manual for exclusions specific to this category.*

Does the project meet the definition of one or more of the PDP categories (a) through (f) listed above?

☒ Yes – **The project is a Priority Development Project, the applicant shall provide PDP Post Construction BMPs and provide a PDP SWQMP.** ***Stop here and complete PDP SWQMP.***

□ No – Does the project propose 500 SF or more of new and/or replaced impervious surface area?

□ Yes – **The project is a Standard Project, the applicant shall implement Structural Post Construction BMPs, site design, and source control BMPs.** ***Complete Step 3, 4, & 5.***

□ No – **The project is a Basic Project, the applicant shall implement site design and source control measures.** ***Complete Step 3 & 4.***

Stormwater Intake Form for All Developments and Standard / Basic Project SWQMP — Page 4 of 5

Step 4: Site Design BMP Checklist – All "Development Projects" Must Complete

All development projects must implement site design BMPs SD-1 through SD-8 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement site design BMPs shown in this checklist.

Answer each category below pursuant to the following.
- "Yes" means the project will implement the site design BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification may be provided.

Source Control Requirement	Applied?		
SD-1 Maintain Natural Drainage Pathways and Hydrologic Features	□ Yes	□ No	☒N/A
SD-2 Conserve Natural Areas, Soils, and Vegetation	□ Yes	□ No	☒ N/A
SD-3 Minimize Impervious Area	☒ Yes	□ No	□ N/A
SD-4 Minimize Soil Compaction	☒ Yes	□ No	□ N/A
SD-5 Impervious Area Dispersion - Directly Connected Impervious Areas (e.g. roof downspouts connected to street) are not allowed	☒Yes	□ No	□ N/A
SD-6 Runoff Collection	☒Yes	□ No	□ N/A
SD-7 Landscaping with Native or Drought Tolerant Species	☒ Yes	□ No	□ N/A
SD-8 Harvesting and Using Precipitation	□ Yes	☒No	□ N/A

Discussion / justification if SD-1 through SD-8 not implemented. Justification must be provided for ALL "No" answers shown above.
SD-8 - Harvest and use of precipitation not feasible per section 5.4.1 of the City's Stormwater Manual.

Step 5: Standard Project BMP Sizing for ≥500sf New/Replaced Impervious Surface Areas

Projects that create and/or remove and replace 500sf or greater of impervious surface collectively over the entire project site shall provide natural biofiltration and/or bioretention BMPs. The applicant may use the Design Capture Volume method (attach calculations hereon; see Appendix B of BMP Design Manual), or may utilize the following calculation:

MINIMUM EFFECTIVE BMP AREA = 0.04 x Total new and/or removed and replaced impervious surfaces

Describe the selected Structural BMP Design including type, location, size, etc. below:

Appendix B: Storm Water Pollutant Control Hydrologic Calculations and Sizing Methods

Worksheet B.5-1: Simple Sizing Method for Biofiltration BMPs

Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1	
1	Remaining DCV after implementing retention BMPs	□□□	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible		in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36	hours
4	Depth of runoff that can be infiltrated [Line 2 x Line 3]		inches
5	Aggregate pore space	0.40	in./in
6	Required depth of gravel below the underdrain [Line 4/ Line 5]		inches
7	Assumed surface area of the biofiltration BMP		sq-ft
8	Media retained pore space	0.1	in/in
9	Volume retained by BMP [[Line 4 + (Line 12 x Line 8)]/12] x Line 7		cubic-feet
10	DCV that requires biofiltration [Line 1 – Line 9]	□□□	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	□□□	inches
12	Media Thickness [18 inches minimum]	□□□	inches
13	Aggregate Storage above underdrain invert (12 inches typical) – use 0 inches for sizing if the aggregate is not over the entire bottom surface area	□□□	inches
14	Media available pore space	0.2	in/in
15	Media filtration rate to be used for sizing	5	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6	hours
17	Depth filtered during storm [Line 15 x Line 16]	30	inches
18	Depth of Detention Storage [Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5)]	□□□	inches
19	Total Depth Treated [Line 17 + Line 18]	□□□	inches
Option 1 – Biofilter 1.5 times the DCV			
20	Required biofiltered volume [1.5 x Line 10]	□□□	cubic-feet
21	Required Footprint [Line 20/ Line 19] x 12	□□□	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume [0.75 x Line 10]	□□□	cubic-feet
23	Required Footprint [Line 22/ Line 18] x 12	□□□	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	□□□	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	□□□	
26	Minimum BMP Footprint [Line 24 x Line 25 x 0.03]	□□□	sq-ft
27	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 26) sq-ft	Note: Line 7 is used to estimate the amount of volume retained by the BMP. Update assumed surface area in Line 7 until its equivalent to the required biofiltration footprint (either Line 21 or Line 23)	

□□SEE □OR□S□EET T□IS S□EET
□□MIN□AREA REQUIRED FOR TREATMENT ONLY □I□E□NO □YDROMODIFICATION□

Stormwater Intake Form for All Developments and Standard / Basic Project SWQMP — Page 5 of 5

Project Owner's Certification:

I hereby acknowledge that my project is subject to the stormwater quality regulations of the City of Encinitas and certify that my project will provide satisfactory stormwater quality measures both during the construction process and afterwards.

If my project is designated as a Priority or a Standard Project, I further acknowledge my understanding that the permanent stormwater treatment features must remain in place, be inspected at least once annually, and be maintained in good working order. Removal or modification of these features without prior City authorization is prohibited.

I certify that I have reviewed the information contained in this form and verified that it is both complete and correct.

Signature of Owner — Date

Jill Vinson, Superintendent — Print Name
Cardiff School District — Company Name

Agent's Certification:

I hereby certify that this project will be designed in conformance with the stormwater quality regulations of the City of Encinitas.

I certify that I have reviewed the information contained in this form and verified that it is both complete and correct.

Signature of Agent — Date

Steven Kettler — Print Name
Kettler Leweck Engineering — Company Name

Engineer — Working Capacity of Agent (architect, engineer)

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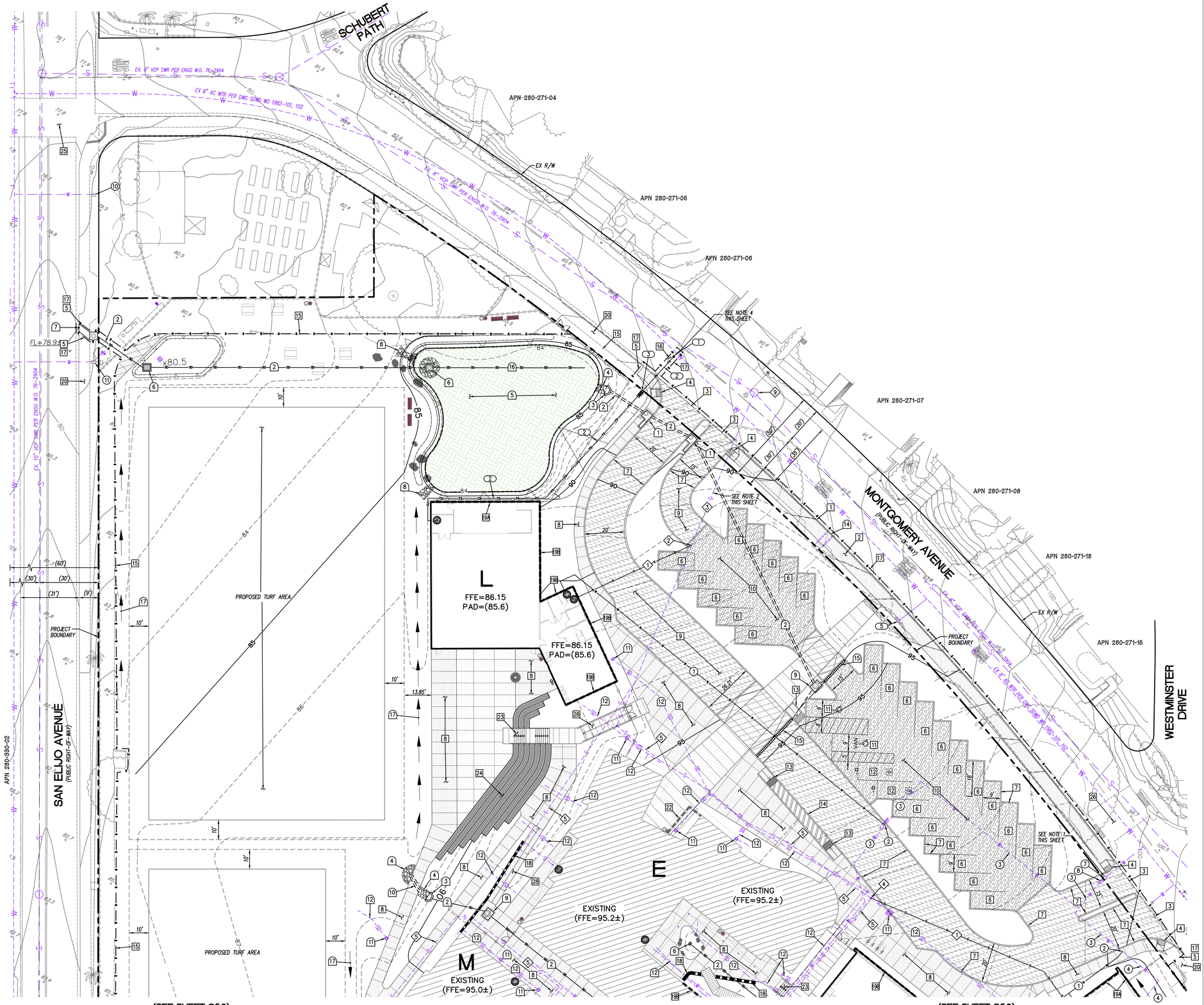
REGISTERED PROFESSIONAL ENGINEER
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No. C48358
Exp. 6-30-2016
CIVIL
STATE OF CALIFORNIA

DRAINAGE MANAGEMENT PLAN

C3□0

5.7-1-158

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PLAN VIEW
SCALE: 1" = 20'

N
0' 10' 20' 40'

KEYED NOTES (IMPROVEMENTS)

SITE IMPROVEMENTS

1. PROPOSED 6" CURB AND GUTTER
2. PROPOSED CONCRETE SIDEWALK
3. PROPOSED CONCRETE DRIVEWAY
4. PROPOSED CURB RAMP WITH TRUNCATED DOMES
5. MATCH PROPOSED IMPROVEMENTS TO EXISTING
6. PROPOSED PARKING STALL
7. PROPOSED 6" CURB
8. PROPOSED WALKWAY (SEE LANDSCAPE PLANS)
9. PROPOSED ASPHALT CONCRETE PAVEMENT FOR DRIVEWAY
10. PROPOSED PERMEABLE PAVERS (SEE LANDSCAPE PLANS)
11. PROPOSED ADA PARKING STALL
12. PROPOSED CARPOOL PARKING STALL
13. PROPOSED PEDESTRIAN RAMP WITH TRUNCATED DOMES
14. PROPOSED 0" CURB
15. PROPOSED DAYLIGHT LINE
16. PROPOSED TRENCH RESURFACING
17. PROPOSED SAWCUT LINE
18. PROPOSED RETAINING WALL (EXPOSED HEIGHTS SHOWN ON SHEET C2.0)
19A. PROPOSED DEEPENED FOOTING (SEE STRUCTURAL ENGINEERING PLANS)
19B. PROPOSED BUILDING SURCHARGE (SEE STRUCTURAL ENGINEERING PLANS)
20. EXISTING SIDEWALK TO REMAIN, PROTECT IN PLACE
21. EXISTING ASPHALT CONCRETE PAVEMENT TO REMAIN, PROTECT IN PLACE
22. EXISTING RETAINING WALL TO REMAIN, PROTECT IN PLACE
23. PROPOSED STAIRS WITH HANDRAIL (SEE LANDSCAPE PLANS)
24. PROPOSED CONCRETE SEATWALL (SEE LANDSCAPE PLANS)
25. EXISTING CONCRETE CROSS-GUTTER TO REMAIN, PROTECT IN PLACE
26. EXISTING SPEED TABLE TO REMAIN
27. PROPOSED PLAY AREA (SEE LANDSCAPE PLANS)
28. PROPOSED CONCRETE RAMP (SEE LANDSCAPE PLANS)

KEYED NOTES (UTILITIES)

PROPOSED SEWER

1. PROPOSED 4" PVC SEWER LATERAL
2. PROPOSED WYE CONNECTION FOR 4" SEWER LATERAL TO EXISTING SEWER PIPE
3. EXISTING SEWER PIPE TO REMAIN, PROTECT IN PLACE
4. PROPOSED CONNECTION TO EXISTING SEWER CLEANOUT
5. EXISTING 4" PVC SEWER LATERAL TO REMAIN, PROTECT IN PLACE
6. PROPOSED 2" PVC SEWER LATERAL
7. CONNECT 4" PVC SEWER LATERAL TO EXISTING 4" PVC SEWER LATERAL
8. EXISTING 4" PVC SEWER LATERAL TO BE REMOVED
9. EXISTING SEWER MANHOLE TO REMAIN, PROTECT IN PLACE

PROPOSED WATER

1. PROPOSED 2" COPPER WATER SERVICES
2. PROPOSED TEE CONNECTION FOR 2" COPPER WATER SERVICES TO EXISTING 2" COPPER WATER SERVICE
3. EXISTING 2" COPPER WATER SERVICES TO REMAIN, PROTECT IN PLACE
4. EXISTING 2" COPPER WATER SERVICES TO BE REMOVED
5. PROPOSED CONNECTION FOR 1" COPPER WATER SERVICES TO PROPOSED 2" COPPER WATER SERVICE PROVIDE 2"X1" REDUCER
6. PROPOSED 1" COPPER WATER SERVICES
7. EXISTING WATER SERVICE WITH EXISTING WATER METER BOX TO REMAIN, PROTECT IN PLACE. (2" WTR METER, METER # 13041462, ACCOUNT # 133322)
8. EXISTING BACKFLOW PREVENTER REDUCED PRINCIPLE DETECTOR ASSEMBLY TO REMAIN, PROTECT IN PLACE
9. EXISTING WATER SERVICE WITH EXISTING WATER METER BOX TO REMAIN, PROTECT IN PLACE. (1 " METER, METER # 13041293, ACCOUNT # 121790)
10. EXISTING WATER SERVICE WITH EXISTING WATER METER BOX TO REMAIN, PROTECT IN PLACE. (5/8" METER, METER # 13040826, ACCOUNT # 132491)
11. EXISTING IRRIGATION SERVICE WITH EXISTING IRRIGATION METER BOX TO REMAIN, PROTECT IN PLACE. (1 1/2" METER, METER # 13041388, ACCOUNT # 133323)

PROPOSED FIRE

1. PROPOSED FIRE SERVICE WET TAP CONNECTION WITH GATE VALVE
2. PROPOSED FIRE SERVICE
3. PROPOSED BACKFLOW PREVENTER REDUCED PRINCIPLE DETECTOR ASSEMBLY
4. EXISTING BACKFLOW PREVENTER REDUCED PRINCIPLE DETECTOR ASSEMBLY TO REMAIN, PROTECT IN PLACE
5. EXISTING FIRE HYDRANT TO REMAIN, PROTECT IN PLACE
6. EXISTING FIRE SERVICE TO BE REMOVED

PROPOSED STORM DRAIN

1. PROPOSED STORM DRAIN CURB INLET (TYPE 'B')
2. PROPOSED STORM DRAIN PIPE (ASSUME AVERAGE SIZE OF 12" PVC)
3. PROPOSED STORM DRAIN HEADWALL
4. PROPOSED STORM DRAIN RIP RAP ENERGY DISSIPATOR
5. PROPOSED PARTIAL INFILTRATION BASIN (SEE SHEET C3.0)
6. PROPOSED STORM DRAIN GRATED INLET (ASSUME AVERAGE SIZE OF 24"X24")
7. PROPOSED STORM DRAIN CURB OUTLET
8. PROPOSED STORM DRAIN CONCRETE SWALE/SPILLWAY
9. PROPOSED TYPE A-4 STORM DRAIN CLEANOUT
10. PROPOSED DUAL WALKWAY UNDERDRAIN PIPE
11. EXISTING STORM DRAIN GRATED INLET TO BE REMOVED
12. EXISTING STORM DRAIN PIPE TO BE REMOVED
13. EXISTING DUAL 3" PVC STORM DRAIN PIPE TO BE REMOVED
14. EXISTING CURB OUTLET TO BE REMOVED
15. PROPOSED TRENCH DRAIN
16. PROPOSED STORM DRAIN PERFORATED PIPE
17. PROPOSED EARTHEN SWALE

NOTES

1. EXISTING 2" DOMESTIC WATER METER AND BACKFLOW TO REMAIN. CONSULTANT TEAM CURRENTLY LOOKING AT OPTIONS TO RECONFIGURE THE DRIVEWAY ENTRANCE/CURB-CUT TO AVOID RELOCATING THE MAIN DOMESTIC WATER SUPPLY AND MINIMIZE IMPACTS TO THE SITE. CONTRACTOR TO PROVIDE A BID ALTERNATIVES AS FOLLOWS:
   (A). TO KILL THE EXISTING SERVICE AT THE MAIN, PROVIDE A NEW WET TAP, RELOCATE THE EXISTING METER AND BACKFLOW, AND TEMPORARILY HIGH-LINE TO BACK-FEED THE EXISTING BUILDINGS (E AND M) THAT ARE TO REMAIN DURING THE SHUT-DOWN.
   (B). TO KILL THE EXISTING SERVICE AT THE MAIN, PROVIDE TWO-2" WATER SERVICES WITH METERS AND BACKFLOWS, UPSIZE ALL EXISTING AND PROPOSED WATER TO 3" (AVERAGE SIZE), AND TEMPORARY HIGH-LINE TO BACK FEED THE EXISTING BUILDINGS (E AND M) THAT ARE TO REMAIN IN SERVICE.
2. THE DEPTH AND SIZE OF THE EXISTING SEWER SYSTEM IS NOT FULLY DISCLOSED IN THE AS-BUILT PLANS. CONTRACTOR TO PROVIDE AN ALLOWANCE TO POTHOLE AND VERIFY THE SIZE AND DEPTH FOR THE EXISTING SEWER IDENTIFIED TO REMAIN.
3. THE SIZE OF THE PROPOSED STORM DRAIN FACILITIES ARE NOT YET ESTABLISHED. THE CONTRACTOR, FOR PRELIMINARY COST PURPOSES SHALL ASSUME 12" FOR STORM DRAIN PIPING AND 24"X24" STORM DRAIN INLETS.
4. THE FIRE SYSTEM SHOWN HEREON IS SHOWN FOR GRAPHICAL PURPOSES ONLY. INPUT FROM THE FIRE PROJECTION CONSULTANT NOT AVAILABLE AT THE TIME THIS DRAWING WAS PRODUCED. FIRE SUPPRESSION SYSTEM SHOWN HEREON IS APPROXIMATE AND FOR PRELIMINARY BUDGETING PURPOSES ONLY.
5. GAS, ELECTRIC, IRRIGATION, ETC. NOT SHOWN HEREON (BY OTHERS).

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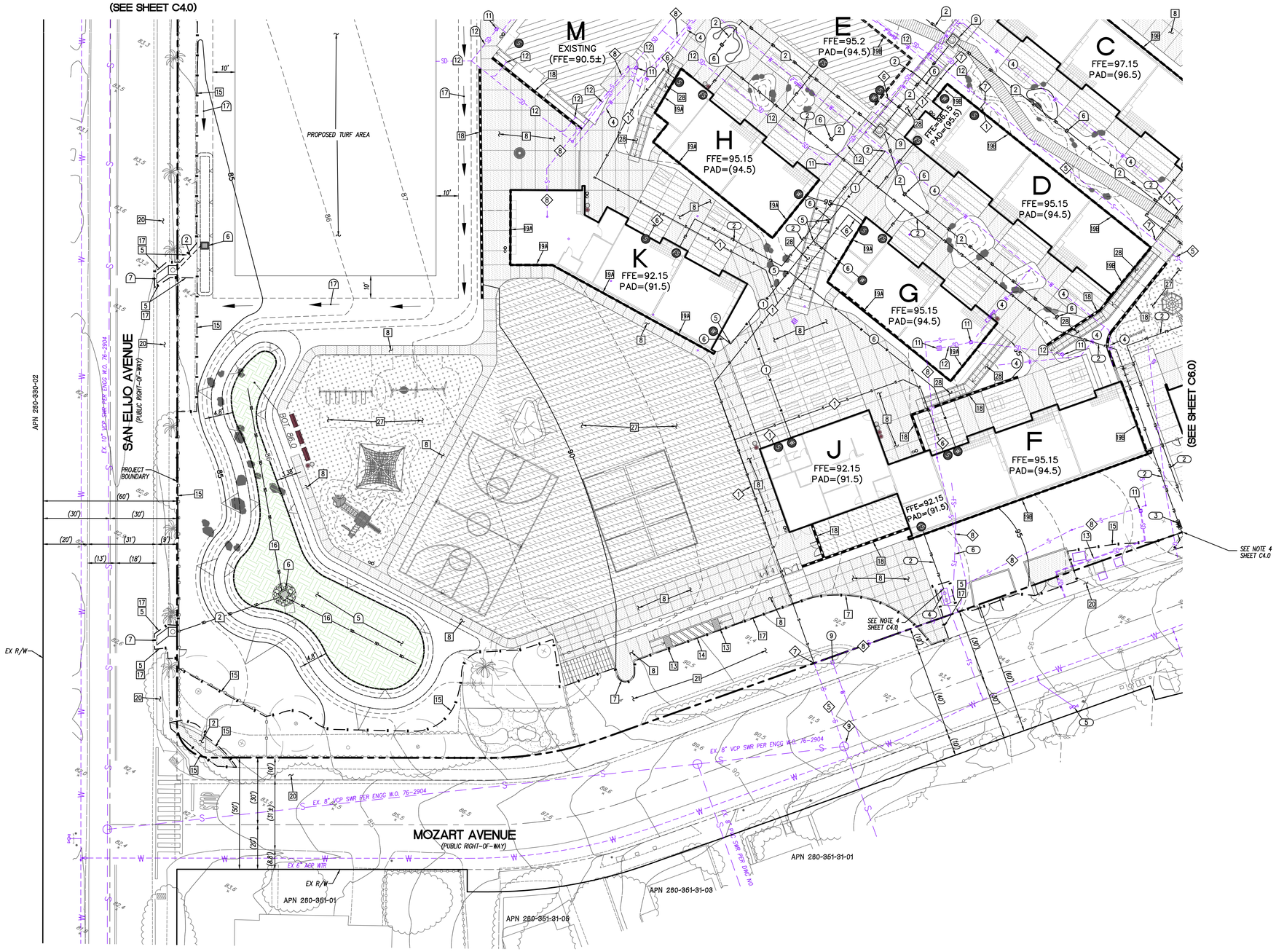
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PRECISE GRADING, DRAINAGE AND □ET UTILITY PLAN
□20-SCALE□

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PLAN VIEW
SCALE: 1" = 20'

N

0' 10' 20' 40'

KEYED NOTES (IMPROVEMENTS)
FOR KEYED NOTES (IMPROVEMENTS) SEE SHEET C4.0

KEYED NOTES (UTILITIES)
FOR KEYED NOTES (UTILITIES) SEE SHEET C4.0

NOTES
FOR NOTES SEE SHEET C4.0

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□20-SCALE□

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N
0' 10' 20' 40'

KEYED NOTES (IMPROVEMENTS)

FOR KEYED NOTES (IMPROVEMENTS) SEE SHEET C4.0

KEYED NOTES (UTILITIES)

FOR KEYED NOTES (UTILITIES) SEE SHEET C4.0

NOTES

FOR NOTES SEE SHEET C4.0

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5.7-1-161

Appendix 5.7-2 Preliminary Drainage Report

Appendices

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PRELIMINARY DRAINAGE REPORT

FOR THE

CARDIFF SCHOOL

August 31, 2018

Wayne W. Chang, MS, PE 46548

ChangConsultants

Civil Engineering ◦ Hydrology ◦ Hydraulics ◦ Sedimentation

P.O. Box 9496
Rancho Santa Fe, CA 92067
(858) 692-0760

FOR REVIEW ONLY

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APPENDIX

A. Rational Method Data and Results

INTRODUCTION

The Cardiff School is an existing K-3 elementary school located at 1888 Montgomery Avenue in the Cardiff-by-the-Sea community in the city of Encinitas (see the Vicinity Map). The project proposes modernization and reconstruction of the school. The work includes demolition of five one-story buildings and three relocatable classroom buildings, construction of ten one-story buildings including classrooms, a makerspace lab, food service, a multipurpose room, and associated support spaces. Improvements also include a new parking lot and drop-off, reconstruction of hardcourts, playgrounds, landscaping, a lunch court, shade structures, an entry trellis, perimeter fencing/gates, and an outdoor assembly area.



Vicinity Map

Under pre-project conditions, storm runoff from the existing elementary school site flows in two general directions: north and south. The northerly portion of the site flows towards its northwest corner at the intersection of San Elijo Avenue and Montgomery Avenue. The southerly portion of the site flows towards the adjacent San Elijo Avenue and Mozart Avenue. The runoff from the north and south is ultimately conveyed south in a series of streets (curb and gutter), channels, and storm drains to San Elijo Lagoon.

Under post-project conditions, the majority of the development area runoff will be conveyed to one of two proposed biofiltration basins for treatment and flow control. A northerly

biofiltration basin will treat the northerly project runoff while a southwesterly biofiltration basin will treat the southerly project runoff. Both biofiltration basin outflows will be piped to San Elijo Avenue. In addition, the westerly portion of the site will contain self-mitigating areas whose runoff will sheet flow directly onto San Elijo Avenue. The overall project flows will then be directed north and south away from the site, and ultimately flow into San Elijo Lagoon as described in the prior paragraph.

This preliminary drainage report has been prepared in support of the Coastal Development Permit submittal for the project. This report merely estimates the overall existing and proposed condition flow rates to the north and south for the CDP. More detailed analyses will be performed for subsequent submittals.

HYDROLOGIC RESULTS

The City of Encinitas' 2009 *Engineering Design Manual* provides hydrology study requirements. The Manual indicates that the most recent County of San Diego criteria have been adopted by the City. The overall existing and proposed condition study area covers 7.17 acres, so the County's rational method procedure applies. The CivilDesign Rational Method Hydrology Program is based on the County criteria and was used for the analyses. The rational method input parameters are summarized below and the supporting data is included in Appendix A:

- Precipitation: The 100-year, 6- and 24-hour precipitation values are 2.5 and 4.0 inches, respectively. The isopluvials are included in Appendix A.

- Drainage areas: The existing condition drainage areas were delineated from the topographic mapping prepared for the project as well as as-built information. A site visit was performed to verify the drainage area delineation. The existing condition drainage areas define the northerly and southerly major drainage basins. For the current CDP submittal, the proposed condition drainage areas are the same as the existing condition drainage areas. For future submittals, the proposed condition analysis will route the flows according to the proposed grading and drainage design. A Rational Method Work Map is included in Appendix A.

- Hydrologic soil groups: According to the *Engineering Design Manual,* hydrology studies shall assume soil group D.

- Runoff coefficients: Runoff coefficients were based on the estimated percent impervious under existing and proposed conditions. The CivilDesign software does not allow a user-defined runoff coefficient to be assigned, so the land use and soil type combination that most closely reflects the runoff coefficient was selected in the software, e.g., if the runoff coefficient is 0.67, a high-density land use and soil group B were selected since these have a runoff coefficient of 0.67.

- Flow lengths and elevations: Flow lengths and elevations were digitized and obtained from the topographic mapping.

The 100-year rational method results are included in Appendix A and summarized in Table 1. The table shows that the project will increase the 100-year flow rates.

Condition	Northerly 100-Year Flow Rate, cfs (Node 16)	Southerly 100-Year Flow Rate, cfs (Node 26)
Existing	11	9
Proposed	18	15

Table 1. Summary of Rational Method Results

CONCLUSION

This preliminary drainage report shows that the project will increase the 100-year flow rates. This is due to the additional impervious area being added. The proposed biofiltration basins will provide storage, so can be used to mitigate the increase.

APPENDIX A

RATIONAL METHOD DATA AND RESULTS

1" = 50'

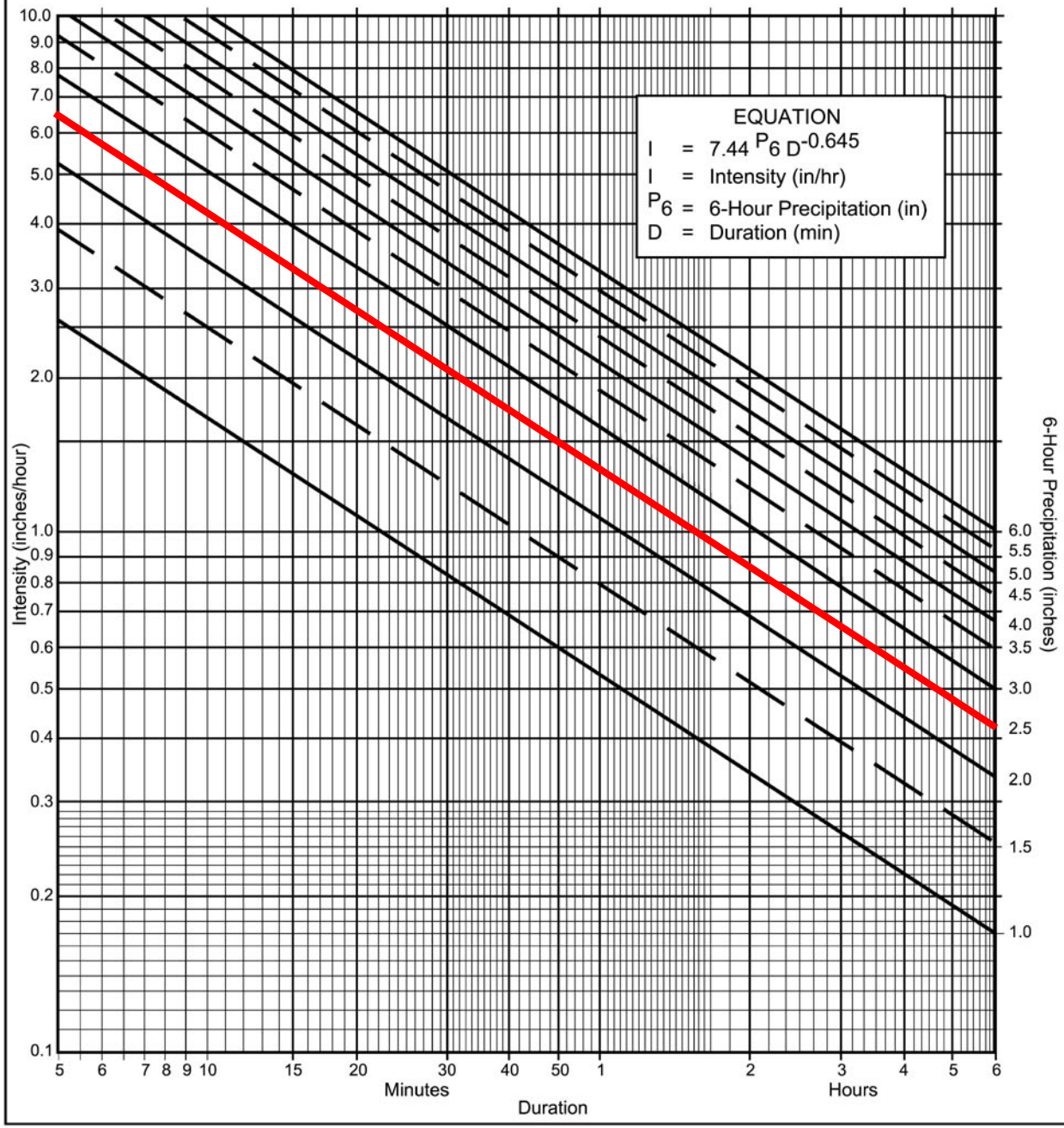
0 50

LEGEND:

- DRAINAGE BASIN BOUNDARY
- OVERLAND FLOW PATH
- EXISTING DRAINAGE FACILITY
- 3.62 AC DRAINAGE BASIN AREA
- [10] RATIONAL METHOD NODE NUMBER

16
14
4.24 AC
10
12
0.04 AC
20
0.43 AC
22
24
2.46 AC
26

CARDIFF SCHOOL
RATIONAL METHOD WORK MAP



Directions for Application:

(1) From precipitation maps determine 6 hr and 24 hr amounts for the selected frequency. These maps are included in the County Hydrology Manual (10, 50, and 100 yr maps included in the Design and Procedure Manual).

(2) Adjust 6 hr precipitation (if necessary) so that it is within the range of 45% to 65% of the 24 hr precipitation (not applicaple to Desert).

(3) Plot 6 hr precipitation on the right side of the chart.

(4) Draw a line through the point parallel to the plotted lines.

(5) This line is the intensity-duration curve for the location being analyzed.

Application Form:

(a) Selected frequency 100- year

(b) P_6 = 2.5 in., P_{24} = 4.0, $\frac{P_6}{P_{24}}$ = 62.5 %(2)

(c) Adjusted P_6(2) = 2.5 in.

(d) t_x = _____ min. See calculations

(e) I = _____ in./hr.

Note: This chart replaces the Intensity-Duration-Frequency curves used since 1965.

P6	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Duration	I	I	I	I	I	I	I	I	I	I	I
5	2.63	3.95	5.27	6.59	7.90	9.22	10.54	11.86	13.17	14.49	15.81
7	2.12	3.18	4.24	5.30	6.36	7.42	8.48	9.54	10.60	11.66	12.72
10	1.68	2.53	3.37	4.21	5.05	5.90	6.74	7.58	8.42	9.27	10.11
15	1.30	1.95	2.59	3.24	3.89	4.54	5.19	5.84	6.49	7.13	7.78
20	1.08	1.62	2.15	2.69	3.23	3.77	4.31	4.85	5.39	5.93	6.46
25	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60
30	0.83	1.24	1.66	2.07	2.49	2.90	3.32	3.73	4.15	4.56	4.98
40	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10	3.45	3.79	4.13
50	0.60	0.90	1.19	1.49	1.79	2.09	2.39	2.69	2.98	3.28	3.58
60	0.53	0.80	1.06	1.33	1.59	1.86	2.12	2.39	2.65	2.92	3.18
90	0.41	0.61	0.82	1.02	1.23	1.43	1.63	1.84	2.04	2.25	2.45
120	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53	1.70	1.87	2.04
150	0.29	0.44	0.59	0.73	0.88	1.03	1.18	1.32	1.47	1.62	1.76
180	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18	1.31	1.44	1.57
240	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98	1.08	1.19	1.30
300	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.85	0.94	1.03	1.13
360	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.84	0.92	1.00

Intensity-Duration Design Chart - Template

FIGURE 3-1

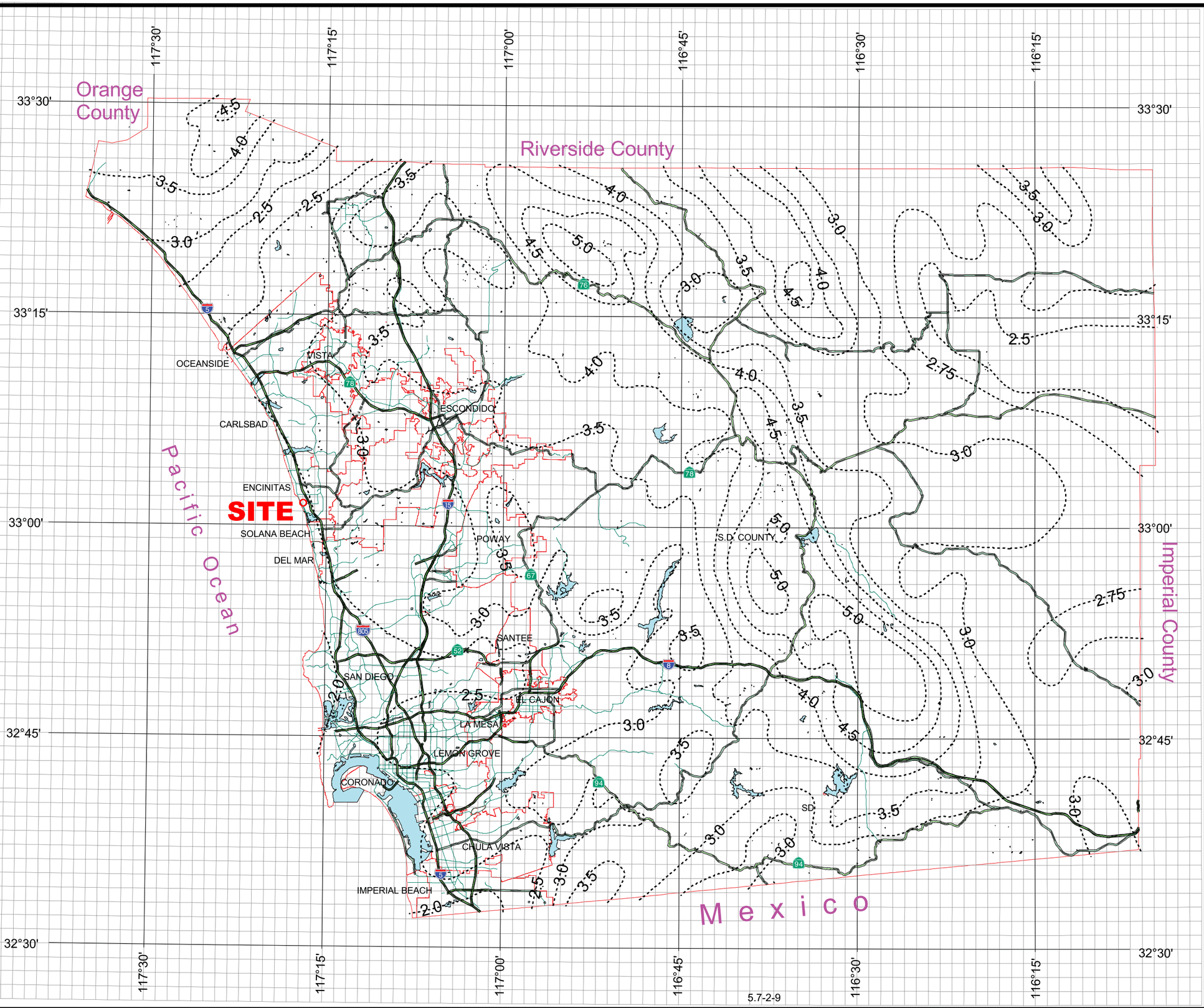
County of San Diego Hydrology Manual

Rainfall Isopluvials

100 Year Rainfall Event - 6 Hours

Isopluvial (inches)

P6=2.5"



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Geographic Information Services

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N W E S

3 0 3 Miles

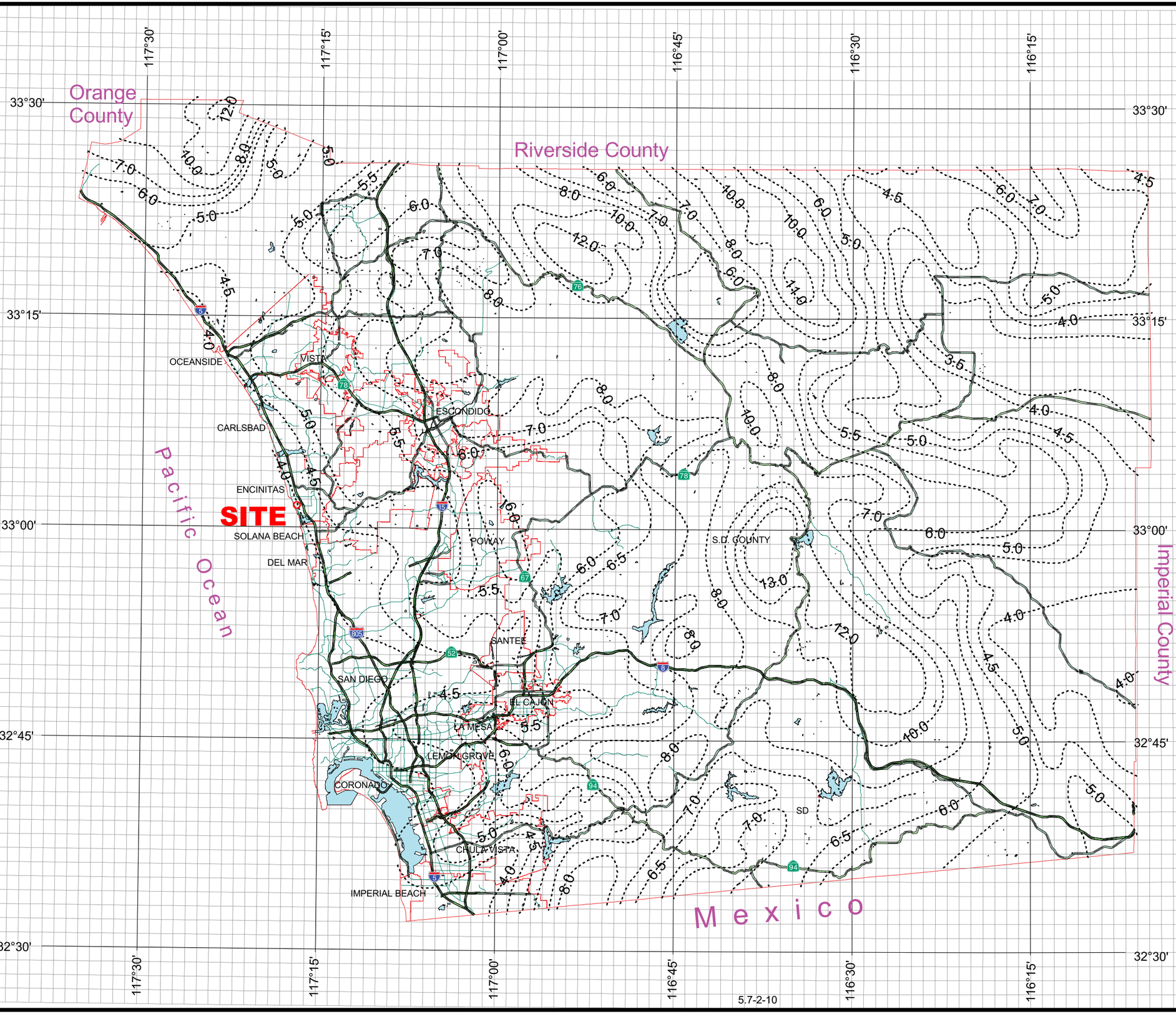
County of San Diego Hydrology Manual

Rainfall Isopluvials

100 Year Rainfall Event - 24 Hours

Isopluvial (inches)

P24=4.0"



5.7-2-10

DPW GIS
Department of Public Works
Geographic Information Services

SanGIS
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N
W E
S

3 0 3 Miles

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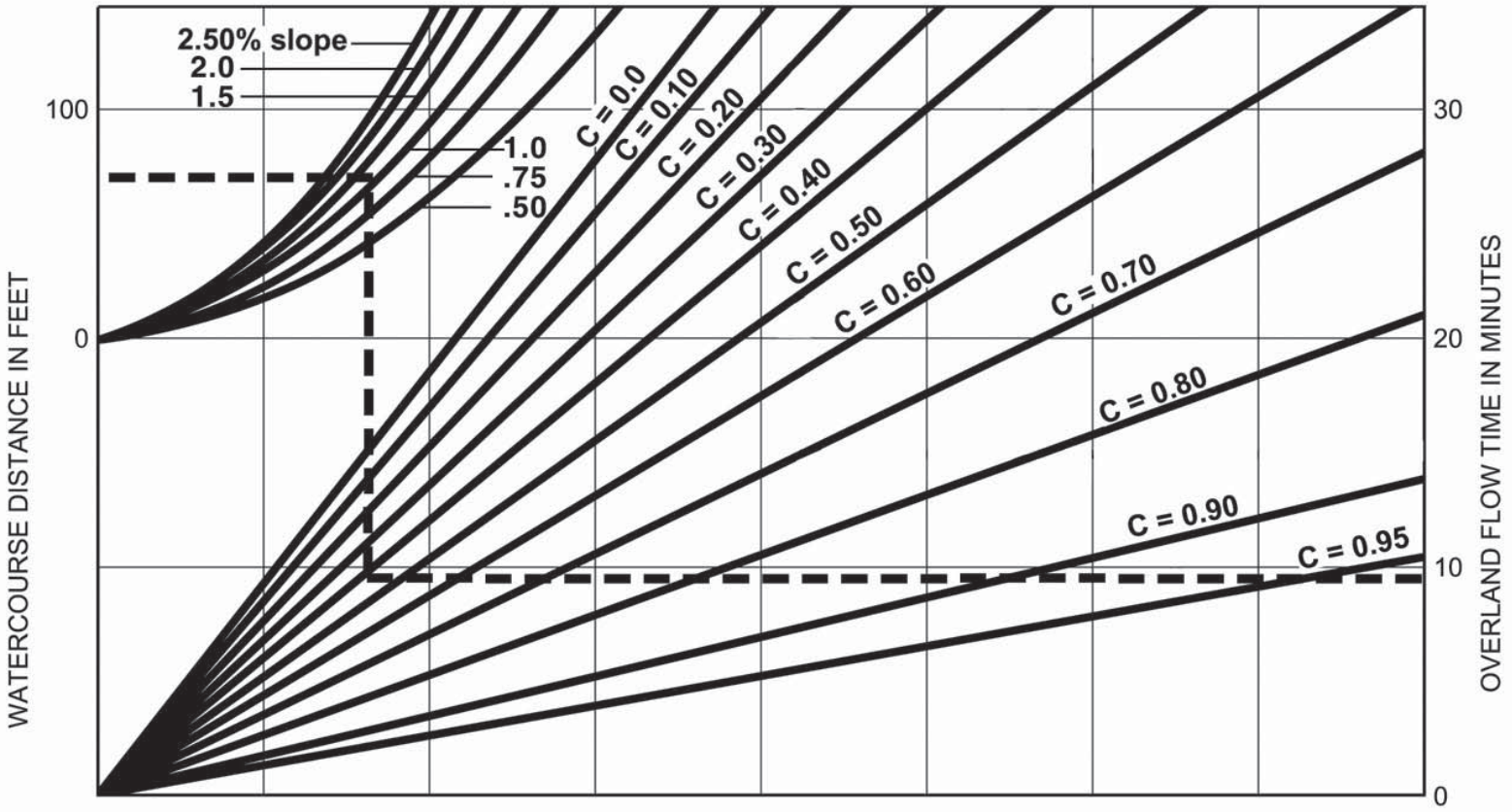
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Table 3-1
RUNOFF COEFFICIENTS FOR URBAN AREAS

Land Use		Runoff Coefficient "C"				
			Soil Type			
NRCS Elements	County Elements	% IMPER.	A	B	C	D
Undisturbed Natural Terrain (Natural)	Permanent Open Space	0*	0.20	0.25	0.30	0.35
Low Density Residential (LDR)	Residential, 1.0 DU/A or less	10	0.27	0.32	0.36	0.41
Low Density Residential (LDR)	Residential, 2.0 DU/A or less	20	0.34	0.38	0.42	0.46
Low Density Residential (LDR)	Residential, 2.9 DU/A or less	25	0.38	0.41	0.45	0.49
Medium Density Residential (MDR)	Residential, 4.3 DU/A or less	30	0.41	0.45	0.48	0.52
Medium Density Residential (MDR)	Residential, 7.3 DU/A or less	40	0.48	0.51	0.54	0.57
Medium Density Residential (MDR)	Residential, 10.9 DU/A or less	45	0.52	0.54	0.57	0.60
Medium Density Residential (MDR)	Residential, 14.5 DU/A or less	50	0.55	0.58	0.60	0.63
High Density Residential (HDR)	Residential, 24.0 DU/A or less	65	0.66	0.67	0.69	0.71
High Density Residential (HDR)	Residential, 43.0 DU/A or less	80	0.76	0.77	0.78	0.79
Commercial/Industrial (N. Com)	Neighborhood Commercial	80	0.76	0.77	0.78	0.79
Commercial/Industrial (G. Com)	General Commercial	85	0.80	0.80	0.81	0.82
Commercial/Industrial (O.P. Com)	Office Professional/Commercial	90	0.83	0.84	0.84	0.85
Commercial/Industrial (Limited I.)	Limited Industrial	90	0.83	0.84	0.84	0.85
Commercial/Industrial (General I.)	General Industrial	95	0.87	0.87	0.87	0.87

*The values associated with 0% impervious may be used for direct calculation of the runoff coefficient as described in Section 3.1.2 (representing the pervious runoff coefficient, Cp, for the soil type), or for areas that will remain undisturbed in perpetuity. Justification must be given that the area will remain natural forever (e.g., the area is located in Cleveland National Forest).
DU/A = dwelling units per acre
NRCS = National Resources Conservation Service



EXAMPLE:

Given: Watercourse Distance (D) = 70 Feet
Slope (s) = 1.3%
Runoff Coefficient (C) = 0.41
Overland Flow Time (T) = 9.5 Minutes

$$T = \frac{1.8\,(1.1-C)\sqrt{D}}{\sqrt[3]{s}}$$

SOURCE: Airport Drainage, Federal Aviation Administration, 1965

FIGURE 3-3

Rational Formula - Overland Time of Flow Nomograph

Note that the Initial Time of Concentration should be reflective of the general land-use at the upstream end of a drainage basin. A single lot with an area of two or less acres does not have a significant effect where the drainage basin area is 20 to 600 acres.

Table 3-2 provides limits of the length (Maximum Length (L_M)) of sheet flow to be used in hydrology studies. Initial T_i values based on average C values for the Land Use Element are also included. These values can be used in planning and design applications as described below. Exceptions may be approved by the "Regulating Agency" when submitted with a detailed study.

Table 3-2

MAXIMUM OVERLAND FLOW LENGTH (L_M)
& INITIAL TIME OF CONCENTRATION (T_i)

Element*	DU/ Acre	.5%		1%		2%		3%		5%		10%	
		L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i	L_M	T_i
Natural		50	13.2	70	12.5	85	10.9	100	10.3	100	8.7	100	6.9
LDR	1	50	12.2	70	11.5	85	10.0	100	9.5	100	8.0	100	6.4
LDR	2	50	11.3	70	10.5	85	9.2	100	8.8	100	7.4	100	5.8
LDR	2.9	50	10.7	70	10.0	85	8.8	95	8.1	100	7.0	100	5.6
MDR	4.3	50	10.2	70	9.6	80	8.1	95	7.8	100	6.7	100	5.3
MDR	7.3	50	9.2	65	8.4	80	7.4	95	7.0	100	6.0	100	4.8
MDR	10.9	50	8.7	65	7.9	80	6.9	90	6.4	100	5.7	100	4.5
MDR	14.5	50	8.2	65	7.4	80	6.5	90	6.0	100	5.4	100	4.3
HDR	24	50	6.7	65	6.1	75	5.1	90	4.9	95	4.3	100	3.5
HDR	43	50	5.3	65	4.7	75	4.0	85	3.8	95	3.4	100	2.7
N. Com		50	5.3	60	4.5	75	4.0	85	3.8	95	3.4	100	2.7
G. Com		50	4.7	60	4.1	75	3.6	85	3.4	90	2.9	100	2.4
O.P./Com		50	4.2	60	3.7	70	3.1	80	2.9	90	2.6	100	2.2
Limited I.		50	4.2	60	3.7	70	3.1	80	2.9	90	2.6	100	2.2
General I.		50	3.7	60	3.2	70	2.7	80	2.6	90	2.3	100	1.9

*See Table 3-1 for more detailed description

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2009 Version 7.8

Rational method hydrology program based on
San Diego County Flood Control Division 2003 hydrology manual
Rational Hydrology Study Date: 06/24/18

Cardiff School
Existing Conditions
100-Year Flow Rate
Conceptual Analysis

********* Hydrology Study Control Information **********

Program License Serial Number 4028

Rational hydrology study storm event year is 100.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour, precipitation(inches) = 2.500
24 hour precipitation(inches) = 4.000
P6/P24 = 62.5%
San Diego hydrology manual 'C' values used

++
Process from Point/Station 10.000 to Point/Station 12.000
**** INITIAL AREA EVALUATION ****

Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
[MEDIUM DENSITY RESIDENTIAL]
(10.9 DU/A or Less)
Impervious value, Ai = 0.450
Sub-Area C Value = 0.600
Initial subarea total flow distance = 78.000(Ft.)
Highest elevation = 105.500(Ft.)
Lowest elevation = 95.000(Ft.)
Elevation difference = 10.500(Ft.) Slope = 13.462 %
INITIAL AREA TIME OF CONCENTRATION CALCULATIONS:
The maximum overland flow distance is 100.00 (Ft)
for the top area slope value of 13.46 %, in a development type of
10.9 DU/A or Less
In Accordance With Figure 3-3

```
Initial Area Time of Concentration =   3.78 minutes
TC = [1.8*(1.1-C)*distance(Ft.)^.5)/(% slope^(1/3)]
TC = [1.8*(1.1-0.6000)*( 100.000^.5)/(  13.462^(1/3)]=   3.78
Calculated TC of    3.783 minutes is less than 5 minutes,
 resetting TC to 5.0 minutes for rainfall intensity calculations
Rainfall intensity (I) =      6.587(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.600
Subarea runoff =      0.158(CFS)
Total initial stream area =        0.040(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       12.000 to Point/Station       14.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =    93.550(Ft.)
Downstream point/station elevation =    89.000(Ft.)
Pipe length  =   490.00(Ft.) Slope =   0.0093  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     0.158(CFS)
Nearest computed pipe diameter  =      6.00(In.)
Calculated individual pipe flow  =     0.158(CFS)
Normal flow depth in pipe =    2.22(In.)
Flow top width inside pipe =    5.79(In.)
Critical Depth =    2.38(In.)
Pipe flow velocity =      2.39(Ft/s)
Travel time through pipe =    3.42 min.
Time of concentration (TC) =     7.20 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       14.000 to Point/Station       16.000
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =    89.000(Ft.)
Downstream point elevation =    80.900(Ft.)
Channel length thru subarea  =   275.000(Ft.)
Channel base width    =   10.000(Ft.)
Slope or 'Z' of left channel bank =  50.000
Slope or 'Z' of right channel bank =  50.000
Estimated mean flow rate at midpoint of channel =      5.684(CFS)
Manning's 'N'    = 0.030
Maximum depth of channel  =    0.500(Ft.)
Flow(q) thru subarea =      5.684(CFS)
Depth of flow =   0.161(Ft.), Average velocity =   1.964(Ft/s)
Channel flow top width =   26.054(Ft.)
Flow Velocity =    1.96(Ft/s)
Travel time  =    2.33 min.
Time of concentration =    9.54 min.
Critical depth =      0.164(Ft.)
 Adding area flow to channel
Rainfall intensity (I) =      4.343(In/Hr) for a   100.0 year storm
Decimal fraction soil group A = 0.000
```

```
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
[MEDIUM DENSITY RESIDENTIAL                 ]
(10.9 DU/A or Less      )
Impervious value, Ai = 0.450
Sub-Area C Value = 0.600
Rainfall intensity =      4.343(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.600  CA =      2.568
Subarea runoff =     10.996(CFS) for      4.240(Ac.)
Total runoff =     11.154(CFS)   Total area =       4.280(Ac.)
Depth of flow =   0.223(Ft.), Average velocity =   2.359(Ft/s)
Critical depth =      0.232(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       20.000 to Point/Station       22.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
[HIGH DENSITY RESIDENTIAL                   ]
(24.0 DU/A or Less      )
Impervious value, Ai = 0.650
Sub-Area C Value = 0.670
Initial subarea total flow distance  =  215.000(Ft.)
Highest elevation =  102.400(Ft.)
Lowest elevation =   96.300(Ft.)
Elevation difference =    6.100(Ft.) Slope =  2.837 %
INITIAL AREA TIME OF CONCENTRATION CALCULATIONS:
The maximum overland flow distance is 90.00 (Ft)
for the top area slope value of   2.84 %, in a development type of
 24.0 DU/A or Less
In Accordance With Figure 3-3
Initial Area Time of Concentration =   5.19 minutes
TC = [1.8*(1.1-C)*distance(Ft.)^.5)/(% slope^(1/3)]
TC = [1.8*(1.1-0.6700)*(  90.000^.5)/(   2.837^(1/3)]=   5.19
The initial area total distance of  215.00 (Ft.) entered leaves a
remaining distance of  125.00 (Ft.)
Using Figure 3-4, the travel time for this distance is   1.27 minutes
for a distance of 125.00 (Ft.) and a slope of  2.84 %
with an elevation difference of   3.55(Ft.) from the end of the top area
Tt = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr)
 =    1.267 Minutes
Tt=[(11.9*0.0237^3)/(  3.55)]^.385=  1.27
Total initial area Ti =   5.19 minutes from Figure 3-3 formula plus
  1.27 minutes from the Figure 3-4 formula =   6.45 minutes
Rainfall intensity (I) =      5.587(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.670
```

```
Subarea runoff =      1.610(CFS)
Total initial stream area =        0.430(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       22.000 to Point/Station       24.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =    95.000(Ft.)
Downstream point/station elevation =    94.400(Ft.)
Pipe length  =    56.00(Ft.) Slope =   0.0107  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     1.610(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     1.610(CFS)
Normal flow depth in pipe =    6.94(In.)
Flow top width inside pipe =    7.57(In.)
Critical Depth =    7.00(In.)
Pipe flow velocity =      4.41(Ft/s)
Travel time through pipe =    0.21 min.
Time of concentration (TC) =     6.67 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       24.000 to Point/Station       26.000
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =    94.400(Ft.)
Downstream point elevation =    88.400(Ft.)
Channel length thru subarea  =   273.000(Ft.)
Channel base width    =    5.000(Ft.)
Slope or 'Z' of left channel bank =  20.000
Slope or 'Z' of right channel bank =  20.000
Estimated mean flow rate at midpoint of channel =      5.533(CFS)
Manning's 'N'    = 0.018
Maximum depth of channel  =    0.500(Ft.)
Flow(q) thru subarea =      5.533(CFS)
Depth of flow =   0.194(Ft.), Average velocity =   3.217(Ft/s)
Channel flow top width =   12.751(Ft.)
Flow Velocity =    3.22(Ft/s)
Travel time  =    1.41 min.
Time of concentration =    8.08 min.
Critical depth =      0.244(Ft.)
 Adding area flow to channel
Rainfall intensity (I) =      4.833(In/Hr) for a   100.0 year storm
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
[HIGH DENSITY RESIDENTIAL                    ]
(24.0 DU/A or Less      )
Impervious value, Ai = 0.650
Sub-Area C Value = 0.670
```

```
Rainfall intensity =      4.833(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.670  CA =      1.936
Subarea runoff =      7.749(CFS) for      2.460(Ac.)
Total runoff =      9.358(CFS)   Total area =       2.890(Ac.)
Depth of flow =   0.251(Ft.), Average velocity =   3.715(Ft/s)
Critical depth =      0.320(Ft.)
End of computations, total study area =           7.170 (Ac.)
```

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2009 Version 7.8

Rational method hydrology program based on
San Diego County Flood Control Division 2003 hydrology manual
     Rational Hydrology Study   Date: 06/24/18

Cardiff School
Proposed Conditions
100-Year Flow Rate
Conceptual Analysis

 *********   Hydrology Study Control Information **********

Program License Serial Number 4028

Rational hydrology study storm event year is   100.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour, precipitation(inches) = 2.500
24 hour precipitation(inches) = 4.000
P6/P24 =   62.5%
San Diego hydrology manual 'C' values used

++
Process from Point/Station   10.000 to Point/Station   12.000
**** INITIAL AREA EVALUATION ****

Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
[COMMERCIAL area type   ]
(General Commercial   )
Impervious value, Ai = 0.850
Sub-Area C Value = 0.820
Initial subarea total flow distance =   78.000(Ft.)
Highest elevation = 105.500(Ft.)
Lowest elevation =   95.000(Ft.)
Elevation difference =   10.500(Ft.) Slope = 13.462 %
INITIAL AREA TIME OF CONCENTRATION CALCULATIONS:
The maximum overland flow distance is 100.00 (Ft)
for the top area slope value of 13.46 %, in a development type of
 General Commercial

```
In Accordance With Figure 3-3
Initial Area Time of Concentration =   2.12 minutes
TC = [1.8*(1.1-C)*distance(Ft.)^.5)/(% slope^(1/3)]
TC = [1.8*(1.1-0.8200)*( 100.000^.5)/(  13.462^(1/3)]=   2.12
Calculated TC of    2.119 minutes is less than 5 minutes,
 resetting TC to 5.0 minutes for rainfall intensity calculations
Rainfall intensity (I) =      6.587(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.820
Subarea runoff =      0.216(CFS)
Total initial stream area =        0.040(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       12.000 to Point/Station       14.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =    93.550(Ft.)
Downstream point/station elevation =    89.000(Ft.)
Pipe length  =   490.00(Ft.) Slope =   0.0093  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     0.216(CFS)
Nearest computed pipe diameter  =      6.00(In.)
Calculated individual pipe flow  =     0.216(CFS)
Normal flow depth in pipe =    2.64(In.)
Flow top width inside pipe =    5.96(In.)
Critical Depth =    2.80(In.)
Pipe flow velocity =      2.60(Ft/s)
Travel time through pipe =    3.14 min.
Time of concentration (TC) =     5.26 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       14.000 to Point/Station       16.000
**** IMPROVED CHANNEL TRAVEL TIME ****
------------------------------------------------------------------------
Upstream point elevation =    89.000(Ft.)
Downstream point elevation =    80.900(Ft.)
Channel length thru subarea  =   275.000(Ft.)
Channel base width    =   10.000(Ft.)
Slope or 'Z' of left channel bank =  50.000
Slope or 'Z' of right channel bank =  50.000
Estimated mean flow rate at midpoint of channel =      9.209(CFS)
Manning's 'N'    = 0.030
Maximum depth of channel  =    0.500(Ft.)
Flow(q) thru subarea =      9.209(CFS)
Depth of flow =   0.204(Ft.), Average velocity =   2.241(Ft/s)
Channel flow top width =   30.364(Ft.)
Flow Velocity =    2.24(Ft/s)
Travel time  =    2.05 min.
Time of concentration =    7.30 min.
Critical depth =      0.211(Ft.)
 Adding area flow to channel
Rainfall intensity (I) =      5.159(In/Hr) for a   100.0 year storm
```

```
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
[COMMERCIAL area type                         ]
(General Commercial    )
Impervious value, Ai = 0.850
Sub-Area C Value = 0.820
Rainfall intensity =      5.159(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.820  CA =      3.510
Subarea runoff =     17.889(CFS) for      4.240(Ac.)
Total runoff =     18.105(CFS)   Total area =       4.280(Ac.)
Depth of flow =   0.281(Ft.), Average velocity =   2.682(Ft/s)
Critical depth =      0.297(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       20.000 to Point/Station       22.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
[COMMERCIAL area type                         ]
(Office Professional    )
Impervious value, Ai = 0.900
Sub-Area C Value = 0.850
Initial subarea total flow distance  =  215.000(Ft.)
Highest elevation =  102.400(Ft.)
Lowest elevation =   96.300(Ft.)
Elevation difference =    6.100(Ft.) Slope =  2.837 %
INITIAL AREA TIME OF CONCENTRATION CALCULATIONS:
The maximum overland flow distance is 80.00 (Ft)
for the top area slope value of   2.84 %, in a development type of
 Office Professional
In Accordance With Figure 3-3
Initial Area Time of Concentration =   2.84 minutes
TC = [1.8*(1.1-C)*distance(Ft.)^.5)/(% slope^(1/3)]
TC = [1.8*(1.1-0.8500)*(  80.000^.5)/(   2.837^(1/3)]=   2.84
The initial area total distance of  215.00 (Ft.) entered leaves a
remaining distance of  135.00 (Ft.)
Using Figure 3-4, the travel time for this distance is   1.34 minutes
for a distance of 135.00 (Ft.) and a slope of  2.84 %
with an elevation difference of   3.83(Ft.) from the end of the top area
Tt = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr)
 =    1.345 Minutes
Tt=[(11.9*0.0256^3)/(  3.83)]^.385=  1.34
Total initial area Ti =   2.84 minutes from Figure 3-3 formula plus
  1.34 minutes from the Figure 3-4 formula =   4.19 minutes
Calculated TC of    4.188 minutes is less than 5 minutes,
```

```
 resetting TC to 5.0 minutes for rainfall intensity calculations
Rainfall intensity (I) =      6.587(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.850
Subarea runoff =      2.407(CFS)
Total initial stream area =        0.430(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       22.000 to Point/Station       24.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =    95.000(Ft.)
Downstream point/station elevation =    94.400(Ft.)
Pipe length  =    56.00(Ft.) Slope =   0.0107  Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.407(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     2.407(CFS)
Normal flow depth in pipe =    7.07(In.)
Flow top width inside pipe =   11.81(In.)
Critical Depth =    7.98(In.)
Pipe flow velocity =      5.00(Ft/s)
Travel time through pipe =    0.19 min.
Time of concentration (TC) =     4.37 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       24.000 to Point/Station       26.000
**** IMPROVED CHANNEL TRAVEL TIME ****
------------------------------------------------------------------------
Upstream point elevation =    94.400(Ft.)
Downstream point elevation =    88.400(Ft.)
Channel length thru subarea  =   273.000(Ft.)
Channel base width    =    5.000(Ft.)
Slope or 'Z' of left channel bank =  20.000
Slope or 'Z' of right channel bank =  20.000
Estimated mean flow rate at midpoint of channel =      8.746(CFS)
Manning's 'N'    = 0.018
Maximum depth of channel  =    0.500(Ft.)
Flow(q) thru subarea =      8.746(CFS)
Depth of flow =   0.243(Ft.), Average velocity =   3.648(Ft/s)
Channel flow top width =   14.725(Ft.)
Flow Velocity =    3.65(Ft/s)
Travel time  =    1.25 min.
Time of concentration =    5.62 min.
Critical depth =      0.309(Ft.)
 Adding area flow to channel
Rainfall intensity (I) =      6.107(In/Hr) for a   100.0 year storm
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
[COMMERCIAL area type                        ]
```

```
(Office Professional    )
Impervious value, Ai = 0.900
Sub-Area C Value = 0.850
Rainfall intensity =      6.107(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for total area
(Q=KCIA) is C = 0.850  CA =      2.456
Subarea runoff =     12.595(CFS) for      2.460(Ac.)
Total runoff =     15.002(CFS)   Total area =       2.890(Ac.)
Depth of flow =   0.315(Ft.), Average velocity =   4.214(Ft/s)
Critical depth =      0.402(Ft.)
End of computations, total study area =          7.170 (Ac.)
```

Appendix 5.9-1 Noise Calculations

Appendices

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AM Peak Hour

Int	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NB	SB	EB	WB
1 San Elijo Ave/Montgomery Ave	0	193	24	30	660	0	0	0	0	23	0	31	914	900	108	0
2 San Elijo Ave/Mozart Ave	0	190	20	13	673	0	0	0	0	50	0	34	910	933	117	0
3 San Elijo Ave/Birmingham Ave	0	155	143	194	572	0	0	0	0	170	0	58	979	1040	565	0
4 Montgomery Ave/Mozart Ave	107	87	0	0	83	19	10	0	60	0	0	0	199	337	0	196
5 Montgomery Ave/Birmingham Dr	2	12	26	76	8	8	4	386	0	18	386	69	177	66	961	786
	109	637	213	313	1996	27	14	386	60	261	386	192				

PM Peak Hour

Int	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NB	SB	EB	WB
1 San Elijo Ave/Montgomery Ave	0	375	20	13	289	0	0	0	0	9	0	21	698	693	63	0
2 San Elijo Ave/Mozart Ave	0	377	25	6	295	0	0	0	0	14	0	10	688	711	55	0
3 San Elijo Ave/Birmingham Ave	0	347	197	72	199	0	0	0	0	144	0	101	719	887	514	0
4 Montgomery Ave/Mozart Ave	24	55	0	0	47	7	7	0	19	0	0	0	116	145	0	57
5 Montgomery Ave/Birmingham Dr	4	3	33	35	5	8	13	475	4	19	372	53	117	68	987	876

AM Peak Hour

	Int	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NB	SB	EB	WB
1	San Elijo Ave/Montgomery Ave	0	193	24	33	660	0	0	0	0	23	0	33	919	900	113	0
2	San Elijo Ave/Mozart Ave	0	190	30	13	673	0	0	0	0	56	0	34	910	949	133	0
3	San Elijo Ave/Birmingham Ave	0	160	143	197	575	0	0	0	0	170	0	63	995	1048	573	0
4	Montgomery Ave/Mozart Ave	110	94	0	0	88	19	10	0	62	0	0	0	211	354	0	201
5	Montgomery Ave/Birmingham Dr	2	12	26	82	8	8	4	386	0	18	386	79	193	66	977	786

PM Peak Hour

	Int	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NB	SB	EB	WB
1	San Elijo Ave/Montgomery Ave	0	375	20	14	289	0	0	0	0	9	0	22	700	693	65	0
2	San Elijo Ave/Mozart Ave	0	377	27	6	295	0	0	0	0	17	0	10	688	716	60	0
3	San Elijo Ave/Birmingham Ave	0	348	197	74	201	0	0	0	0	144	0	102	725	890	517	0
4	Montgomery Ave/Mozart Ave	25	57	0	0	49	7	7	0	20	0	0	0	120	151	0	59
5	Montgomery Ave/Birmingham Dr	4	3	33	38	5	8	13	475	4	19	372	55	122	68	992	876

Project Turn Volumes

AM Peak Hour

	Int												
1	San Elijo Ave/Montgomery Ave	0	0	0	3	0	0	0	0	0	0	0	2
2	San Elijo Ave/Mozart Ave	0	0	10	0	0	0	0	0	0	6	0	0
3	San Elijo Ave/Birmingham Ave	0	5	0	3	3	0	0	0	0	0	0	5
4	Montgomery Ave/Mozart Ave	3	7	0	0	5	0	0	0	2	0	0	0
5	Montgomery Ave/Birmingham Dr	0	0	0	6	0	0	0	0	0	0	0	10

PM Peak Hour

	Int												
1	San Elijo Ave/Montgomery Ave	0	0	0	1	0	0	0	0	0	0	0	1
2	San Elijo Ave/Mozart Ave	0	0	2	0	0	0	0	0	0	3	0	0
3	San Elijo Ave/Birmingham Ave	0	1	0	2	2	0	0	0	0	0	0	1
4	Montgomery Ave/Mozart Ave	1	2	0	0	2	0	0	0	1	0	0	0
5	Montgomery Ave/Birmingham Dr	0	0	0	3	0	0	0	0	0	0	0	2

AM Peak Hour

Int	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NB	SB	EB	WB
1 San Elijo Ave/Montgomery Ave	0	205	26	32	701	0	0	0	0	25	0	33	971	957	116	0
2 San Elijo Ave/Mozart Ave	0	202	22	14	715	0	0	0	0	54	0	37	968	993	127	0
3 San Elijo Ave/Birmingham Ave	0	165	152	206	608	0	0	0	0	181	0	62	1041	1106	601	0
4 Montgomery Ave/Mozart Ave	114	93	0	0	89	21	11	0	64	0	0	0	214	360	0	210
5 Montgomery Ave/Birmingham Dr	3	13	28	81	9	9	5	410	0	20	410	74	191	73	1023	837
	117	678	228	333	2122	30	16	410	64	280	410	206				

PM Peak Hour

Int	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NB	SB	EB	WB
1 San Elijo Ave/Montgomery Ave	0	398	22	14	307	0	0	0	0	10	0	23	742	737	69	0
2 San Elijo Ave/Mozart Ave	0	401	27	7	314	0	0	0	0	15	0	11	733	757	60	0
3 San Elijo Ave/Birmingham Ave	0	369	210	77	212	0	0	0	0	153	0	108	766	944	548	0
4 Montgomery Ave/Mozart Ave	26	59	0	0	50	8	8	0	21	0	0	0	125	156	0	63
5 Montgomery Ave/Birmingham Dr	5	4	36	38	6	9	14	505	5	21	395	57	128	77	1052	933

AM Peak Hour

Int		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NB	SB	EB	WB
1	San Elijo Ave/Montgomery Ave	0	205	26	35	701	0	0	0	0	25	0	35	976	957	121	0
2	San Elijo Ave/Mozart Ave	0	202	32	14	715	0	0	0	0	60	0	37	968	1009	143	0
3	San Elijo Ave/Birmingham Ave	0	170	152	209	611	0	0	0	0	181	0	67	1057	1114	609	0
4	Montgomery Ave/Mozart Ave	117	100	0	0	94	21	11	0	66	0	0	0	226	377	0	215
5	Montgomery Ave/Birmingham Dr	3	13	28	87	9	9	5	410	0	20	410	84	207	73	1039	837
		120	690	238	345	2130	30	16	410	66	286	410	223				

PM Peak Hour

Int		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NB	SB	EB	WB
1	San Elijo Ave/Montgomery Ave	0	398	22	15	307	0	0	0	0	10	0	24	744	737	71	0
2	San Elijo Ave/Mozart Ave	0	401	29	7	314	0	0	0	0	18	0	11	733	762	65	0
3	San Elijo Ave/Birmingham Ave	0	370	210	79	214	0	0	0	0	153	0	109	772	947	551	0
4	Montgomery Ave/Mozart Ave	27	61	0	0	52	8	8	0	22	0	0	0	129	162	0	65
5	Montgomery Ave/Birmingham Dr	5	4	36	41	6	9	14	505	5	21	395	59	133	77	1057	933

Project Turn Volumes

AM Peak Hour

Int													
1	San Elijo Ave/Montgomery Ave	0	0	0	3	0	0	0	0	0	0	0	2
2	San Elijo Ave/Mozart Ave	0	0	10	0	0	0	0	0	0	6	0	0
3	San Elijo Ave/Birmingham Ave	0	5	0	3	3	0	0	0	0	0	0	5
4	Montgomery Ave/Mozart Ave	3	7	0	0	5	0	0	0	2	0	0	0
5	Montgomery Ave/Birmingham Dr	0	0	0	6	0	0	0	0	0	0	0	10

PM Peak Hour

Int													
1	San Elijo Ave/Montgomery Ave	0	0	0	1	0	0	0	0	0	0	0	1
2	San Elijo Ave/Mozart Ave	0	0	2	0	0	0	0	0	0	3	0	0
3	San Elijo Ave/Birmingham Ave	0	1	0	2	2	0	0	0	0	0	0	1
4	Montgomery Ave/Mozart Ave	1	2	0	0	2	0	0	0	1	0	0	0
5	Montgomery Ave/Birmingham Dr	0	0	0	3	0	0	0	0	0	0	0	2

CASD-02	Vibration @ 25 ft	Residential Area to N (55)	Residential Area to E (50)	Residential Area to S (85)
Phase 1 and 2		55	85	85
Clam shovel	**0.202**	**0.062**	**0.032**	**0.032**
Vibratory Roller	**0.21**	**0.064**	**0.033**	**0.033**
Hoe Ram	**0.089**	**0.027**	**0.014**	**0.014**
Large Bulldozer	**0.089**	**0.027**	**0.014**	**0.014**
Caisson Drilling	**0.089**	**0.027**	**0.014**	**0.014**
Loaded Trucks	**0.076**	**0.023**	**0.012**	**0.012**
Jackhammer	**0.035**	**0.011**	**0.006**	**0.006**
Small Bulldozer	**0.003**	**0.001**	**0.000**	**0.000**

CASD-02	Vibration @ 25 ft	Residential Area to N (55)	Residential Area to E (85)	Residential Area to S (85)
Phase 1 and 2	VdB	55	85	85
Clam shovel	**94**	**83.727**	**78.056**	**78.056**
Vibratory Roller	**94**	**83.727**	**78.056**	**78.056**
Hoe Ram	**87**	**76.727**	**71.056**	**71.056**
Large Bulldozer	**87**	**76.727**	**71.056**	**71.056**
Caisson Drilling	**87**	**76.727**	**71.056**	**71.056**
Loaded Trucks	**86**	**75.727**	**70.056**	**70.056**
Jackhammer	**79**	**68.727**	**63.056**	**63.056**
Small Bulldozer	**58**	**47.727**	**42.056**	**42.056**

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 8/8/2018
Case Descr Demolition and Demo Haul

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (N)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	140	0
Excavator	No	40		80.7	140	0
Dozer	No	40		81.7	140	0
Excavator	No	40		80.7	140	0
Excavator	No	40		80.7	140	0
Dozer	No	40		81.7	140	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	80.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	71.8	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	71.8	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	71.8	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.6	77.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (E)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	300	0
Excavator	No	40		80.7	300	0
Dozer	No	40		81.7	300	0
Excavator	No	40		80.7	300	0
Excavator	No	40		80.7	300	0
Dozer	No	40		81.7	300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	74	67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74	70.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (S)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	440	0
Excavator	No	40		80.7	440	0
Dozer	No	40		81.7	440	0
Excavator	No	40		80.7	440	0
Excavator	No	40		80.7	440	0
Dozer	No	40		81.7	440	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	70.7	63.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	61.8	57.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.8	58.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	61.8	57.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	61.8	57.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.8	58.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.7	67.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 8/8/2018
Case Descr Site Prep and Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (N)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	140	0
Excavator	No	40		80.7	140	0
Dozer	No	40		81.7	140	0
Grader	No	40	85		140	0
Tractor	No	40	84		140	0
Front End Loader	No	40		79.1	140	0
Backhoe	No	40		77.6	140	0
Dozer	No	40		81.7	140	0
Dozer	No	40		81.7	140	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	71.8	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	76.1	72.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	75.1	71.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.2	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.1	78.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (E)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	300	0
Excavator	No	40		80.7	300	0
Dozer	No	40		81.7	300	0
Grader	No	40	85		300	0
Tractor	No	40	84		300	0
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0
Dozer	No	40		81.7	300	0
Dozer	No	40		81.7	300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.4	71.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (S)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	440	0
Excavator	No	40		80.7	440	0
Dozer	No	40		81.7	440	0
Grader	No	40	85		440	0
Tractor	No	40	84		440	0
Front End Loader	No	40		79.1	440	0
Backhoe	No	40		77.6	440	0
Dozer	No	40		81.7	440	0
Dozer	No	40		81.7	440	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	58.7	54.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	61.8	57.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.8	58.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.1	61.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	60.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.7	54.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.8	58.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.8	58.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.1	68.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 8/8/2018
Case Descr Trenching and Concrete

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (N)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	140	0
Backhoe	No	40		77.6	140	0
Concrete Mixer Truck	No	40		78.8	140	0
Concrete Mixer Truck	No	40		78.8	140	0
Paver	No	50		77.2	140	0
Roller	No	20		80	140	0
Roller	No	20		80	140	0
Tractor	No	40	84		140	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Front End Loader	70.2	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	69.9	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	69.9	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	68.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	71.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	71.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	75.1	71.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	75.1	75.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (E)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0
Concrete Mixer Truck	No	40		78.8	300	0
Concrete Mixer Truck	No	40		78.8	300	0
Paver	No	50		77.2	300	0
Roller	No	20		80	300	0
Roller	No	20		80	300	0
Tractor	No	40	84		300	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	63.2	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	63.2	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	61.7	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.4	69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (S)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	440	0
Backhoe	No	40		77.6	440	0
Concrete Mixer Truck	No	40		78.8	440	0
Concrete Mixer Truck	No	40		78.8	440	0
Paver	No	50		77.2	440	0
Roller	No	20		80	440	0
Roller	No	20		80	440	0
Tractor	No	40	84		440	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Front End Loader	60.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.7	54.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	58.3	55.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	61.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	61.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.1	61.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.1	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 8/8/2018
Case Descr Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (N)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	140	0
Paver	No	50		77.2	140	0
Roller	No	20		80	140	0
Roller	No	20		80	140	0
Backhoe	No	40		77.6	140	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	71.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	68.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	71.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	71.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	71.6	71.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (E)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	300	0
Paver	No	50		77.2	300	0
Roller	No	20		80	300	0
Roller	No	20		80	300	0
Backhoe	No	40		77.6	300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	65	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	61.7	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65	64.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (S)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	440	0
Paver	No	50		77.2	440	0
Roller	No	20		80	440	0
Roller	No	20		80	440	0
Backhoe	No	40		77.6	440	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	61.7	53.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	58.3	55.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	61.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	61.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.7	54.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	61.7	61.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 8/6/2018
Case Descr Site Prep and Grading

---- Receptor #1 ----

Descriptior	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (N)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	300	0
Dozer	No	40		81.7	300	0
Dozer	No	40		81.7	300	0
Tractor	No	40	84		300	0
Backhoe	No	40		77.6	300	0
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0
Grader	No	40	85		300	0
Dozer	No	40		81.7	300	0
Excavator	No	40		80.7	300	0
Dozer	No	40		81.7	300	0
Grader	No	40	85		300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.4	73.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Descriptior	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (E)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	300	0
Dozer	No	40		81.7	300	0
Dozer	No	40		81.7	300	0
Tractor	No	40	84		300	0
Backhoe	No	40		77.6	300	0
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0
Grader	No	40	85		300	0
Dozer	No	40		81.7	300	0
Excavator	No	40		80.7	300	0
Dozer	No	40		81.7	300	0
Grader	No	40	85		300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	65.1	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.4	73.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Descriptior	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (S)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	350	0
Dozer	No	40		81.7	350	0
Dozer	No	40		81.7	350	0
Tractor	No	40	84		350	0
Backhoe	No	40		77.6	350	0
Front End Loader	No	40		79.1	350	0
Backhoe	No	40		77.6	350	0
Grader	No	40	85		350	0
Dozer	No	40		81.7	350	0
Excavator	No	40		80.7	350	0
Dozer	No	40		81.7	350	0
Grader	No	40	85		350	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	67.1	63.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	60.7	56.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	62.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	60.7	56.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	68.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	63.8	59.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	68.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.1	72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 8/6/2018
Case Descri Building Construction and Paving

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Home (N)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	300	0
Tractor	No	40	84		300	0
All Other Equipment >	No	50	85		300	0
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0
Concrete Mixer Truck	No	40		78.8	300	0
Concrete Mixer Truck	No	40		78.8	300	0
Paver	No	50		77.2	300	0
Roller	No	20		80	300	0
Roller	No	20		80	300	0
Compressor (air)	No	40		77.7	300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	65	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	69.4	66.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	63.2	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	63.2	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	61.7	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	62.1	58.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.4	71.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Home (E)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	300	0
Tractor	No	40	84		300	0
All Other Equipment >	No	50	85		300	0
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0
Concrete Mixer Truck	No	40		78.8	300	0
Concrete Mixer Truck	No	40		78.8	300	0
Paver	No	50		77.2	300	0
Roller	No	20		80	300	0
Roller	No	20		80	300	0
Compressor (air)	No	40		77.7	300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	65	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	69.4	66.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	63.2	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	63.2	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	61.7	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	62.1	58.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.4	71.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Home (S)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	350	0
Tractor	No	40	84		350	0
All Other Equipment >	No	50	85		350	0
Front End Loader	No	40		79.1	350	0
Backhoe	No	40		77.6	350	0
Concrete Mixer Truck	No	40		78.8	350	0
Concrete Mixer Truck	No	40		78.8	350	0
Paver	No	50		77.2	350	0
Roller	No	20		80	350	0
Roller	No	20		80	350	0
Compressor (air)	No	40		77.7	350	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	63.6	55.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	67.1	63.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	68.1	65.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	62.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	60.7	56.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	60.3	57.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	63.1	56.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	63.1	56.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	60.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.1	69.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 8/6/2018
Case Descr Demolition and Demo Haul

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (N)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	300	0
Dozer	No	40		81.7	300	0
Tractor	No	40	84		300	0
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0
All Other Equipment >	No	50	85		300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	74	67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	69.4	66.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74	71.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (E)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	300	0
Dozer	No	40		81.7	300	0
Tractor	No	40	84		300	0
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0
All Other Equipment >	No	50	85		300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	74	67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	69.4	66.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74	71.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (S)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	350	0
Dozer	No	40		81.7	350	0
Tractor	No	40	84		350	0
Front End Loader	No	40		79.1	350	0
Backhoe	No	40		77.6	350	0
All Other Equipment >	No	50	85		350	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	72.7	65.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	67.1	63.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	62.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	60.7	56.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	68.1	65.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	72.7	70.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 8/6/2018
Case Descr Site Prep Grading and Utility Trenching

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (N)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		300	0
Scraper	No	40		83.6	300	0
Tractor	No	40	84		300	0
Grader	No	40	85		300	0
Dozer	No	40		81.7	300	0
Tractor	No	40	84		300	0
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	68	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.4	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (E)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		300	0
Scraper	No	40		83.6	300	0
Tractor	No	40	84		300	0
Grader	No	40	85		300	0
Dozer	No	40		81.7	300	0
Tractor	No	40	84		300	0
Front End Loader	No	40		79.1	300	0
Backhoe	No	40		77.6	300	0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	68	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.5	59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.4	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (S)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		350	0
Scraper	No	40		83.6	350	0
Tractor	No	40	84		350	0
Grader	No	40	85		350	0
Dozer	No	40		81.7	350	0
Tractor	No	40	84		350	0
Front End Loader	No	40		79.1	350	0
Backhoe	No	40		77.6	350	0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	68.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	66.7	62.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	67.1	63.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	68.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.8	60.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	67.1	63.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	62.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	60.7	56.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.1	71.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 8/6/2018
Case Descri Site Prep Grading and Utility Trenching

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (N)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	300	0
All Other Equipment >	No	50	85		300	0
Generator	No	50		80.6	300	0
Tractor	No	40	84		300	0
Welder / Torch	No	40		74	300	0
Concrete Mixer Truck	No	40		78.8	300	0
Paver	No	50		77.2	300	0
Roller	No	20		80	300	0
Roller	No	20		80	300	0
Compressor (air)	No	40		77.7	300	0
Backhoe	No	40		77.6	300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	65	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	69.4	66.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	65.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	58.4	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	63.2	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	61.7	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	62.1	58.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.4	71.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (E)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	300	0
All Other Equipment >	No	50	85		300	0
Generator	No	50		80.6	300	0
Tractor	No	40	84		300	0
Welder / Torch	No	40		74	300	0
Concrete Mixer Truck	No	40		78.8	300	0
Paver	No	50		77.2	300	0
Roller	No	20		80	300	0
Roller	No	20		80	300	0
Compressor (air)	No	40		77.7	300	0
Backhoe	No	40		77.6	300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	65	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	69.4	66.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	65.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68.4	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	58.4	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	63.2	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	61.7	58.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	62.1	58.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	69.4	71.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Home (S)	Residential	50	50	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	350	0
All Other Equipment >	No	50	85		350	0
Generator	No	50		80.6	350	0
Tractor	No	40	84		350	0
Welder / Torch	No	40		74	350	0
Concrete Mixer Truck	No	40		78.8	350	0
Paver	No	50		77.2	350	0
Roller	No	20		80	350	0
Roller	No	20		80	350	0
Compressor (air)	No	40		77.7	350	0
Backhoe	No	40		77.6	350	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	63.6	55.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment >	68.1	65.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	63.7	60.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	67.1	63.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	57.1	53.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	60.3	57.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	63.1	56.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	63.1	56.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	60.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	60.7	56.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.1	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

CASD-02.0- Roadway Noise Increases		PM Peak Hour (4PM-6PM) Intersection Volumes												Roadway Noise Level Increase				Percent Increase (%)			
ID	Roadway	Existing				Project				Existing + Project											
	AM Peak Hour	N	S	E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	E	W
1	San Elijo Ave/Montgomery Ave	914	900	108	0	5	0	5	0	919	900	113	0	0.02	0.00	0.20	#DIV/0!	1%	0%	5%	#DIV/0!
2	San Elijo Ave/Mozart Ave	910	933	117	0	0	16	16	0	910	949	133	0	0.00	0.07	0.56	#DIV/0!	0%	2%	14%	#DIV/0!
3	San Elijo Ave/Birmingham Dr	979	1040	565	0	16	8	8	0	995	1048	573	0	0.07	0.03	0.06	#DIV/0!	2%	1%	1%	#DIV/0!
4	Montgomery Ave/Mozart Ave	199	337	0	196	12	17	0	5	211	354	0	201	0.25	0.21	#DIV/0!	0.11	6%	5%	#DIV/0!	3%
5	Montgomery Ave/Birmingham Dr	177	66	961	786	16	0	16	0	193	66	977	786	0.38	0.00	0.07	0.00	9%	0%	2%	0%
	PM Peak Hour																				
1	San Elijo Ave/Montgomery Ave	698	693	63	0	2	0	2	0	700	693	65	0	0.01	0.00	0.14	#DIV/0!	0%	0%	3%	#DIV/0!
2	San Elijo Ave/Mozart Ave	688	711	55	0	0	5	5	0	688	716	60	0	0.00	0.03	0.38	#DIV/0!	0%	1%	9%	#DIV/0!
3	San Elijo Ave/Birmingham Dr	719	887	514	0	6	3	3	0	725	890	517	0	0.04	0.01	0.03	#DIV/0!	1%	0%	1%	#DIV/0!
4	Montgomery Ave/Mozart Ave	116	145	0	57	4	6	0	2	120	151	0	59	0.15	0.18	#DIV/0!	0.15	3%	4%	#DIV/0!	4%
5	Montgomery Ave/Birmingham Dr	117	68	987	876	5	0	5	0	122	68	992	876	0.18	0.00	0.02	0.00	4%	0%	1%	0%

CASD-02.0 - Roadway Noise Increases		PM Peak Hour (4PM-6PM) Intersection Volumes												Roadway Noise Level Increase				Percent Increase (%)				Cumulative Increase (%)				Cumulative Roadway Noise Level Increase			
ID	Roadway	Future 2022				Project				Future + Project																			
	AM Peak Hour	N	S	E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	E	W
1	San Elijo Ave/Montgomery Ave	971	957	116	0	5	0	5	0	976	957	121	0	0.02	0.00	0.18	#DIV/0!	1%	0%	4%	#DIV/0!	7%	6%	12%	#DIV/0!	0.29	0.27	0.49	#DIV/0!
2	San Elijo Ave/Mozart Ave	968	993	127	0	0	16	16	0	968	1009	143	0	0.00	0.07	0.52	#DIV/0!	0%	2%	13%	#DIV/0!	6%	8%	22%	#DIV/0!	0.27	0.34	0.87	#DIV/0!
3	San Elijo Ave/Birmingham Dr	1041	1106	601	0	16	8	8	0	1057	1114	609	0	0.07	0.03	0.06	#DIV/0!	2%	1%	1%	#DIV/0!	8%	7%	8%	#DIV/0!	0.33	0.30	0.33	#DIV/0!
4	Montgomery Ave/Mozart Ave	214	360	0	210	12	17	0	5	226	377	0	215	0.24	0.20	#DIV/0!	0.10	6%	5%	#DIV/0!	2%	14%	12%	#DIV/0!	10%	0.55	0.49	#DIV/0!	0.40
5	Montgomery Ave/Birmingham Dr	191	73	1023	837	16	0	16	0	207	73	1039	837	0.35	0.00	0.07	0.00	8%	0%	2%	0%	17%	11%	8%	6%	0.68	0.44	0.34	0.27
	PM Peak Hour																												
1	San Elijo Ave/Montgomery Ave	742	737	69	0	2	0	2	0	744	737	71	0	0.01	0.00	0.12	#DIV/0!	0%	0%	3%	#DIV/0!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
2	San Elijo Ave/Mozart Ave	733	757	60	0	0	5	5	0	733	762	65	0	0.00	0.03	0.35	#DIV/0!	0%	1%	8%	#DIV/0!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
3	San Elijo Ave/Birmingham Dr	766	944	548	0	6	3	3	0	772	947	551	0	0.03	0.01	0.02	#DIV/0!	1%	0%	1%	#DIV/0!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
4	Montgomery Ave/Mozart Ave	125	156	0	63	4	6	0	2	129	162	0	65	0.14	0.16	#DIV/0!	0.14	3%	4%	#DIV/0!	3%	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
5	Montgomery Ave/Birmingham Dr	128	77	1052	933	5	0	5	0	133	77	1057	933	0.17	0.00	0.02	0.00	4%	0%	0%	0%	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

Appendix 5.10-1 Traffic Impact Study

Appendices

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TECHNICAL MEMORANDUM

CARDIFF ELEMENTARY SCHOOL MODERNIZATION

TRAFFIC IMPACT STUDY

Prepared for the City of Encinitas
by IBI Group

July 25, 2018

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1 INTRODUCTION

1.1 STUDY PURPOSE

This traffic analysis report has been prepared for the proposed modernization to Cardiff Elementary School in Encinitas, CA. The purpose of this traffic study is to document the traffic conditions at and around the school under the proposed Cardiff Elementary School modernization project. Potential impacts to local facilities are identified and measures are formulated to mitigate those impacts where appropriate.

1.2 REPORT ORGANIZATION

This report is organized into the following ten sections:

- Introduction
- Project Description
- Analysis Methodology
- Existing Year (2018) No Project
- Opening Year (2021) No Project
- Project Traffic
- Existing Year (2018) With Project
- Opening Year (2021) With Project
- Conclusions
- Appendices

Section 1 provides a brief introduction to the study purpose and report organization. Section 2 provides a summary of the project description. Section 3 includes the methodology utilized in the analysis and the referenced standards. The study area roadways and Existing Year (2018) intersection geometry, turning movement volumes, and level of service are presented in Section 4. Section 5 describes the Opening Year (2021) No Project condition and provides the roadway segment and intersection level of service. Section 6 describes the project trip generation, distribution, and assignment. Section 7 describes the Existing Year (2018) With Project scenario and provides the roadway segment and intersection level of service. Section 8 describes the Opening Year (2021) With Project scenario and provides the roadway segment and intersection level of service. Findings and conclusions from this study are presented in Section 9. Lastly, the appendices are provided in Section 10.

2 PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND

The District-owned property is roughly triangular and surrounded by Montgomery Avenue on the northeast, Mozart Avenue on the south, and San Elijo Avenue on the west. Residential uses are northeast of Montgomery Avenue and south of Mozart Avenue. West of San Elijo Avenue is a railroad easement, Highway 101, and the beach. The main entrance to the school is through a parking lot on Montgomery Avenue, although vehicle loading areas are also available along Mozart Avenue. The school's natural turf fields and playground areas are shared with the community. The project location is illustrated in Figure 2.1.

The Cardiff School District is proposing the Cardiff Elementary School Modernization Project. This project proposes to replace the school's older classrooms, multi-purpose room, food service, and other support spaces on the existing campus with new facilities that would accommodate the school's educational program. The school improvements would result in a net addition of one classroom and additional square feet of auditorium space, which would accommodate the existing school population. The project would also improve vehicle drop-off/pick-up zones in order to enhance the safety and onsite vehicular circulation by increasing the amount of parking stalls available and expanding the driveway and curb space of the drop-off/pick-up zones. Vehicles can enter the proposed parking lot and drop-off/pick-up zone using Montgomery Avenue. One-way entrances will be utilized for both the lot and drop-off/pick-up zone which can be seen in Figure 2.2.

Figure 2.1: Project Location Map



CARDIFF SCHOOL DISTRICT

Figure 2.2: Study Area Site Plan and Circulation

MUNICIPAL CODE PARKING REQUIREMENTS

1.5 Spaces for each classroom

1 for each 100 SF auditorium

Existing: 19 Classrooms
2,260 SF Auditorium

Proposed: 20 Classrooms
3,141 SF Auditorium

Net Gain: 1 Classroom
881 SF Auditorium

Additional Parking Req'd: 10.31 spaces = **11 spaces**

EXISTING ON-SITE PARKING

Lot 1 – 28 Parking Stalls (includes 2 HC)

Lot 2 – N/A

Total existing: 28 Parking Stalls

Total required: 28 + 11 = 39 Parking Stalls

PROPOSED ON-SITE PARKING

Lot 1 – 31 Parking Stalls (includes 2 HC and 2 future EV charging)

9 Parallel Parking Stalls at Drop Off

Lot 2 – 5 Parallel Parking Stalls at Drop Off

Total proposed: 45 Parking Stalls

Proposed exceeds required by 6 Parking Stalls



PARKING

3 ANALYSIS METHODOLOGY

The traffic analysis to be prepared for the proposed modernization to Cardiff Elementary School follows the requirements and guidelines set forth by the SANTEC/ITE Guidelines for Traffic Impact Studies (TIS) in the San Diego Region. The traffic analysis conducted includes an assessment of traffic conditions for five existing intersections and two roadway segments located within the project location. Analysis scenarios and horizon years are summarized for the following time scenarios:

- Existing Year (2018) No Project
- Existing Year (2018) With Project
- Opening Year (2021) No Project
- Opening Year (2021) With Project

3.1 STUDY AREA INTERSECTIONS/ROADWAY SEGMENTS

Based on the project trip generation and distribution, the following five study area intersections were selected for analysis in this report:

1. San Elijo Avenue and Montgomery Avenue
2. San Elijo Avenue ad Mozart Avenue
3. San Elijo Avenue and Birmingham Drive
4. Montgomery Avenue and Mozart Avenue
5. Montgomery Avenue and Birmingham Drive

Additionally, the following two roadway segments were included:

1. Montgomery Avenue from San Elijo Avenue to Mozart Avenue
2. Mozart Avenue from San Elijo Avenue to Montgomery Avenue

3.2 TRAFFIC COUNT DATA

The existing intersection turning movement counts were taken on Thursday, June 8, 2017 and Tuesday, April 17, 2018 at the five study intersections during the morning peak period (7:00 AM to 9:00 AM) and the afternoon peak period (4:00 PM to 6:00 PM). It is worth noting that counts were taken while school was still in session on June 8, 2017. The AM and PM peak analyses are based on the hour of highest total intersection volume during the morning and afternoon periods. Average daily traffic volumes were also conducted on Tuesday, April 17, 2018 at the two roadway segments. The daily segment and peak hour intersection count data sheets are included in Appendix A of this report.

An ambient growth rate of 2% per year was used for both, establishing base year 2018 conditions and projecting opening year 2021. This growth rate was identified and used to account for cumulative conditions such as local and regional projects.

3.3 PEAK HOUR LINK LEVEL OF SERVICE ANALYSIS

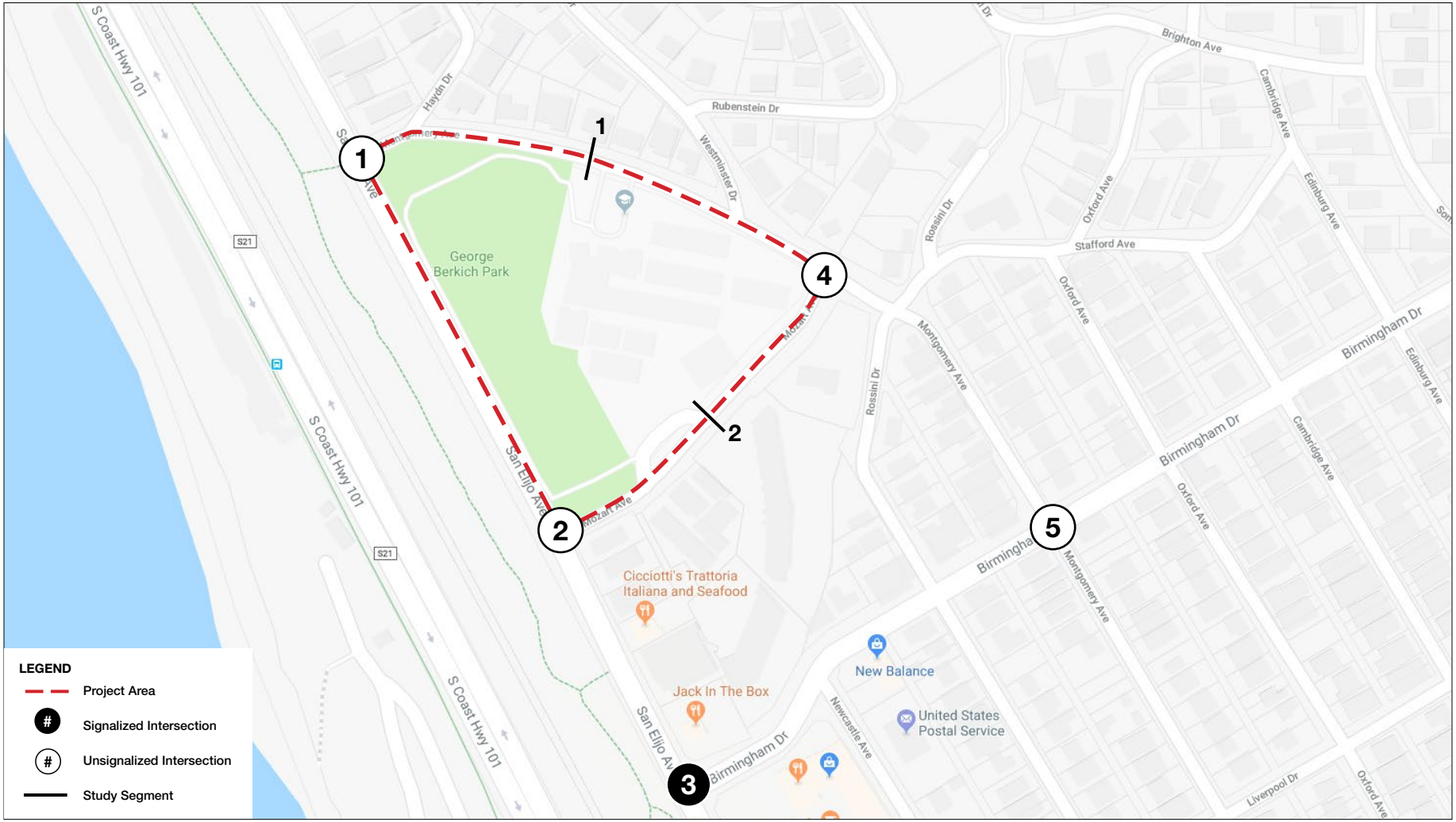
The peak hour link level of service analysis was conducted by calculating the traffic volume in each direction for a specified link segment. Link volumes were derived from the peak hour turning movement volumes between the two adjacent study intersections. A volume-to-capacity (V/C) ratio was taken and respective letter grade assigned at each location using the range of V/C values shown in Table 3.1. LOS D is generally taken to be the minimum. Link volumes and the associated LOS are presented for informational purposes only.

TABLE 3.1: LINK LEVEL OF SERVICE DEFINITION

LEVEL OF SERVICE	RANGE OF V/C RATIOS	DEFINITION
A	0.00 – 0.60	**Free Flow:** Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
B	0.61 – 0.70	**Stable Flow:** The ability to maneuver within the traffic stream is only slightly restricted and control delay at intersections is not significant. The travel speed is between 67% and 85% of base free-flow speed.
C	0.71 – 0.80	**Stable Flow:** The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
D	0.81 – 0.90	**Approaching Unstable Flow:** Small increases in flow may cause substantial increases in delay and decreases in travel speed. The travel speed is between 40% and 50% of the base free-flow speed.
E	0.91 – 1.00	**Unstable Flow:** Significant delay is commonly experienced. The travel speed is between 30% and 40% of the base free-flow speed.
F	> 1.00	**Forced Flow:** Congestion is likely occurring at intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed.

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity,* Transportation Research Board, 1980.

Figure 3.1: Study Intersection and Study Link Locations



CARDIFF SCHOOL DISTRICT

IBI Group July 2018

3.4 INTERSECTION LEVEL OF SERVICE ANALYSIS

According to the City of Encinitas' guidelines, the analysis methodology and performance criteria used in this analysis has been prepared in accordance with the traffic study requirements identified in the SANTEC/ITE Guidelines, as summarized in Table 3.2.

TABLE 3.2: SANTEC/ITE GUIDELINES

Table 2 SANTEC/ITE Guidelines- Measure of Significant Project Traffic Impacts

Level of Service with Project*	Allowable Change due to Project Impact**					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
D, E, & F (or ramp meter delays above 15 min.)	0.01	1	0.02	1	2	2

NOTES:
• All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using Table 2 or a similar LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.
•• If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant.. These impact. changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigation (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see above • note), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating significant impact changes.

KEY: V/C = Volume to Capacity ratio
Speed = Speed measured in miles per hour
Delay = Average stopped delay per vehicle measured in seconds for intersections, or minutes for ramp meters
LOS = Level of Service

3.4.1 SIGNALIZED INTERSECTIONS

The HCM 2010 methodology defines LOS as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of factors such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS conditions vary based on the type of street and whether the traffic flow is considered interrupted or uninterrupted. The six qualitative categories of LOS and corresponding average delay that have been defined are presented below in Table 3.3.

TABLE 3.3: LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

LOS	DESCRIPTION	DELAY (SEC)
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.	0.0 -10.0
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.	10.1 – 20.0
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.	20.1 – 35.0
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.	35.1 – 55.0
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.	55.1 – 80.0
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.	80.1 or more

Source: Highway Capacity Manual (2010)

3.4.2 UNSIGNALIZED INTERSECTIONS

The two types of unsignalized intersections include side-street stop controlled (SSSC) and all-way stop controlled (AWSC). The level of service for a side-street stop controlled intersection is determined by the computed or measured control delay at each minor-street movement. LOS F would occur when the volume-to-capacity ratio exceeds 1.0, regardless of the control delay. The delay range for unsignalized intersections is different from those of signalized intersections primarily due to driver expectation. The expectation is that signalized intersections are designed to carry higher volumes of traffic and therefore higher levels of delay are acceptable. The HCM 2010 methodology estimates the delay based on the worse approach at unsignalized intersections. The table below includes the LOS ranges for both unsignalized intersection types.

TABLE 3.4: LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	DESCRIPTION	CONTROL DELAY (SEC/VEH)
A	Little or no delays	0.0 – 10.0
B	Short traffic delays	10.1 – 15.0
C	Average traffic delays	15.1 – 25.0
D	Long traffic delays	25.1 – 35.0
E	Very long traffic delays	35.1 – 50.0
F	Extreme traffic delays with intersection capacity exceeded	50.1 or more

Source: Highway Capacity Manual (2010)

4 EXISTING YEAR (2018) NO PROJECT

This section presents the Existing Year (2018) No Project scenario conditions of the project study area; this scenario will serve as the base for which all upcoming scenarios are assessed. The study area encompasses arterial roadways and signalized intersections within the project area. Descriptions of the existing roadway network and intersection level of service analysis results for the Existing Year (2018) No Project scenario are included in this section.

4.1 EXISTING ROADWAY NETWORK

Selected arterials that are located in the vicinity of the project corridor are described in this section. Items of note include existing geometry, pedestrian and bicycle facilities, speed limit, and adjacent land uses. The selected arterials are as follows:

SAN ELIJO AVENUE

San Elijo Avenue is a two-lane undivided roadway that runs north and south within the boundaries of the study area. The posted speed limit is 35 miles per hour within the study area. The land use adjacent to the corridor is comprised of businesses, residential housing, and an educational facility. There are no dedicated bicycle lanes on either side of the corridor and on-street parking is permitted intermittently.

MONTGOMERY AVENUE

Montgomery Avenue is a two-lane undivided roadway that runs north and south within the study location. The posted speed limit is 15 miles per hour due to its proximity to the Cardiff Elementary School. The land use around the corridor is made up of predominantly residential housing as well as an educational facility. There are no exclusive bicycle lanes and on-street parking is permitted along both sides of the corridor.

MOZART AVENUE

Mozart Avenue is a two-lane undivided roadway that runs east and west within the study perimeters. The posted speed limit is 15 miles per hour due to its proximity to the Cardiff Elementary School. The land use adjacent to the roadway is comprised of primarily residential housing and an educational facility. Bicycle lanes are not present and on-street parking is permitted along both sides of the roadway.

BIRMINGHAM DRIVE

Birmingham Drive is a two-lane undivided roadway that runs east and west within the study boundary. The posted speed limit is 30 miles per hour within the study location. The land use adjacent to the roadway includes businesses and primarily residential housing. Bicycle lanes are not present on either side of the roadway and on-street parking is not permitted.

4.2 SITE ACCESS AND INTERNAL CIRCULATION

A field review of the project site was conducted to evaluate existing traffic patterns including access points and drop-off/pick-up patterns. The field observations took place on Thursday, April 19, 2018 during the morning drop off and afternoon pick up periods. The observation periods

coincided with the school bell schedule and began an hour before and after classes began in the morning and classes ended in the afternoon. Figure 2.1 displays the site plan and circulation.

The school has a total of three drop-off/pick-up points located along Montgomery and Mozart Avenue. Along Montgomery Avenue is a parking lot which is used as a drop-off/pick-up location. Mozart Avenue has a curbside drop-off/pick-up located immediately south of the Montgomery Avenue intersection and a drop-off/pick-up driveway north of the San Elijo Avenue intersection.

The morning drop off period occurs approximately 30 minutes before students are allowed onto the playground and ends approximately 10 minutes after classes begin. The school's morning schedule off-sets when kindergartners are allowed onto the playground by approximately 10 minutes. During the drop off period, a majority of vehicles park on-street, allowing parents to walk their children onto campus facilities. This behavior results in high usage of the crosswalks along Montgomery and Mozart.[1] The Montgomery Avenue drop-off location operates relatively smoothly as minimal vehicle queueing was observed spilling onto Montgomery Avenue; this is due to the parking lot, allowing vehicles to queue off-street. The Mozart Avenue drop-off locations observed slightly higher usage with vehicle queueing taking place at the Mozart Avenue and Montgomery Avenue intersection. Vehicles traveling west along Montgomery to access the Mozart Avenue drop-off locations observed a queuing condition that went back as far as the Stafford Avenue/Rossini Drive and Montgomery Avenue intersection. The Mozart Avenue drop-off driveway also had minimal queuing as the driveway allowed for vehicles to queue off-street; few vehicles were observed turning left into the driveway, resulting in a minimal queue lengths along Mozart Avenue and did not spill onto San Elijo Avenue. Approximate queue lengths for the morning drop off period and existing/proposed stacking lengths are also summarized below.

The circulation behavior and patterns for the afternoon pick up period was observed to be the same as the morning pick up. However, in the afternoon all students are being picked up at once resulting in higher volumes of vehicles. Queue lengths for pick-up locations are extended longer and the parking lot/driveway queues along Mozart Avenue and Montgomery Avenue spill onto the roadways. Although volumes are higher than the morning and congestion builds, the congested pick-up period lasts approximately 15-20 minutes as the pick-up period beings approximately 5-10 minutes before classes end and continues approximately 10 minutes after. Approximate queue lengths for the afternoon pick up period and existing/proposed stacking lengths are also summarized below.

TABLE 4.1: EXISTING APPROXIMATE QUEUE LENGTHS

PERIOD	LOCATION	OBSERVED VEHICLE QUEUE LENGTH
Morning Drop Off	Montgomery Parking Lot	< 2 cars
	Mozart Curbside	3-4 cars
	Mozart Drop Off and Pick Up	< 2 cars
Afternoon Pick Up	Montgomery Parking Lot	3-4 cars
	Mozart Curbside	4-5 cars
	Mozart Drop Off and Pick Up	3-4 cars

Notes: Queue lengths were not measured and are approximated based on observations

[1] Crossing guard is present for drop-off and pick-up periods to assist with crosswalk at the Mozart and Montgomery intersection.

TABLE 4.2: EXISTING APPROXIMATE QUEUE LENGTHS

LOCATION	EXISTING STACKING LENGTH	PROPOSED STACKING LENGTH
Montgomery Parking Lot	6 cars	13 cars
Mozart Curbside	5 cars	5 cars
Mozart Drop Off and Pick Up	5 cars	5 cars

Notes: Stacking length is estimated using 22 feet per car.

In addition, a speed survey was conducted for a typical weekday (Tuesday, April 17th) to understand roadway conditions. The speed survey was conducted for the two adjacent roadways, Montgomery Avenue between San Elijo Avenue and Mozart Avenue and Mozart Avenue between San Elijo Avenue and Montgomery Avenue. On average, the daily bi-direction speed along Montgomery Avenue was observed to be 16 MPH and 14 MPH for Mozart Avenue. Speeds for the morning pick-up and afternoon drop-off are within the posted 15 miles per hour for school zones indicating vehicle speeds are acceptable along these roadway segments. For reference, the complete data sheets are included in Appendix B.

4.3 AVERAGE DAILY TRAFFIC

The average daily traffic volumes for the roadway segments for the Existing Year (2018) No Project scenario are summarized in Table 4.3. Road segment volumes have been included for noise and air quality purposes. Existing road segment volumes are extracted from 24-hour counts which can be found in Appendix A.

TABLE 4.3: EXISTING YEAR (2018) NO PROJECT ROADWAY SEGMENT DATA COLLECTION SUMMARY

ID	ROADWAY	SOURCE	EXISTING NP ADT
1	Montgomery Ave from San Elijo Ave to Mozart Ave	Counts Unlimited, June 2017	862
2	Mozart Ave from San Elijo Ave to Montgomery Ave	Counts Unlimited, June 2017	695

4.4 INTERSECTION LEVEL OF SERVICE

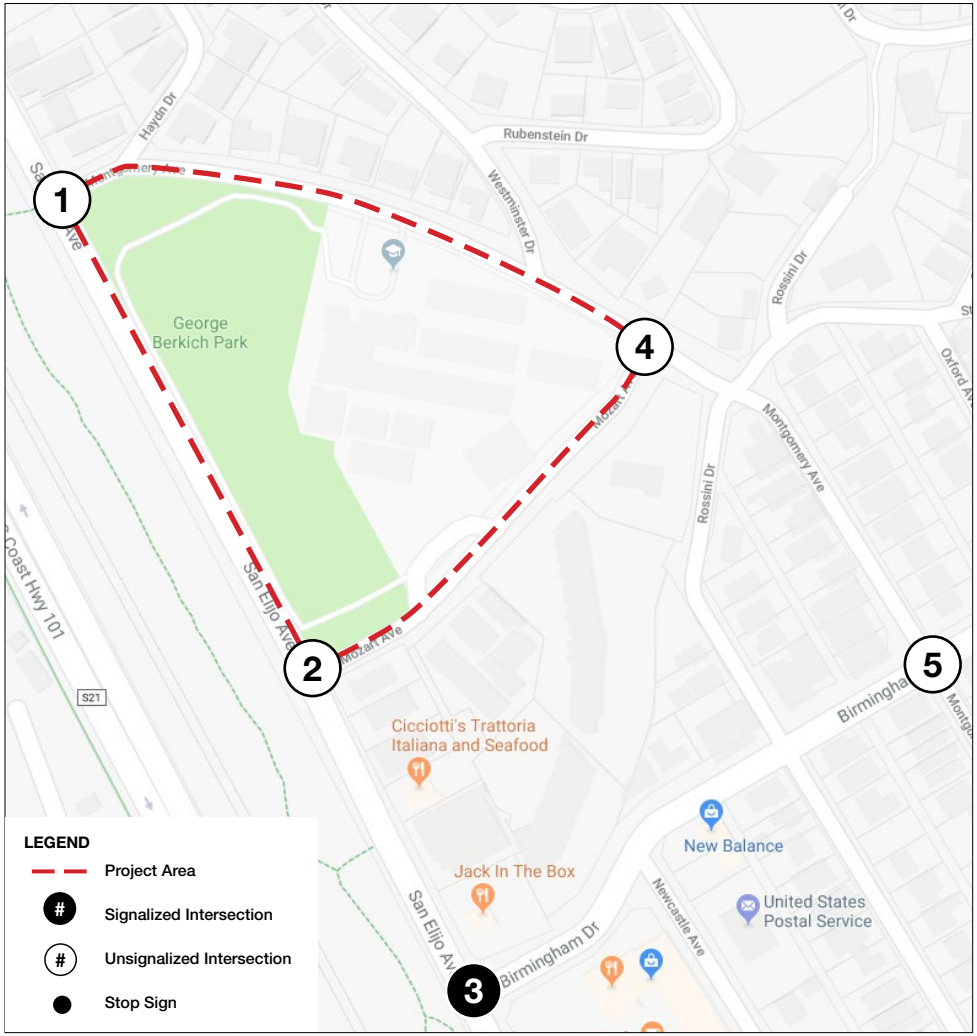
The peak hour turning movement volumes presented in Figure 4.3 and 4.4 were utilized to assess intersection performance. Intersection performance was determined using the methods outlined in Section 3. Table 4.4 summarizes the existing levels of service at the study area intersections. Existing study intersection geometries are shown in Figure 4.3. Additionally, Existing Year (2018) No Project AM peak hour turning movement volumes are shown in Figure 4.4, and the PM peak hour volumes are shown in Figure 4.5.

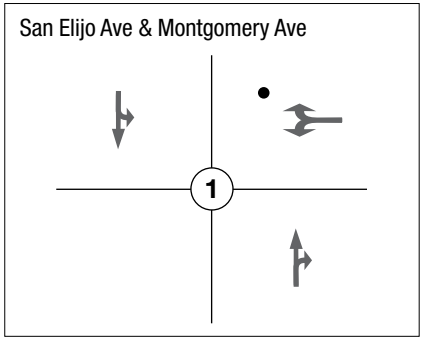
All five study intersections currently operate at an acceptable level of service during both peak hours.

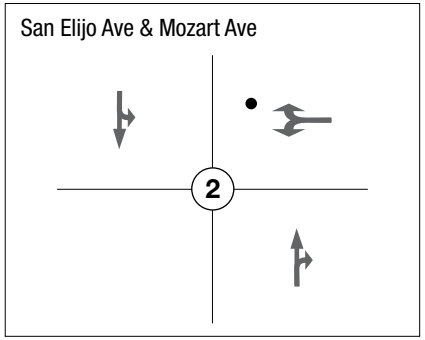
TABLE 4.4: EXISTING YEAR (2018) NO PROJECT INTERSECTION LOS

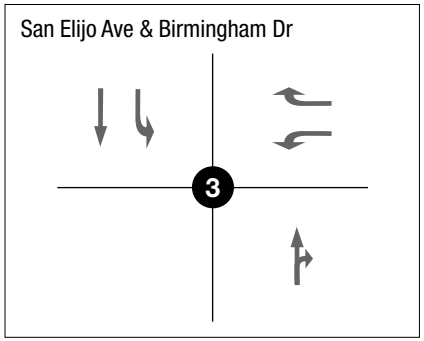
INTERSECTION		Intersection Control	AM		PM	
			V/C or Delay (S)	LOS	V/C or Delay (S)	LOS
1	San Elijo Ave & Montgomery Ave	TWSC	14.9	B	12.4	B
2	San Elijo Ave & Mozart Ave	TWSC	17.7	C	13.5	B
3	San Elijo Ave & Birmingham Dr	Signalized	17.5	B	18.1	B
4	Montgomery Ave & Mozart Ave	TWSC	9.6	A	8.9	A
5	Montgomery Ave & Birmingham Dr	TWSC	15.4	C	15.1	C

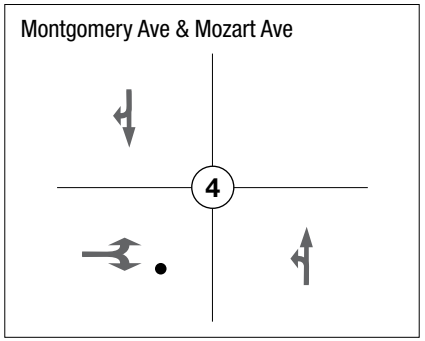
Figure 4.1: Existing Year (2018) Intersection Geometry

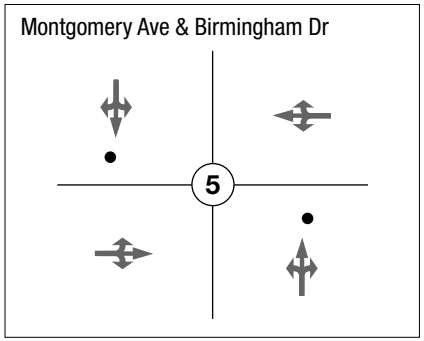








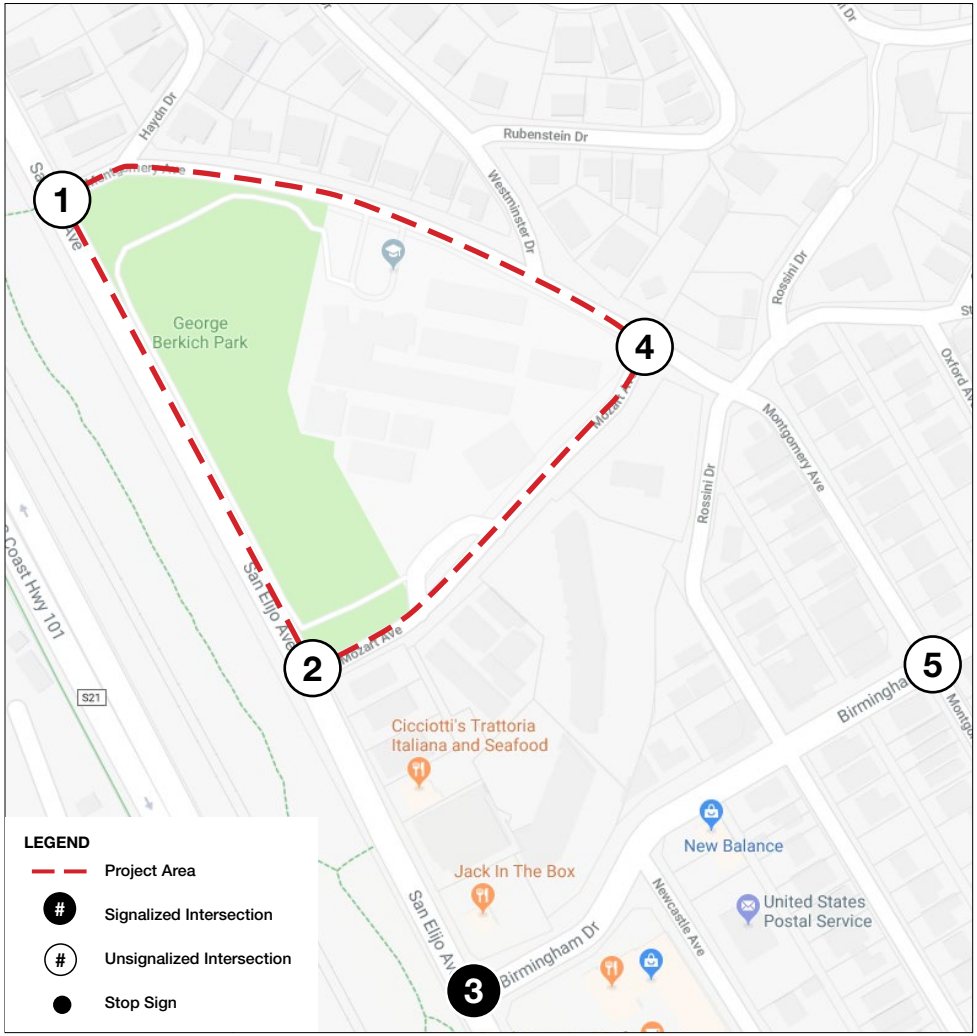


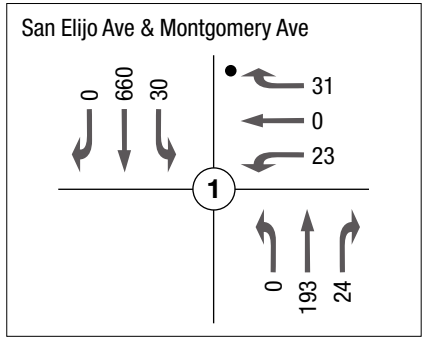


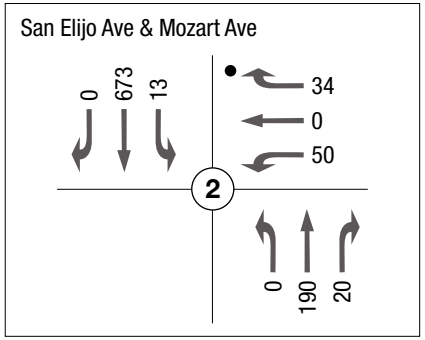
CARDIFF SCHOOL DISTRICT

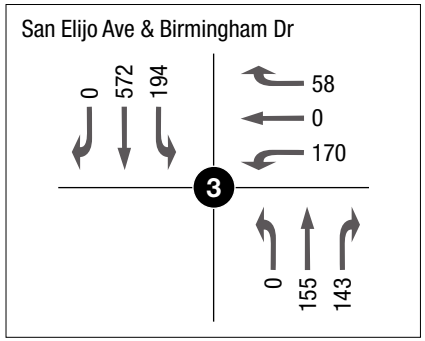
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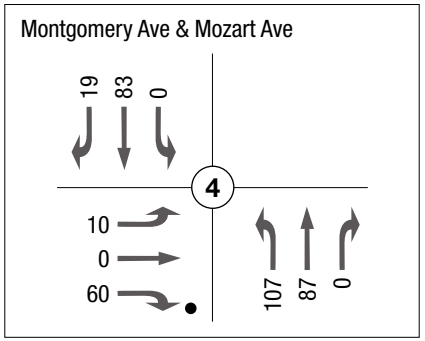
Figure 4.2: Existing Year (2018) No Project Volumes – AM Peak Hour

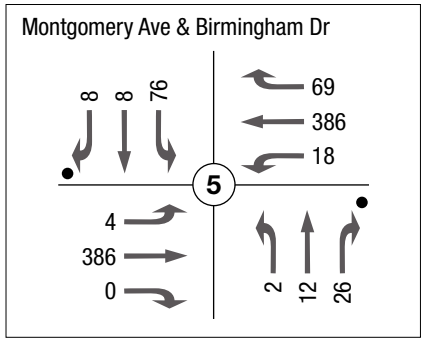








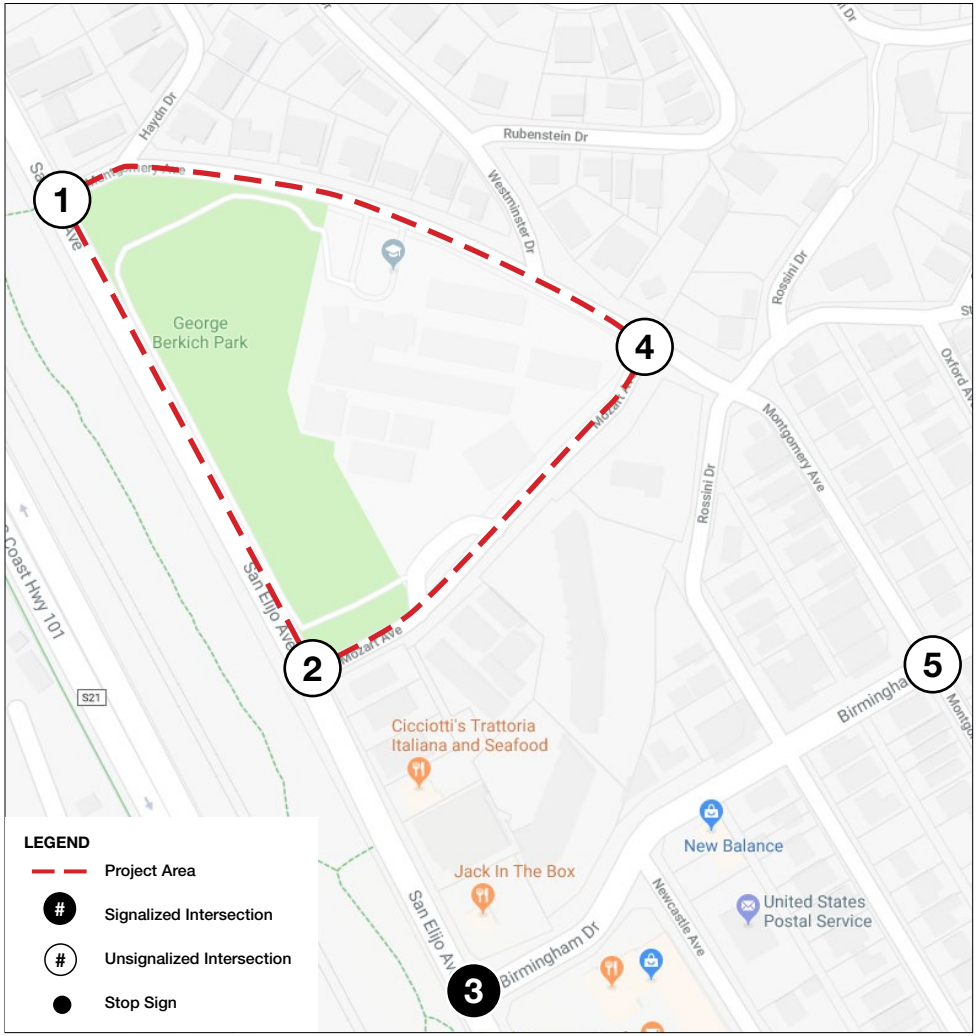


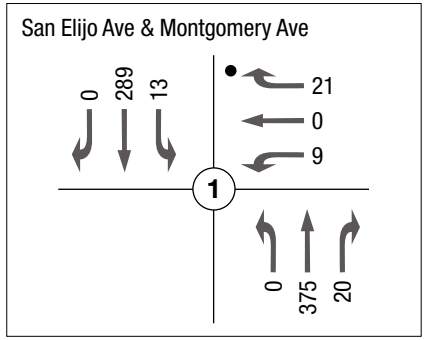


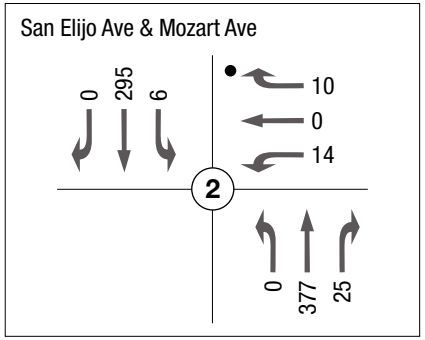
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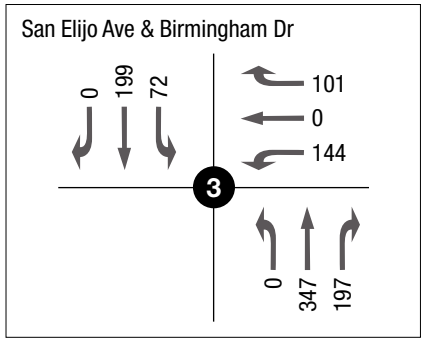
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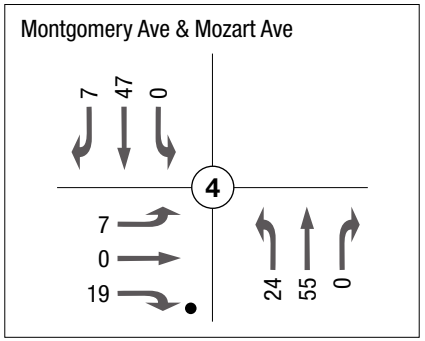
Figure 4.3: Existing Year (2018) No Project Volumes – PM Peak Hour

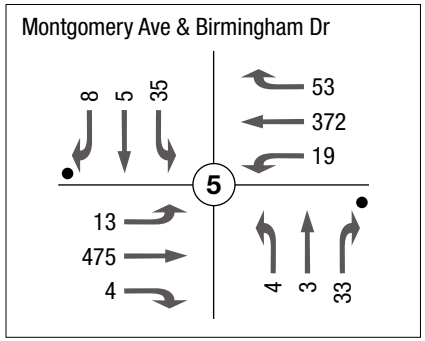












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5 OPENING YEAR (2021) NO PROJECT

This section presents the ADT, peak hour link analysis, queue analysis, and intersection LOS analysis for the Opening Year (2021) No Project scenario. Associated lane geometries and controls are consistent with the Existing Year (2018) No Project intersection geometries and controls as described in Section 4.

5.1 AVERAGE DAILY TRAFFIC

The average daily traffic for study segments in the Opening Year (2021) No Project scenario are presented in Table 5.1. Road segment volumes have been included for noise and air quality purposes.

TABLE 5.1: OPENING YEAR (2021) NO PROJECT ROADWAY SEGMENT SUMMARY

ID	ROADWAY	SOURCE	OPENING NP ADT
1	Montgomery Ave from San Elijo Ave to Mozart Ave	Counts Unlimited, June 2017	915
2	Mozart Ave from San Elijo Ave to Montgomery Ave	Counts Unlimited, June 2017	738

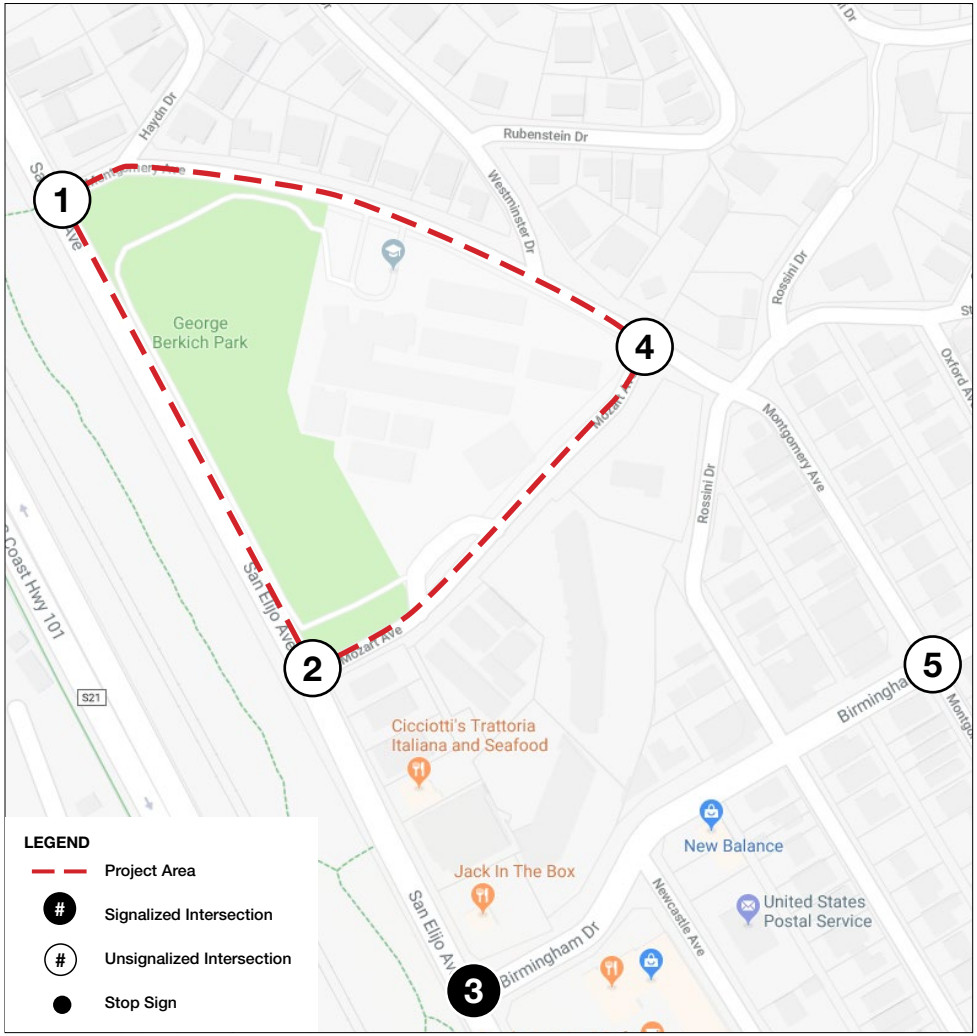
5.2 INTERSECTION LEVEL OF SERVICE

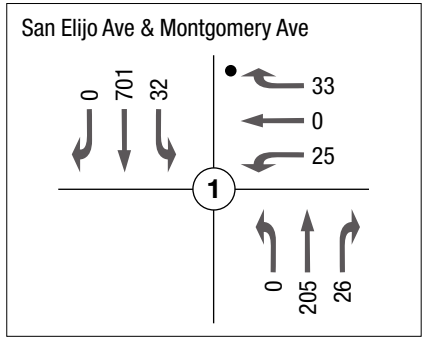
The peak hour turning movement volumes presented in Figure 5.1 and 5.2 were utilized to assess intersection performance. Intersection performance was determined using the methods outlined in Section 3. A summary of the AM and PM peak hour intersection level of service analysis results for the Opening Year (2021) No Project scenario is presented in Table 5.4. All five intersections are operating at acceptable level of service.

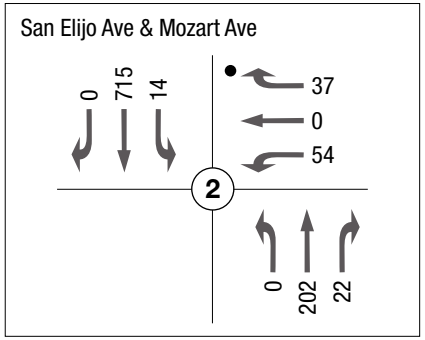
TABLE 5.2: OPENING YEAR (2021) NO PROJECT INTERSECTION LEVEL OF SERVICE

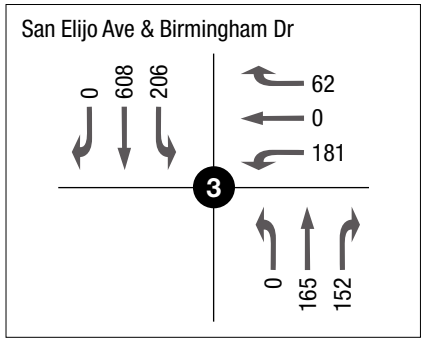
INTERSECTION		Intersection Control	AM		PM	
			V/C or Delay (S)	LOS	V/C or Delay (S)	LOS
1	San Elijo Ave & Montgomery Ave	TWSC	15.9	C	12.8	B
2	San Elijo Ave & Mozart Ave	TWSC	19.4	C	14.1	B
3	San Elijo Ave & Birmingham Dr	Signalized	19.9	B	21.0	C
4	Montgomery Ave & Mozart Ave	TWSC	9.7	A	9.0	A
5	Montgomery Ave & Birmingham Dr	TWSC	16.2	C	16.2	C

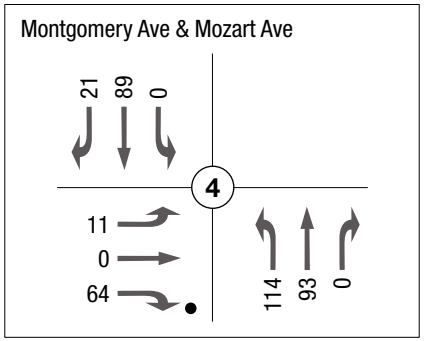
Figure 5.1: Opening Year (2021) No Project Volumes – AM Peak Hour

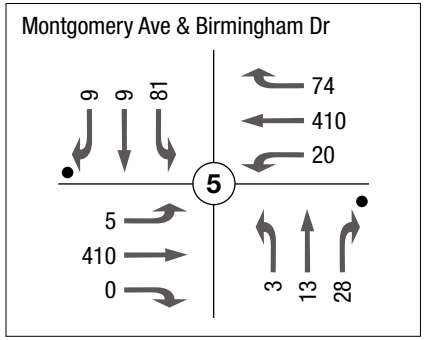








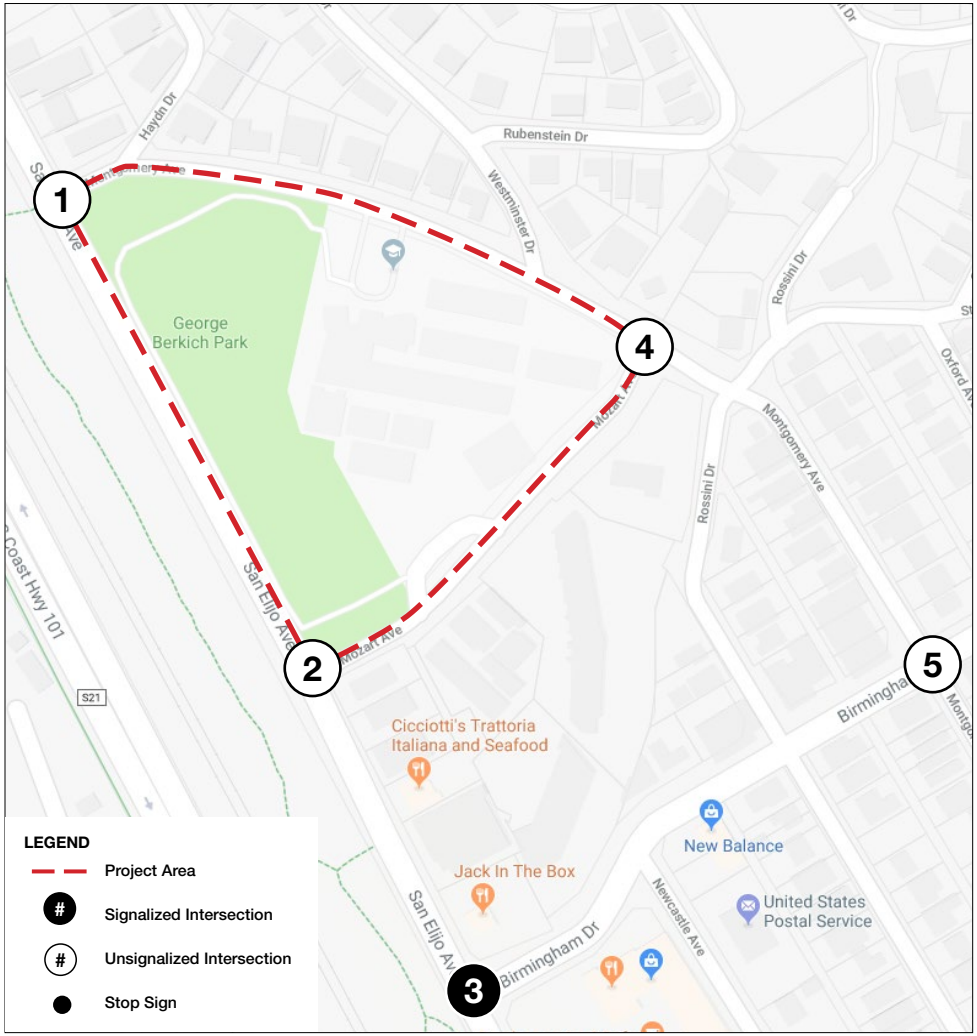


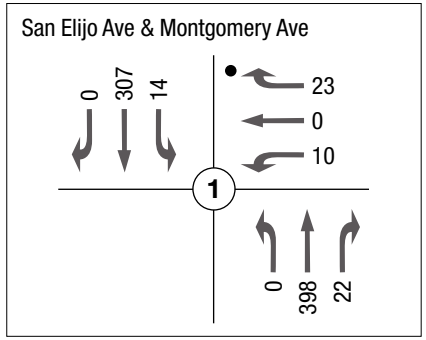


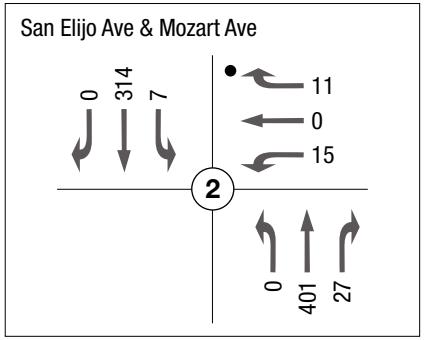
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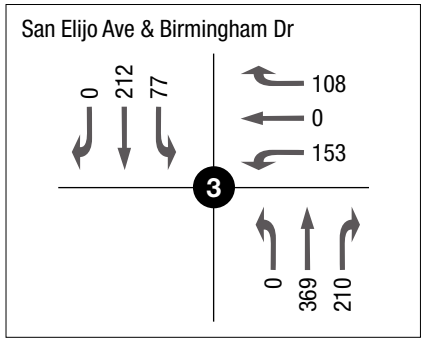
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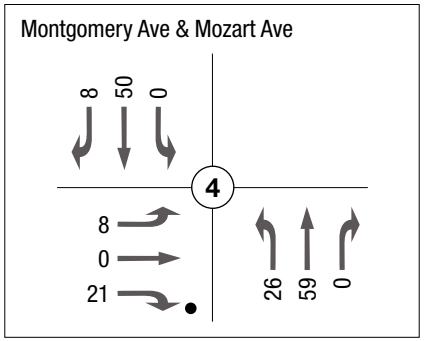
Figure 5.2: Opening Year (2021) No Project Volumes – PM Peak Hour

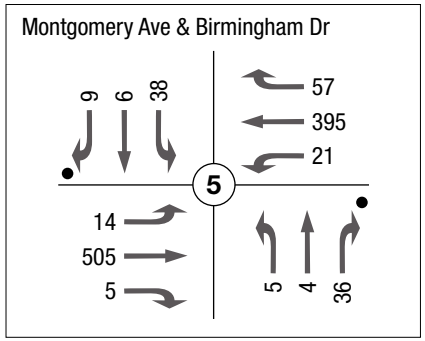












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6 PROJECT TRAFFIC

A description of the methods utilized to generate, distribute, and assign project-generated traffic to intersections within the study area are presented in this section.

6.1 TRIP GENERATION

The trip generation for the Cardiff Elementary School Modernization Study has been estimated using rates published in the SANTEC/ITE Guidelines for Traffic Impact Studies (TIS) in the San Diego Region. The proposed project would not eliminate the school's existing programs, and it is not the intent of the project to expand the school enrollment capacity. Understanding year-to-year fluctuating enrollment, a 10-year enrollment average was used to establish the school's existing baseline. An average classroom size of 22 students per classroom is also assumed. Over the past 10 years, the average enrollment at Cardiff Elementary School was 367 students. The project proposed a build out of a total of 20 classrooms resulting in a maximum design capacity of 440 students. For a conservative analysis, this assessment assumes an enrollment increase of 73 students.

The project is expected to generate 117 net daily trips, with 38 trips (23 inbound and 15 outbound) during the AM peak hour and 10 trips (4 inbound and 6 outbound) during the PM peak hour. Table 6.1 presents the resultant AM and PM peak hour trip generation for the proposed project.

TABLE 6.1: PROJECT TRIP GENERATION RATES

SOURCE	LAND USE	UNITS (STUDENTS)	DAILY	AM PEAK HOUR			PM PEAK HOUR		
				In	Out	Total	In	Out	Total
Rates									
SANDAG	Elementary School	Students	1.6	0.31	0.2	0.51	0.06	0.08	0.14
Trips									
SANDAG	Elementary School	73	117	23	15	38	4	6	10

Source: SANDAG (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region

6.2 TRIP DISTRIBUTION

According to the existing pick-up and drop-off locations, the proposed project site would utilize two driveways for pick-up and drop-off located at Montgomery Avenue and Mozart Avenue. Figure 6.1 illustrates the local trip distribution. Figure 6.2 presents the AM peak hour turning movement volumes and Figure 6.3 presents the PM peak hour turning movement volumes.

6.3 PEDESTRIAN SAFETY

Pedestrian safety and circulation was considered under project conditions. Vehicle speeds along Montgomery and Mozart Avenue were observed to be within the 15 miles per hour school zone speeds. Field observations for pick-up/drop-off periods also did not reveal pedestrian safety concerns. In addition, the proposed project would expand and enhance existing pick-up/drop-off areas. As such, additional measures are not needed at this time as vehicle speeds and field observations indicate acceptable pedestrian safety/circulation patterns.

6.4 PROJECT CONSTRUCTION PHASING

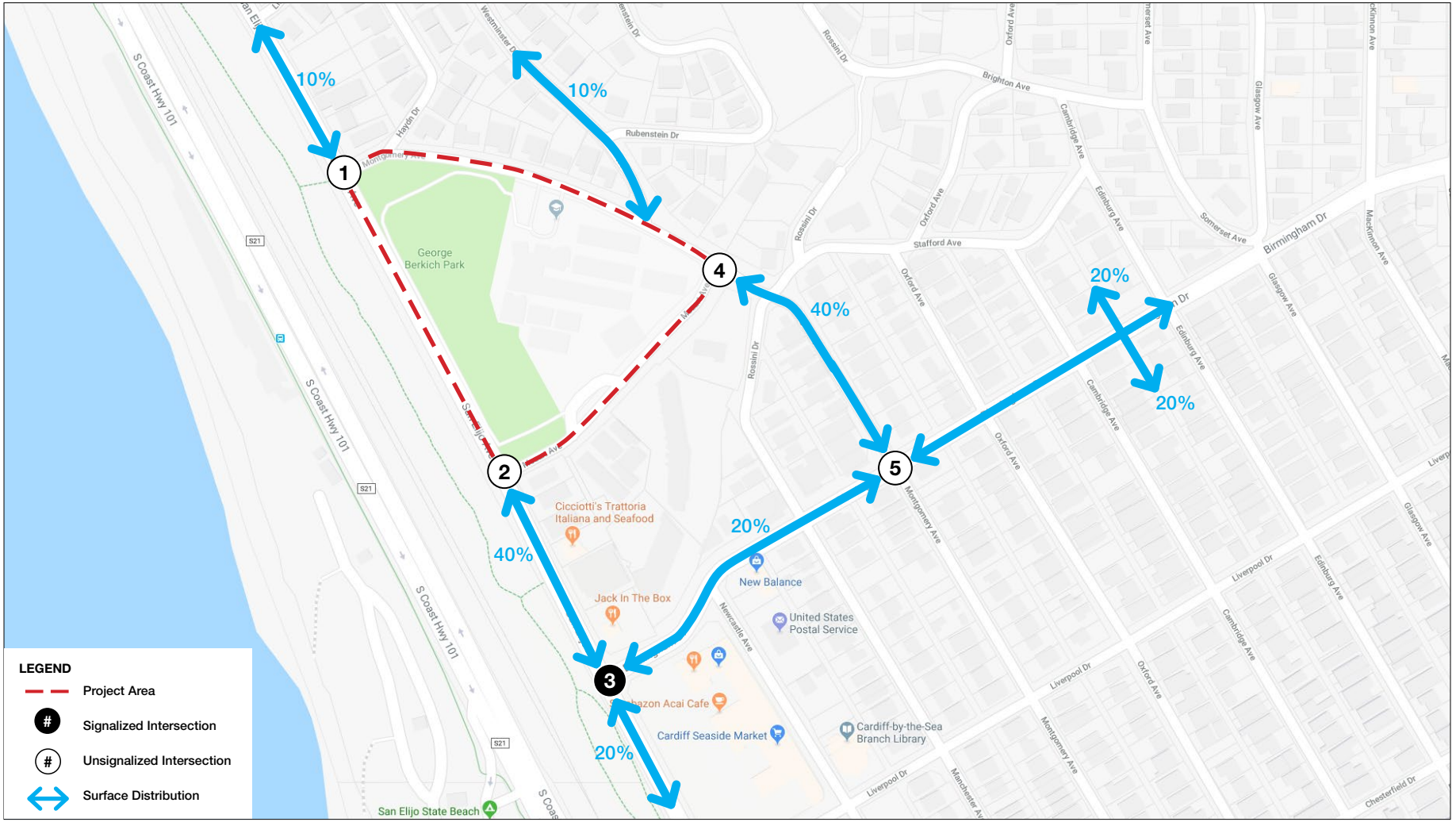
In order to accommodate the implementation of the project, construction of the study area will be needed. The existing parking lot on Montgomery Avenue will be reconstructed to provide more available parking stalls and an extended driveway for more curb space, relieving any queuing during the morning and afternoon hours. Additionally, there will be construction of new classrooms as well as improvements of campus facilities to support the school's educational program.

Construction to enhance and improve the drop-off/pick-up zones will commence in two phases. This is depicted in Figure 2.2 where Phase 1 will impact the parking zones directly. Phase 1A includes the construction of the new parking lot on Montgomery Avenue which will start in June of 2019 and end in August of 2019. This construction will not significantly impact the circulation around the study area as school is not in session. Phase 1B will begin in June of 2019 and end in August of 2020 which entails the construction of new classrooms. Kindergarteners and first graders will remain at Cardiff Elementary School during Phase 1 while the second and third grades will relocate to Ada Harris Elementary School. In August 2020, the second grade will return to Cardiff and the third grade will follow in August 2021. Phase 2 consists of the building of new classrooms and facility renovations and will not impact the circulation pattern of the study area.

There will be a net positive in parking and additional drop-off/pick-up curb space due to the completion of the project construction. The project will experience no anticipated circulation impacts at Cardiff Elementary. Additionally, circulation will improve as there will be less students due to the transfer of the two grades in Phase 1 and 2.

Based on the 2017-2018 school year enrollment at Cardiff Elementary provided by the California Department of Education, an approximate total of 147 second and third graders will be moved to Ada Harris Elementary School during the 2019-2020 school year and 50 students during the 2020-2021 school year. Ada Harris has two separate and substantial drop-off/pick-up locations where teacher supervisions are provided. The second and third graders are designated to be picked up at the end of the lower parking located by the curve lot while fourth, fifth, and sixth graders will be picked up at the upper parking lot. There is approximately 800 feet of off-street drop off curb space on Windsor Road nearest to the campus from Kings Cross Drive to Woodlake Drive that is allowed to be utilized. Students who walk or have other ride arrangements can be picked up at Kings Cross Drive where there is also teacher supervision. In addition, the anticipated trip generation of the 147 students being transferred falls under the city requirements for a traffic impact study as less than 500 total daily trips and less than 50 peak hour trips are anticipated at the adjacent intersections. Based on the number of peak hour trips and the available drop-off/pick-up locations and options, circulation impacts at Ada Harris are not anticipated.

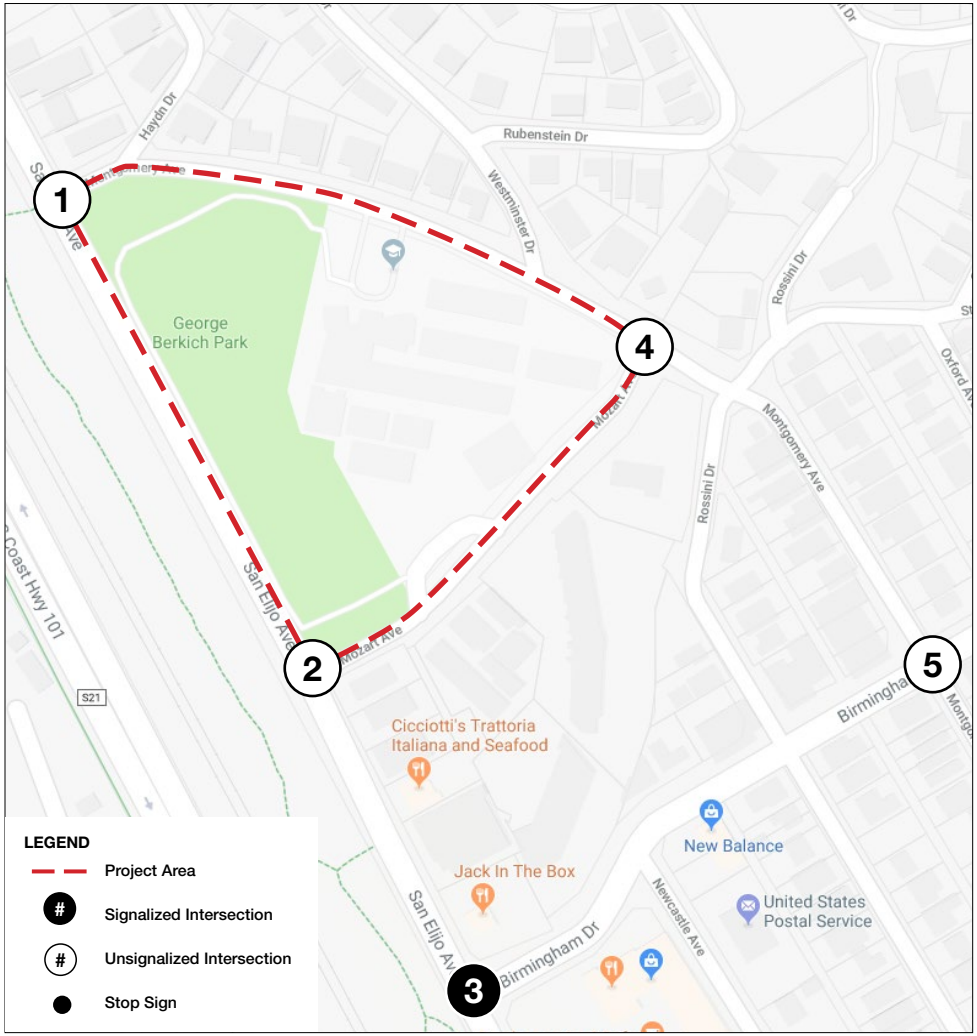
Figure 6.1: Estimated Trip Distribution

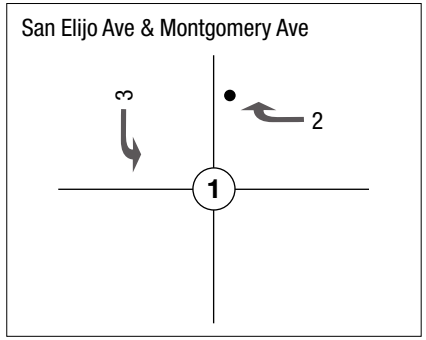


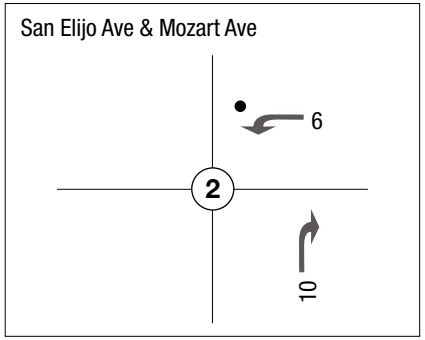
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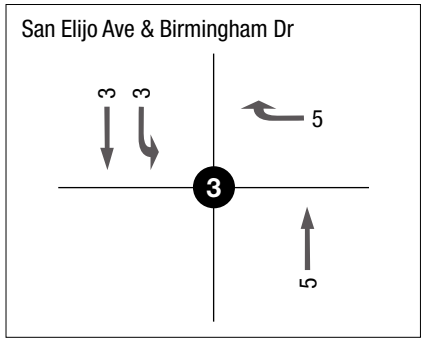
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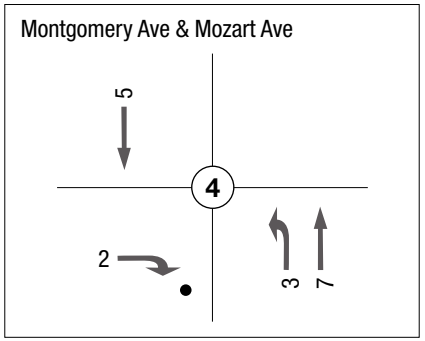
Figure 6.2: Project Turning Movement Volumes – AM Peak Hour

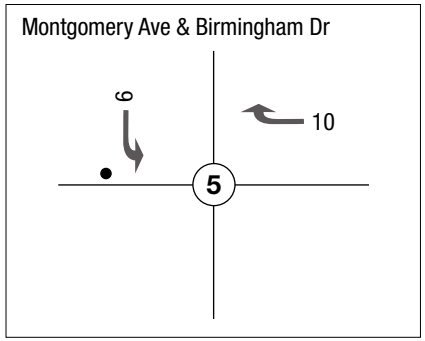








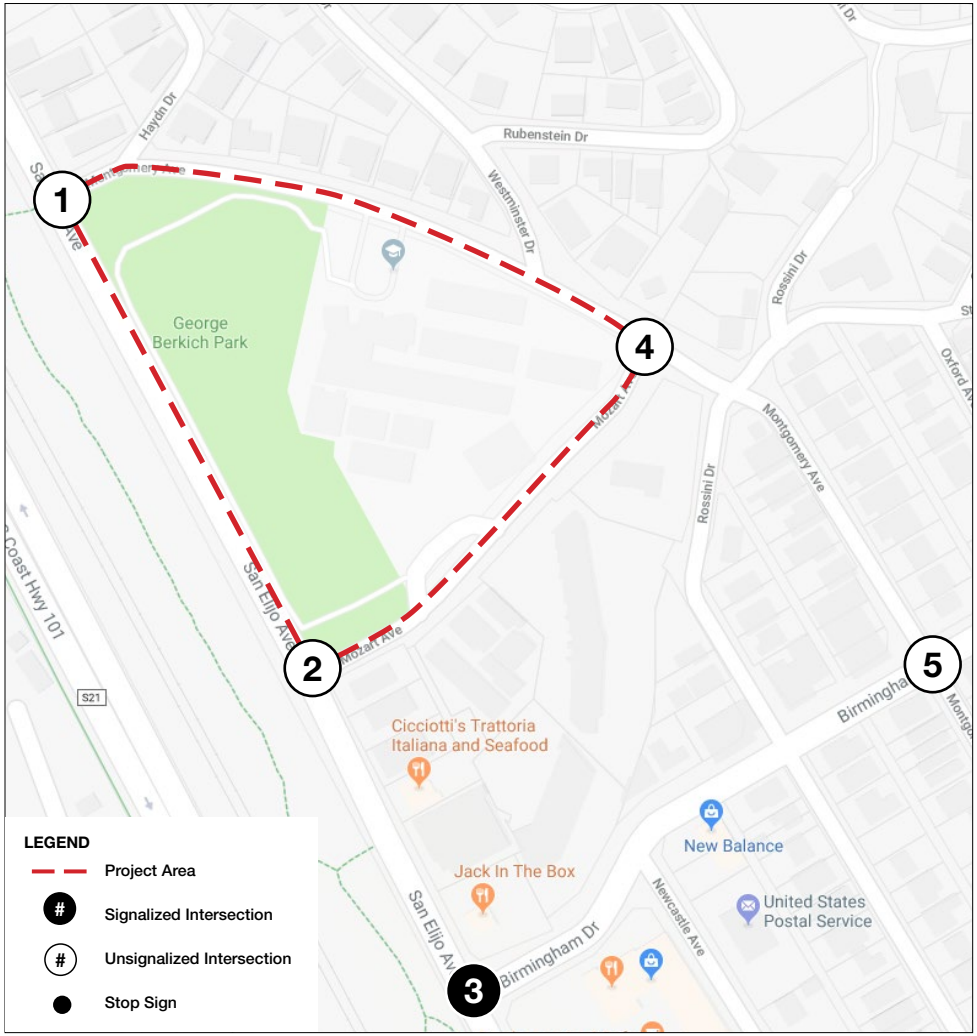


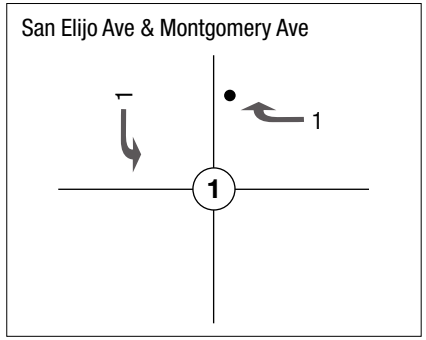


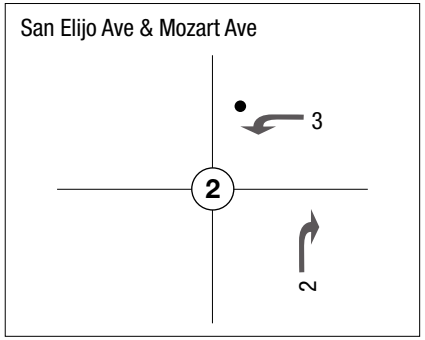
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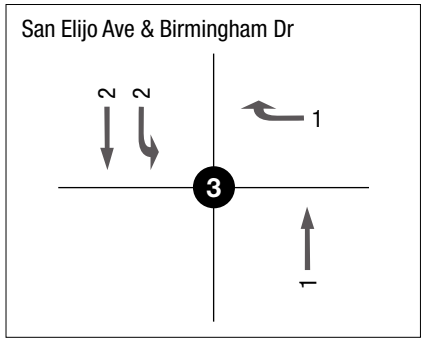
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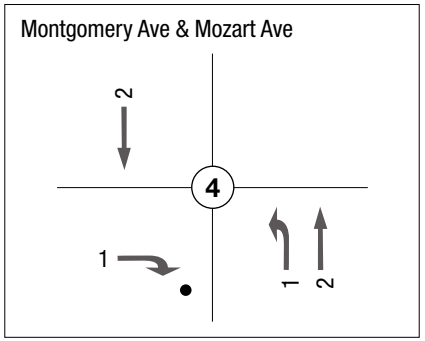
Figure 6.3: Project Turning Movement Volumes – PM Peak Hour

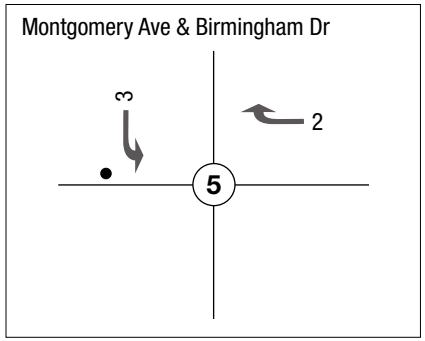








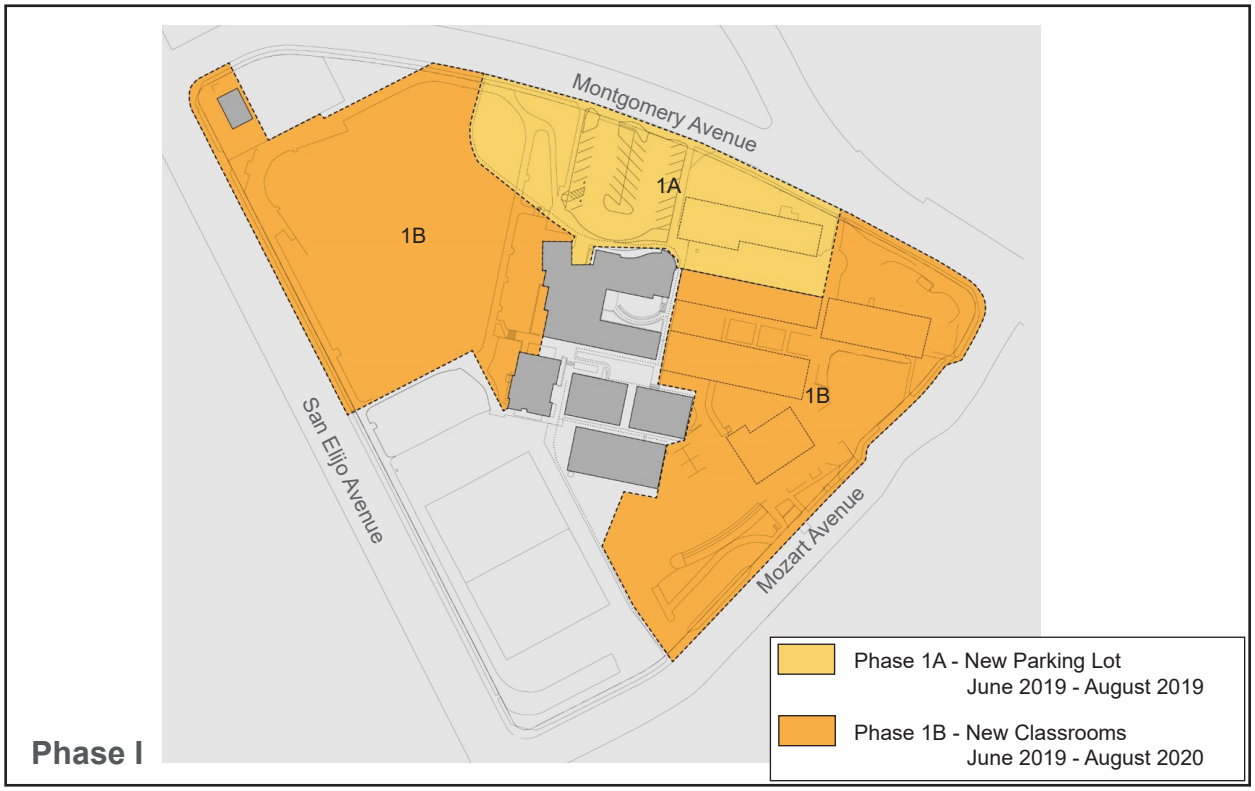




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Figure 6.4: Project Construction Phasing





0 225
Scale (Feet)

Source: Studio E Architects, 2018

PlaceWorks

7 EXISTING YEAR (2018) WITH PROJECT

This section includes an analysis of the Existing Year (2018) With Project scenario. Results for the average daily traffic and intersection level of service for the Existing Year (2018) With Project scenario are presented in this section.

7.1 AVERAGE DAILY TRAFFIC

The average daily traffic for selected links generated by the project as well as in the Existing Year (2018) With Project scenarios are presented in Table 7.1 below. Road segment volumes have been included for noise and air quality purposes.

TABLE 7.1: EXISTING YEAR (2018) WITH PROJECT ROADWAY SEGMENT SUMMARY

ID	ROADWAY	SOURCE	EXISTING NP ADT
1	Montgomery Ave from San Elijo Ave to Mozart Ave	Counts Unlimited, June 2017	921
2	Mozart Ave from San Elijo Ave to Montgomery Ave	Counts Unlimited, June 2017	754

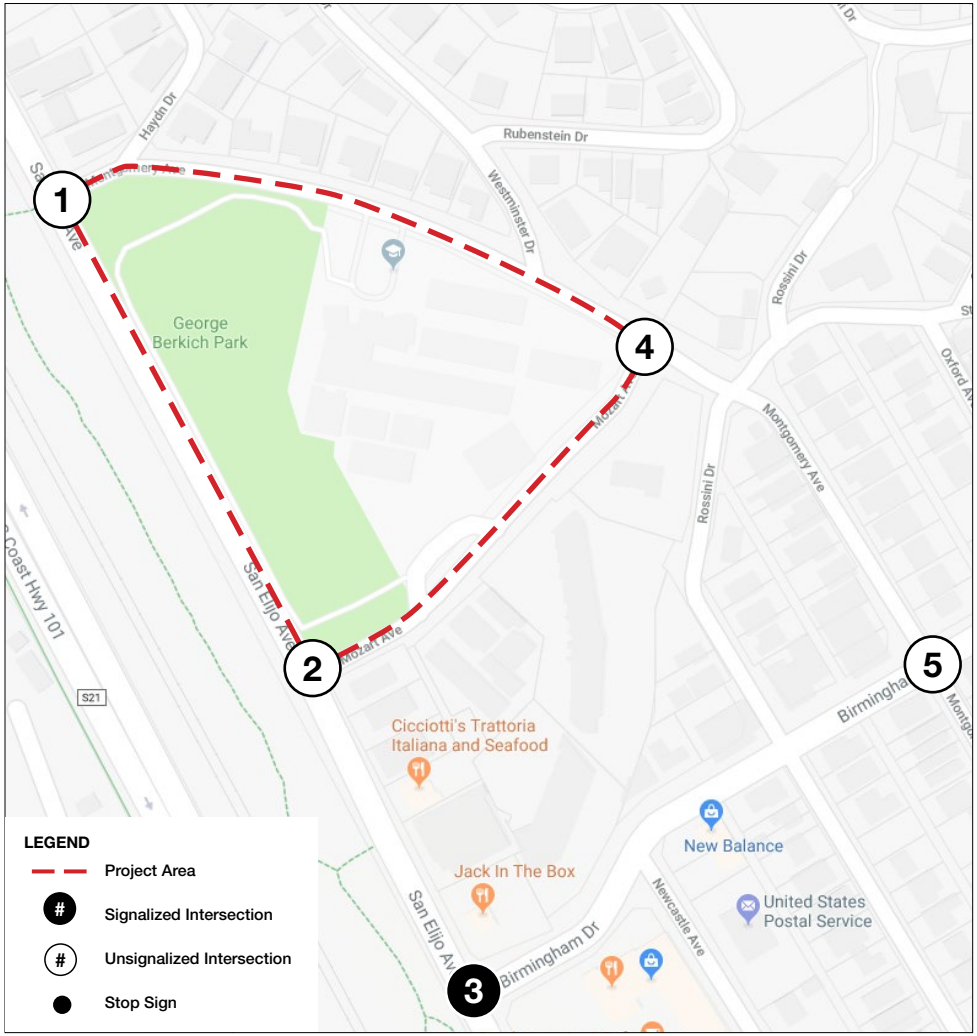
7.2 INTERSECTION LEVEL OF SERVICE

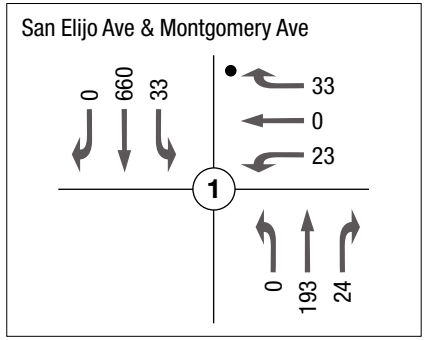
The peak hour turning movement volumes presented in Figure 7.1 and 7.2 were utilized in order to assess intersection performance. A summary of the AM and PM peak hour intersection level of service analysis results for the Existing Year (2018) With Project scenario is presented in Table 7.4.

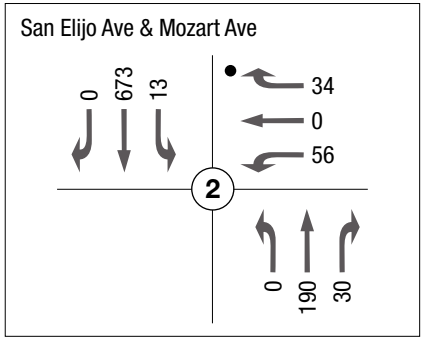
TABLE 7.2: EXISTING YEAR (2018) WITH PROJECT INTERSECTION LOS

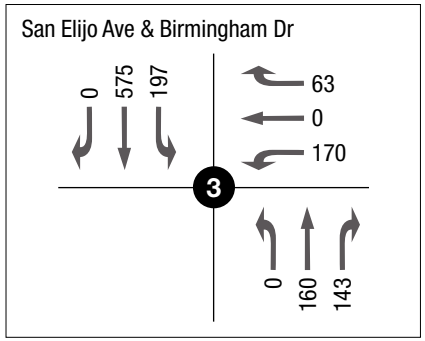
INTERSECTION		Intersection Control	AM		PM	
			V/C or Delay (S)	LOS	V/C or Delay (S)	LOS
1	San Elijo Ave & Montgomery Ave	TWSC	14.8	B	12.4	B
2	San Elijo Ave & Mozart Ave	TWSC	18.5	C	13.8	B
3	San Elijo Ave & Birmingham Dr	Signalized	17.7	B	18.2	B
4	Montgomery Ave & Mozart Ave	TWSC	9.7	A	8.9	A
5	Montgomery Ave & Birmingham Dr	TWSC	15.4	C	15.1	C

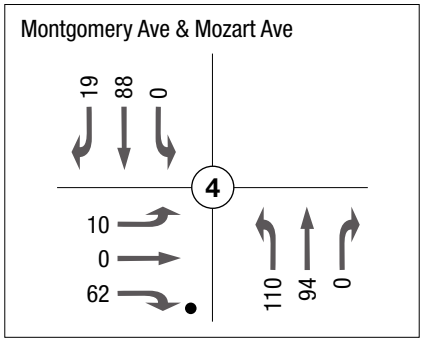
Figure 7.1: Existing Year (2018) With Project Volumes – AM Peak Hour

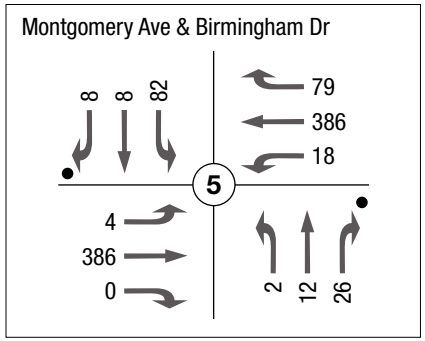






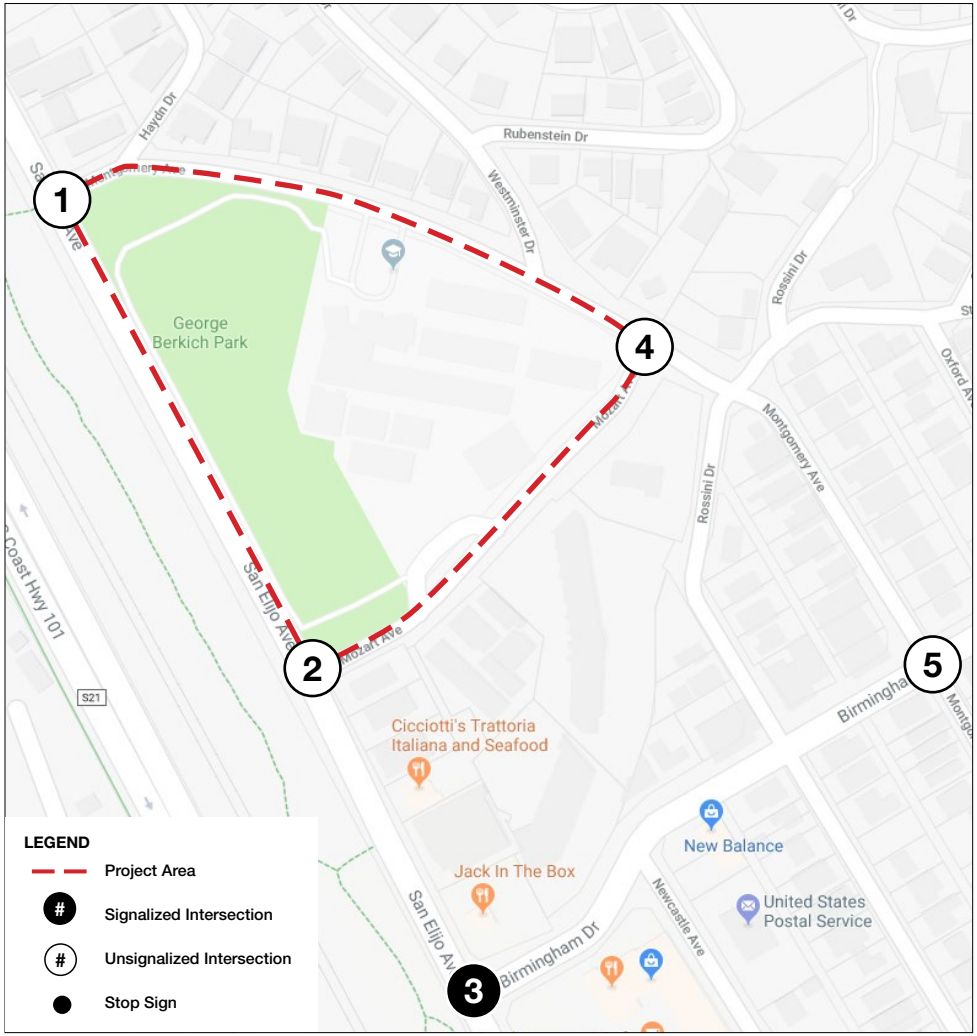


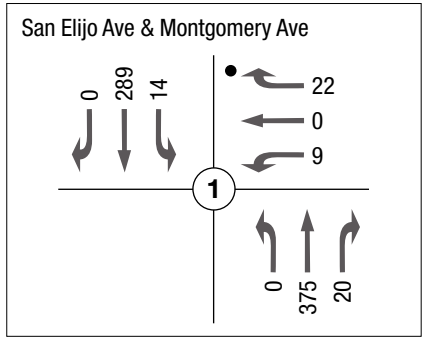


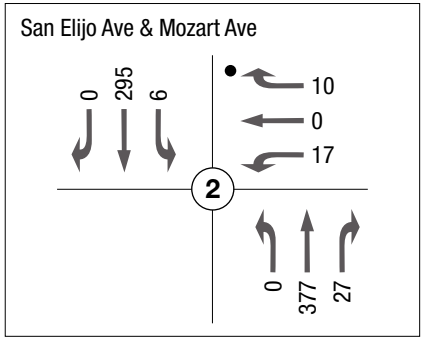


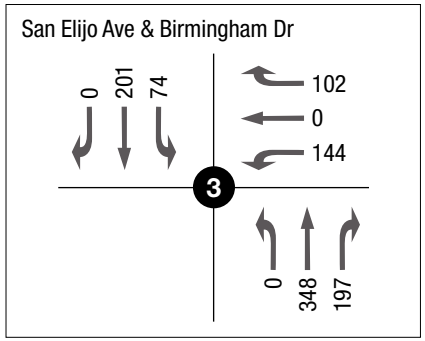
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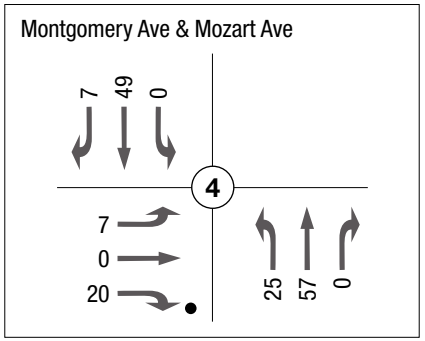
Figure 7.2: Existing Year (2018) With Project Volumes – PM Peak Hour

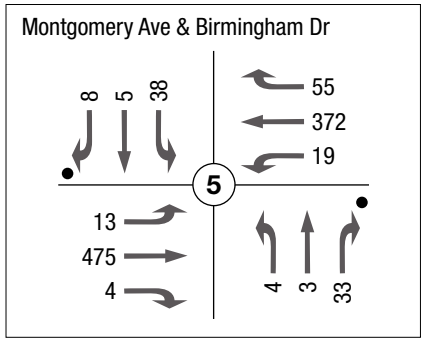












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8 OPENING YEAR (2021) WITH PROJECT

This section presents the ADT and intersection LOS analysis for the Opening Year (2021) With Project scenario. Associated lane geometries and controls are consistent with those used in the Opening Year (2021) No Project scenario.

8.1 AVERAGE DAILY TRAFFIC

The average daily traffic for selected links generated by the project as well as in the Opening Year (2021) No Project and Opening Year (2021) With Project scenarios are presented in Table 8.1. Road segment volumes have been included for noise and air quality purposes.

TABLE 8.1: OPENING YEAR (2021) WITH PROJECT ROADWAY SEGMENT SUMMARY

ID	ROADWAY	SOURCE	EXISTING NP ADT
1	Montgomery Ave from San Elijo Ave to Mozart Ave	Counts Unlimited, June 2017	974
2	Mozart Ave from San Elijo Ave to Montgomery Ave	Counts Unlimited, June 2017	797

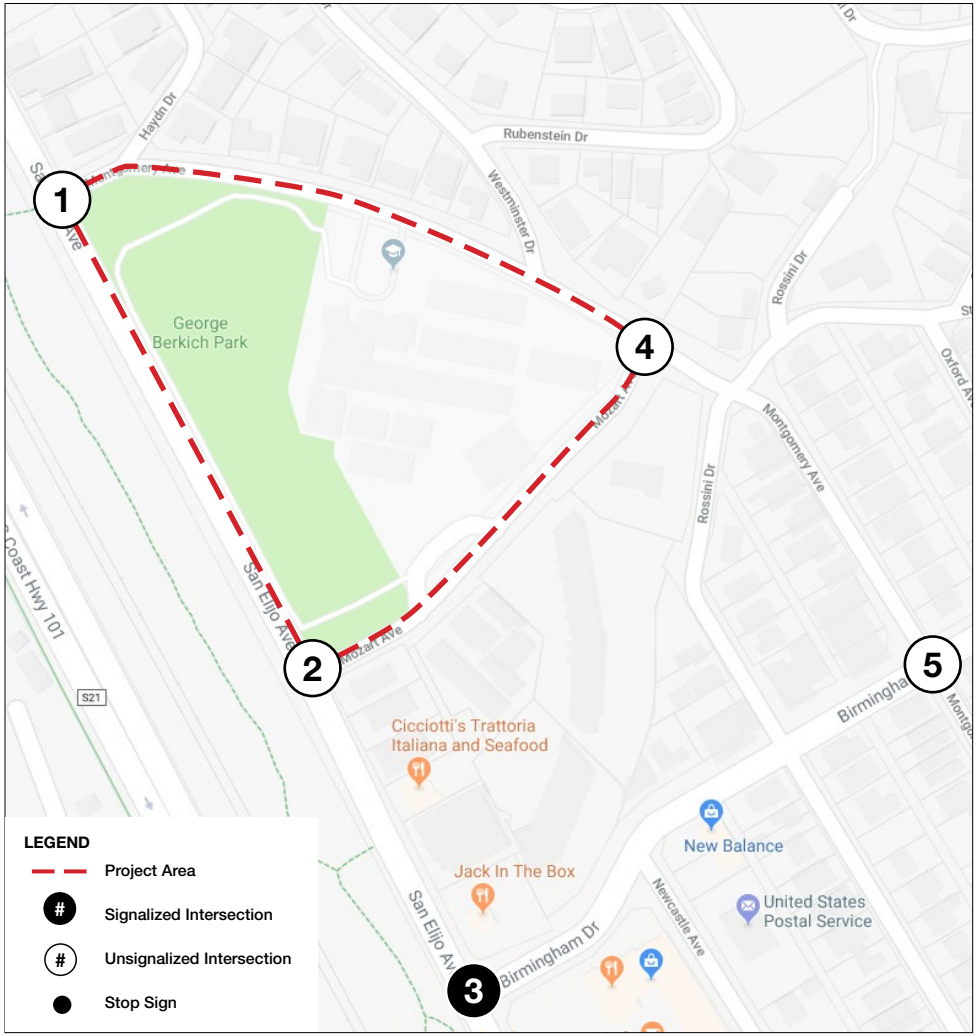
8.2 INTERSECTION LEVEL OF SERVICE

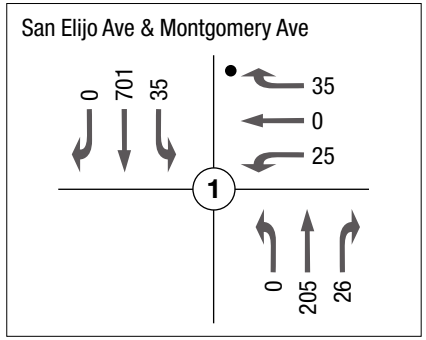
The peak hour turning movement volumes presented in Figure 8.1 and 8.2 were utilized to assess intersection performance. A summary of the AM and PM peak hour intersection level of service analysis results for the Opening Year (2021) With Project condition is presented in Table 8.4. The intersection impact thresholds employed are outlined in Section 3.

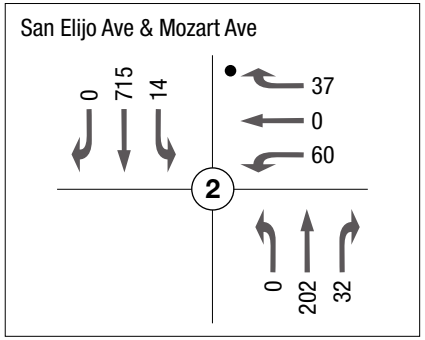
TABLE 8.2: OPENING YEAR (2021) WITH PROJECT INTERSECTION LOS

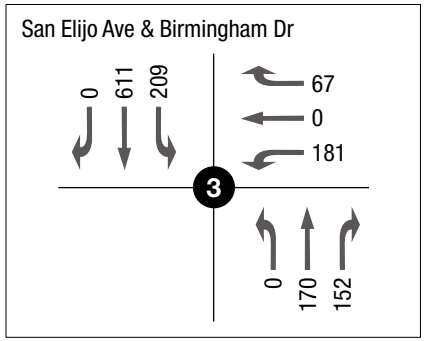
INTERSECTION		Intersection Control	AM		PM	
			V/C or Delay (S)	LOS	V/C or Delay (S)	LOS
1	San Elijo Ave & Montgomery Ave	TWSC	15.9	C	12.8	B
2	San Elijo Ave & Mozart Ave	TWSC	20.5	C	14.4	B
3	San Elijo Ave & Birmingham Dr	Signalized	20.1	C	21.1	C
4	Montgomery Ave & Mozart Ave	TWSC	9.8	A	9.0	A
5	Montgomery Ave & Birmingham Dr	TWSC	16.4	C	16.2	C

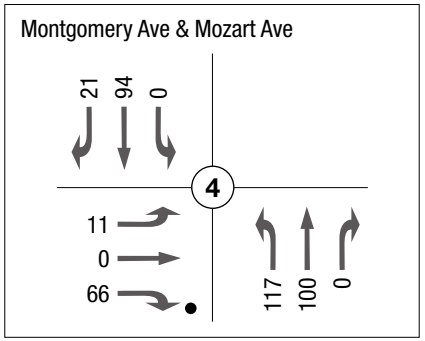
Figure 8.1: Opening Year (2021) With Project Volumes – AM Peak Hour

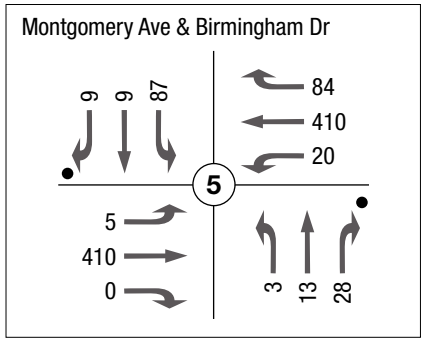






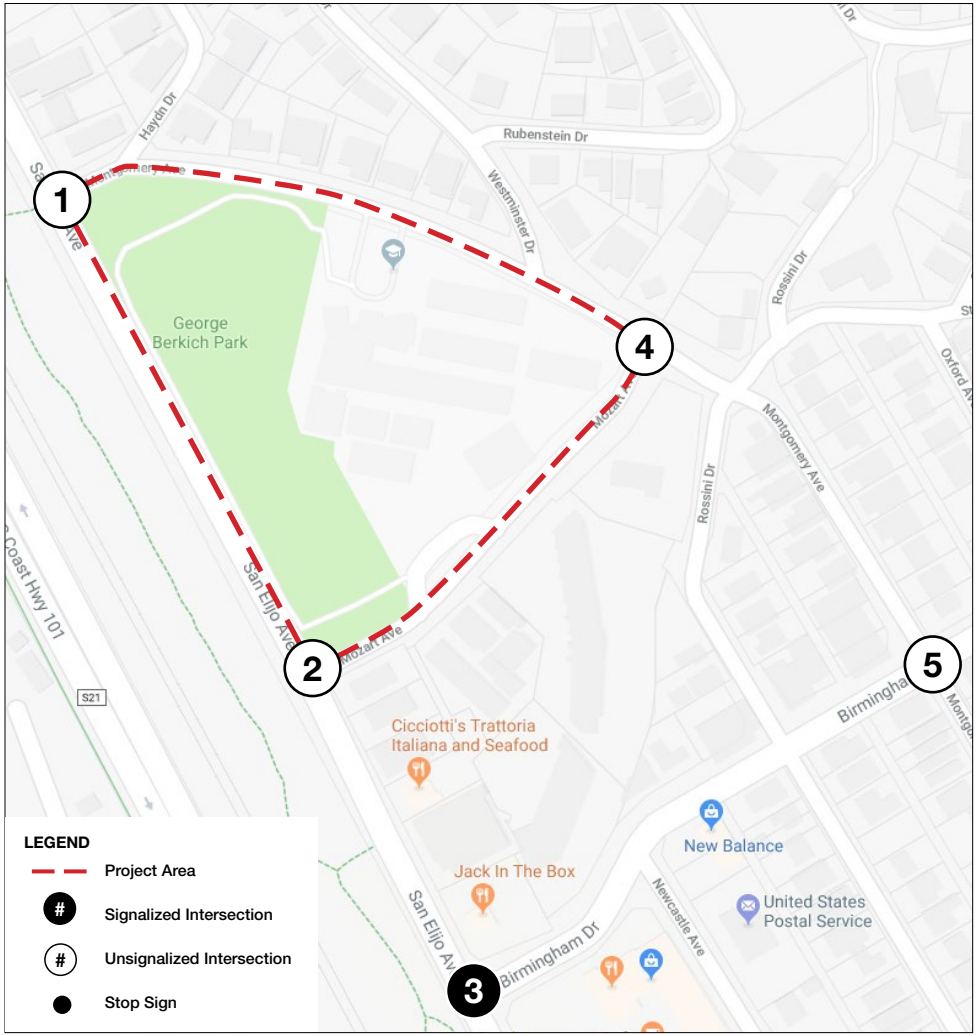


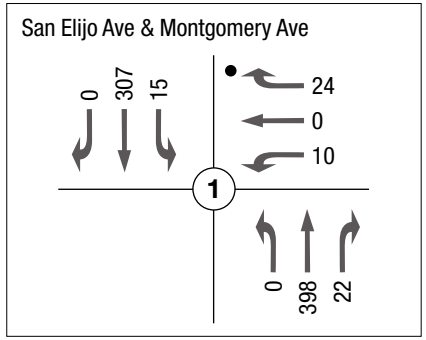


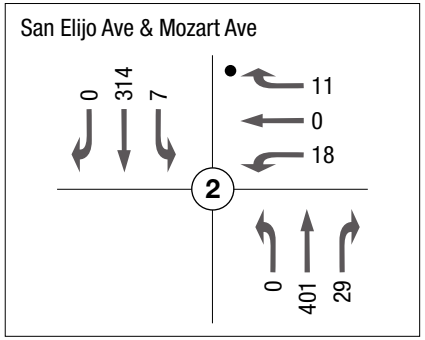


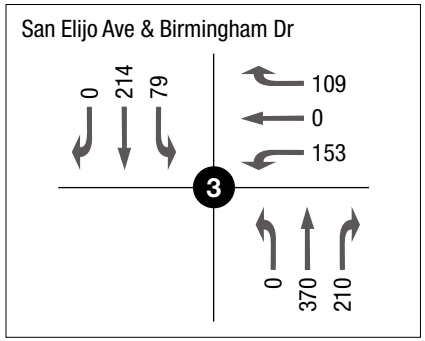
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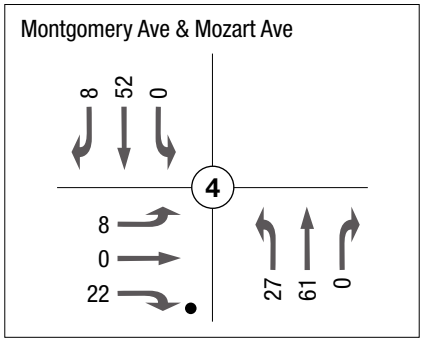
Figure 8.2: Opening Year (2021) With Project Volumes – PM Peak Hour

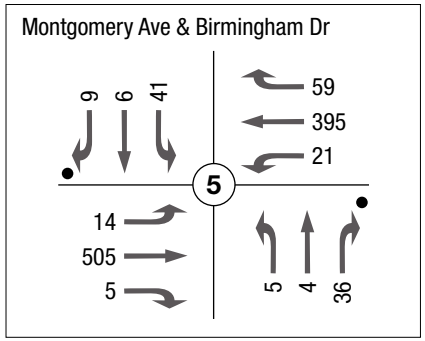












CARDIFF SCHOOL DISTRICT

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9 CONCLUSIONS

Based on the results of the level of service analysis, the proposed modernization to Cardiff Elementary School can be implemented without significantly impacting any of the study area intersections or street segments. All five study intersections as well as the two study roadway segments are operating at an acceptable level of service both scenarios of Existing Year (2018) and Opening Year (2021). Since there were no significant impacts with addition of the project, mitigation measures were not necessary for the analysis.

10 APPENDICES

APPENDIX A – TRAFFIC COUNTS (INTERSECTION AND LINK VOLUMES)

APPENDIX B – SPEED SURVEY DATA

APPENDIX C – HCM 2010 METHODOLOGY REPORTS

APPENDIX A

Traffic Counts (Intersection and Link Volumes)

Counts Unlimited Inc
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(951) 268-6268

City of Encinitas
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E/W: Birmingham Drive
Weather: Sunny

File Name : ECNMOBIAM
Site Code : 22117355
Start Date : 6/8/2017
Page No : 1

Groups Printed- Total Volume

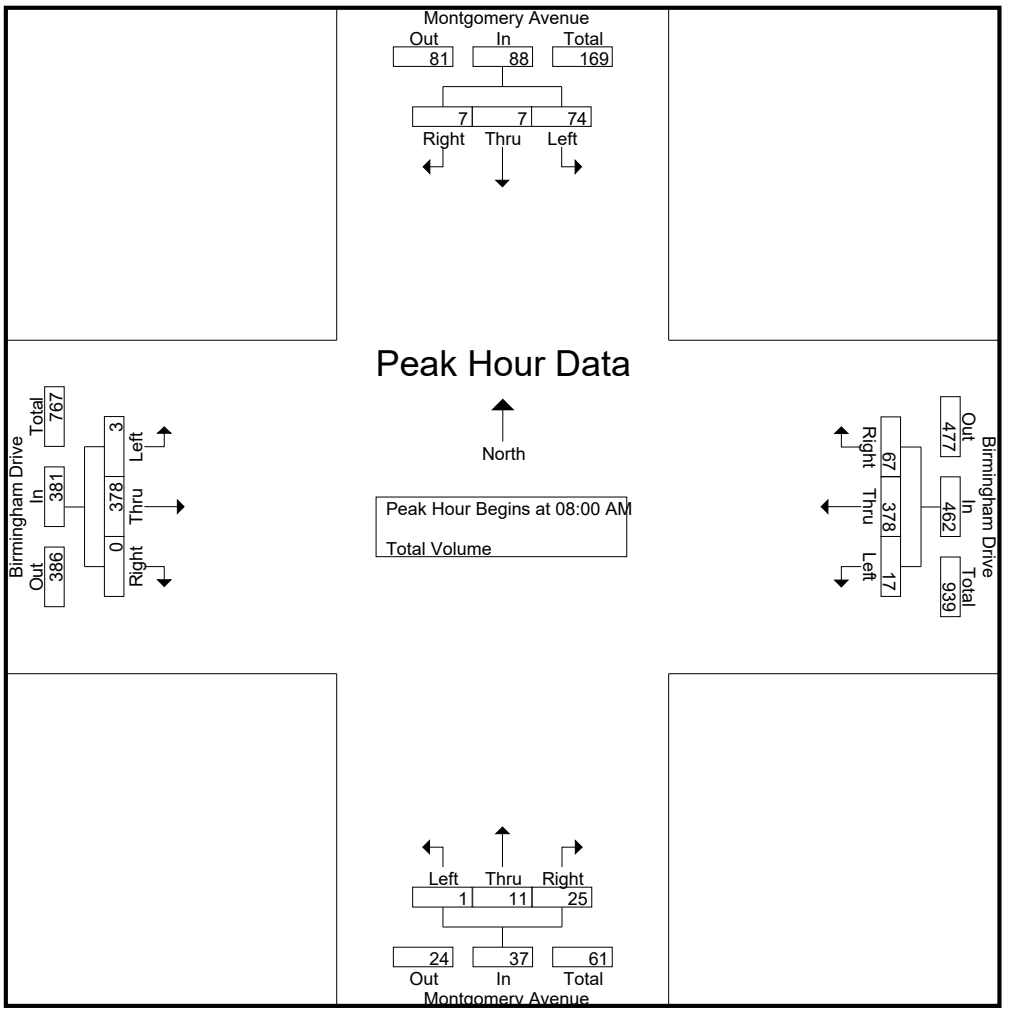
	Montgomery Avenue Southbound				Birmingham Drive Westbound				Montgomery Avenue Northbound				Birmingham Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	0	0	3	2	61	4	67	0	1	4	5	0	51	0	51	126
07:15 AM	11	0	3	14	1	67	5	73	1	0	6	7	0	60	0	60	154
07:30 AM	11	1	2	14	5	56	15	76	0	1	6	7	1	81	1	83	180
07:45 AM	24	1	2	27	3	68	21	92	0	1	8	9	2	90	0	92	220
Total	49	2	7	58	11	252	45	308	1	3	24	28	3	282	1	286	680
08:00 AM	14	2	2	18	4	90	33	127	0	5	9	14	0	97	0	97	256
08:15 AM	31	3	1	35	8	77	15	100	1	4	8	13	1	110	0	111	259
08:30 AM	12	1	2	15	4	91	4	99	0	2	5	7	0	93	0	93	214
08:45 AM	17	1	2	20	1	120	15	136	0	0	3	3	2	78	0	80	239
Total	74	7	7	88	17	378	67	462	1	11	25	37	3	378	0	381	968
Grand Total	123	9	14	146	28	630	112	770	2	14	49	65	6	660	1	667	1648
Apprch %	84.2	6.2	9.6		3.6	81.8	14.5		3.1	21.5	75.4		0.9	99	0.1		
Total %	7.5	0.5	0.8	8.9	1.7	38.2	6.8	46.7	0.1	0.8	3	3.9	0.4	40	0.1	40.5	

	Montgomery Avenue Southbound				Birmingham Drive Westbound				Montgomery Avenue Northbound				Birmingham Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	14	2	2	18	4	90	33	127	0	5	9	14	0	97	0	97	256
08:15 AM	31	3	1	35	8	77	15	100	1	4	8	13	1	110	0	111	259
08:30 AM	12	1	2	15	4	91	4	99	0	2	5	7	0	93	0	93	214
08:45 AM	17	1	2	20	1	120	15	136	0	0	3	3	2	78	0	80	239
Total Volume	74	7	7	88	17	378	67	462	1	11	25	37	3	378	0	381	968
% App. Total	84.1	8	8		3.7	81.8	14.5		2.7	29.7	67.6		0.8	99.2	0		
PHF	.597	.583	.875	.629	.531	.788	.508	.849	.250	.550	.694	.661	.375	.859	.000	.858	.934

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Start Date : 6/8/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				08:00 AM				07:30 AM				07:45 AM			
+0 mins.	24	1	2	27	4	90	33	127	0	1	6	7	2	90	0	92
+15 mins.	14	2	2	18	8	77	15	100	0	1	8	9	0	97	0	97
+30 mins.	31	3	1	35	4	91	4	99	0	5	9	14	1	110	0	111
+45 mins.	12	1	2	15	1	120	15	136	1	4	8	13	0	93	0	93
Total Volume	81	7	7	95	17	378	67	462	1	11	31	43	3	390	0	393
% App. Total	85.3	7.4	7.4		3.7	81.8	14.5		2.3	25.6	72.1		0.8	99.2	0	
PHF	.653	.583	.875	.679	.531	.788	.508	.849	.250	.550	.861	.768	.375	.886	.000	.885

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Start Date : 6/8/2017
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Groups Printed- Total Volume

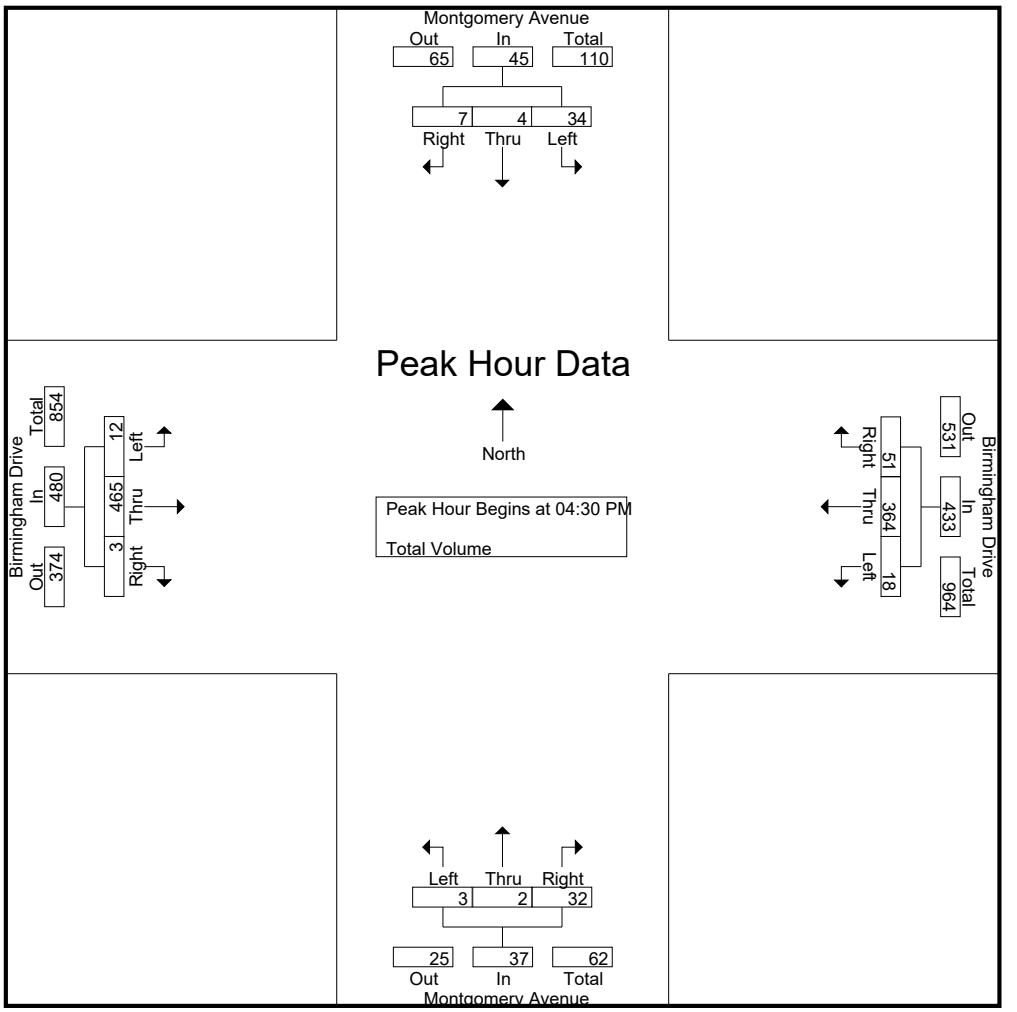
	Montgomery Avenue Southbound				Birmingham Drive Westbound				Montgomery Avenue Northbound				Birmingham Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	12	1	0	13	2	94	10	106	0	0	5	5	3	93	1	97	221
04:15 PM	6	1	2	9	8	89	8	105	0	0	4	4	1	89	1	91	209
04:30 PM	10	1	1	12	4	83	17	104	1	0	6	7	3	119	1	123	246
04:45 PM	9	2	1	12	5	103	12	120	0	0	6	6	4	116	0	120	258
Total	37	5	4	46	19	369	47	435	1	0	21	22	11	417	3	431	934
05:00 PM	12	1	4	17	6	88	7	101	1	1	13	15	2	122	1	125	258
05:15 PM	3	0	1	4	3	90	15	108	1	1	7	9	3	108	1	112	233
05:30 PM	5	0	1	6	9	89	7	105	0	1	3	4	4	119	1	124	239
05:45 PM	11	3	1	15	7	111	10	128	1	0	3	4	1	116	0	117	264
Total	31	4	7	42	25	378	39	442	3	3	26	32	10	465	3	478	994
Grand Total	68	9	11	88	44	747	86	877	4	3	47	54	21	882	6	909	1928
Apprch %	77.3	10.2	12.5		5	85.2	9.8		7.4	5.6	87		2.3	97	0.7		
Total %	3.5	0.5	0.6	4.6	2.3	38.7	4.5	45.5	0.2	0.2	2.4	2.8	1.1	45.7	0.3	47.1	

	Montgomery Avenue Southbound				Birmingham Drive Westbound				Montgomery Avenue Northbound				Birmingham Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	10	1	1	12	4	83	17	104	1	0	6	7	3	119	1	123	246
04:45 PM	9	2	1	12	5	103	12	120	0	0	6	6	4	116	0	120	258
05:00 PM	12	1	4	17	6	88	7	101	1	1	13	15	2	122	1	125	258
05:15 PM	3	0	1	4	3	90	15	108	1	1	7	9	3	108	1	112	233
Total Volume	34	4	7	45	18	364	51	433	3	2	32	37	12	465	3	480	995
% App. Total	75.6	8.9	15.6		4.2	84.1	11.8		8.1	5.4	86.5		2.5	96.9	0.6		
PHF	.708	.500	.438	.662	.750	.883	.750	.902	.750	.500	.615	.617	.750	.953	.750	.960	.964

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Site Code : 22117355
Start Date : 6/8/2017
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				05:00 PM				04:30 PM				04:45 PM			
+0 mins.	6	1	2	9	6	88	7	101	1	0	6	7	4	116	0	120
+15 mins.	10	1	1	12	3	90	15	108	0	0	6	6	2	122	1	125
+30 mins.	9	2	1	12	9	89	7	105	1	1	13	15	3	108	1	112
+45 mins.	12	1	4	17	7	111	10	128	1	1	7	9	4	119	1	124
Total Volume	37	5	8	50	25	378	39	442	3	2	32	37	13	465	3	481
% App. Total	74	10	16		5.7	85.5	8.8		8.1	5.4	86.5		2.7	96.7	0.6	
PHF	.771	.625	.500	.735	.694	.851	.650	.863	.750	.500	.615	.617	.813	.953	.750	.962

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Weather: Sunny

File Name : ECNMOMZAM
Site Code : 22117355
Start Date : 6/8/2017
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Groups Printed- Total Volume

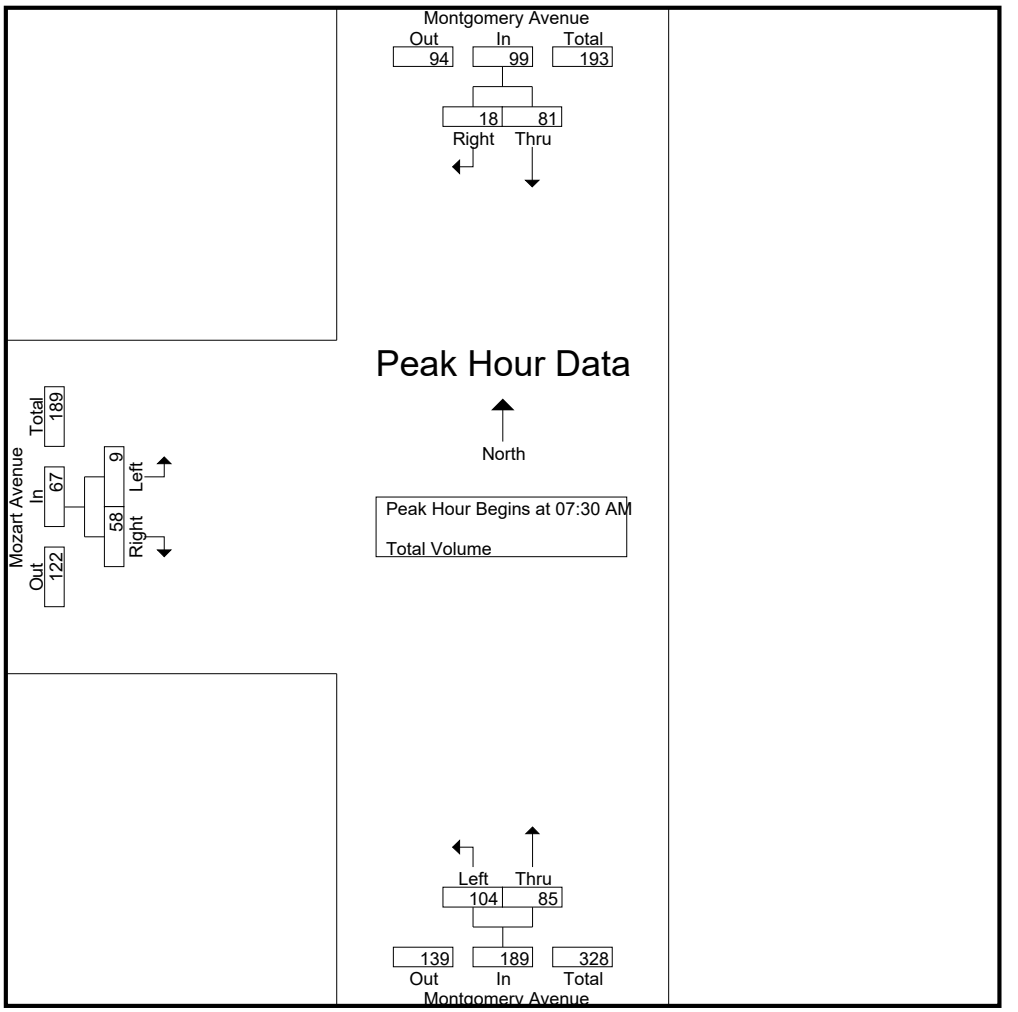
	Montgomery Avenue Southbound			Montgomery Avenue Northbound			Mozart Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	10	3	13	2	3	5	1	1	2	20
07:15 AM	8	0	8	3	6	9	0	3	3	20
07:30 AM	10	1	11	7	7	14	0	4	4	29
07:45 AM	22	1	23	12	20	32	3	7	10	65
Total	50	5	55	24	36	60	4	15	19	134
08:00 AM	26	7	33	56	32	88	1	16	17	138
08:15 AM	23	9	32	29	26	55	5	31	36	123
08:30 AM	14	1	15	0	8	8	0	0	0	23
08:45 AM	13	3	16	0	16	16	2	2	4	36
Total	76	20	96	85	82	167	8	49	57	320
Grand Total	126	25	151	109	118	227	12	64	76	454
Apprch %	83.4	16.6		48	52		15.8	84.2		
Total %	27.8	5.5	33.3	24	26	50	2.6	14.1	16.7	

	Montgomery Avenue Southbound			Montgomery Avenue Northbound			Mozart Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	10	1	11	7	7	14	0	4	4	29
07:45 AM	22	1	23	12	20	32	3	7	10	65
08:00 AM	26	7	33	56	32	88	1	16	17	138
08:15 AM	23	9	32	29	26	55	5	31	36	123
Total Volume	81	18	99	104	85	189	9	58	67	355
% App. Total	81.8	18.2		55	45		13.4	86.6		
PHF	.779	.500	.750	.464	.664	.537	.450	.468	.465	.643

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City of Encinitas
N/S: Montgomery Avenue
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Weather: Sunny

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Site Code : 22117355
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:30 AM			07:30 AM		
+0 mins.	22	1	23	7	7	14	0	4	4
+15 mins.	26	7	33	12	20	32	3	7	10
+30 mins.	23	9	32	56	32	88	1	16	17
+45 mins.	14	1	15	29	26	55	5	31	36
Total Volume	85	18	103	104	85	189	9	58	67
% App. Total	82.5	17.5		55	45		13.4	86.6	
PHF	.817	.500	.780	.464	.664	.537	.450	.468	.465

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City of Encinitas
N/S: Montgomery Avenue
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Weather: Sunny

File Name : ECNMOMZPM
Site Code : 22117355
Start Date : 6/8/2017
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Groups Printed- Total Volume

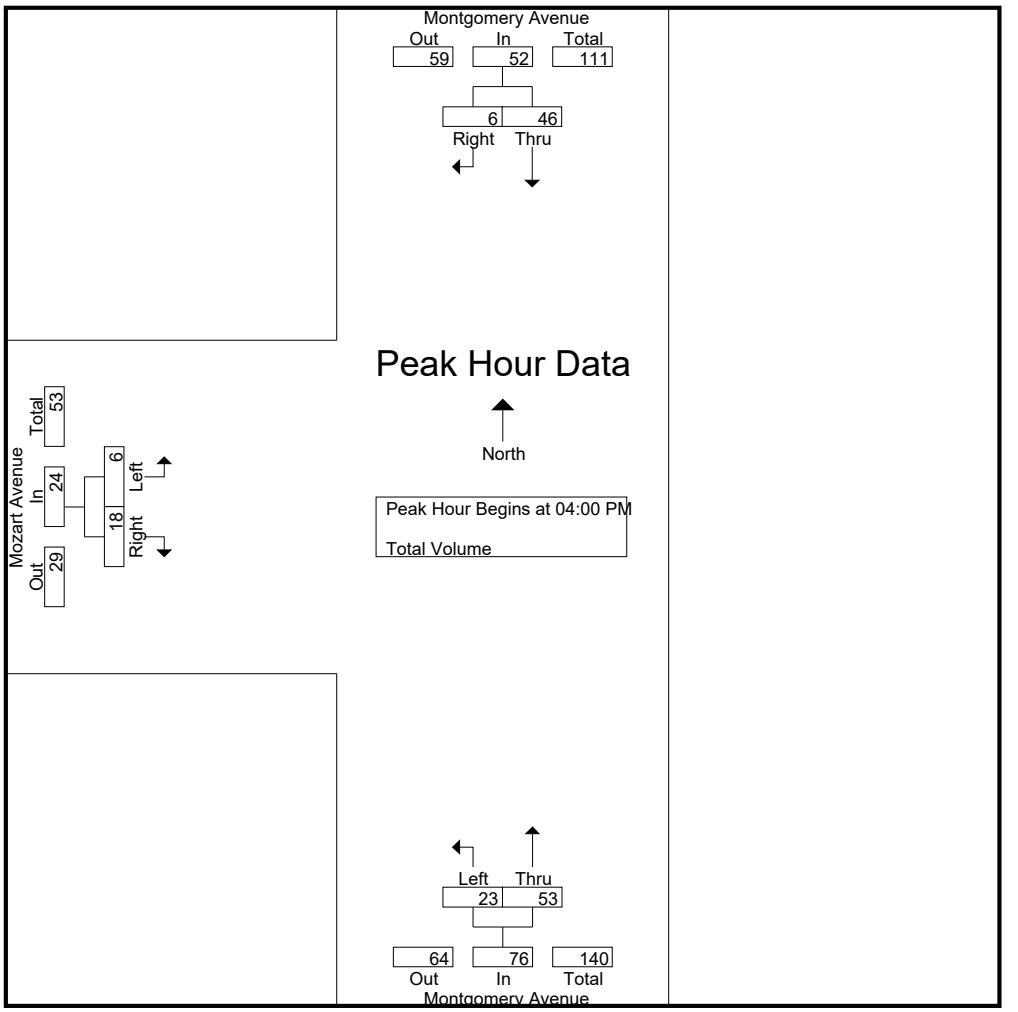
	Montgomery Avenue Southbound			Montgomery Avenue Northbound			Mozart Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	13	0	13	3	13	16	1	7	8	37
04:15 PM	15	1	16	2	14	16	1	5	6	38
04:30 PM	9	5	14	5	18	23	3	2	5	42
04:45 PM	9	0	9	13	8	21	1	4	5	35
Total	46	6	52	23	53	76	6	18	24	152
05:00 PM	6	1	7	5	10	15	3	5	8	30
05:15 PM	9	1	10	5	22	27	1	5	6	43
05:30 PM	9	1	10	5	7	12	3	4	7	29
05:45 PM	13	4	17	9	10	19	0	5	5	41
Total	37	7	44	24	49	73	7	19	26	143
Grand Total	83	13	96	47	102	149	13	37	50	295
Apprch %	86.5	13.5		31.5	68.5		26	74		
Total %	28.1	4.4	32.5	15.9	34.6	50.5	4.4	12.5	16.9	

	Montgomery Avenue Southbound			Montgomery Avenue Northbound			Mozart Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	13	0	13	3	13	16	1	7	8	37
04:15 PM	15	1	16	2	14	16	1	5	6	38
04:30 PM	9	5	14	5	18	23	3	2	5	42
04:45 PM	9	0	9	13	8	21	1	4	5	35
Total Volume	46	6	52	23	53	76	6	18	24	152
% App. Total	88.5	11.5		30.3	69.7		25	75		
PHF	.767	.300	.813	.442	.736	.826	.500	.643	.750	.905

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City of Encinitas
N/S: Montgomery Avenue
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Weather: Sunny

File Name : ECNMOMZPM
Site Code : 22117355
Start Date : 6/8/2017
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:30 PM			04:45 PM		
+0 mins.	13	0	13	5	18	23	1	4	5
+15 mins.	15	1	16	13	8	21	3	5	8
+30 mins.	9	5	14	5	10	15	1	5	6
+45 mins.	9	0	9	5	22	27	3	4	7
Total Volume	46	6	52	28	58	86	8	18	26
% App. Total	88.5	11.5		32.6	67.4		30.8	69.2	
PHF	.767	.300	.813	.538	.659	.796	.667	.900	.813

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City of Encinitas
N/S: San Elijo Avenue
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Weather: Sunny

File Name : ECNSEMOAM
Site Code : 22117355
Start Date : 6/8/2017
Page No : 1

Groups Printed- Total Volume

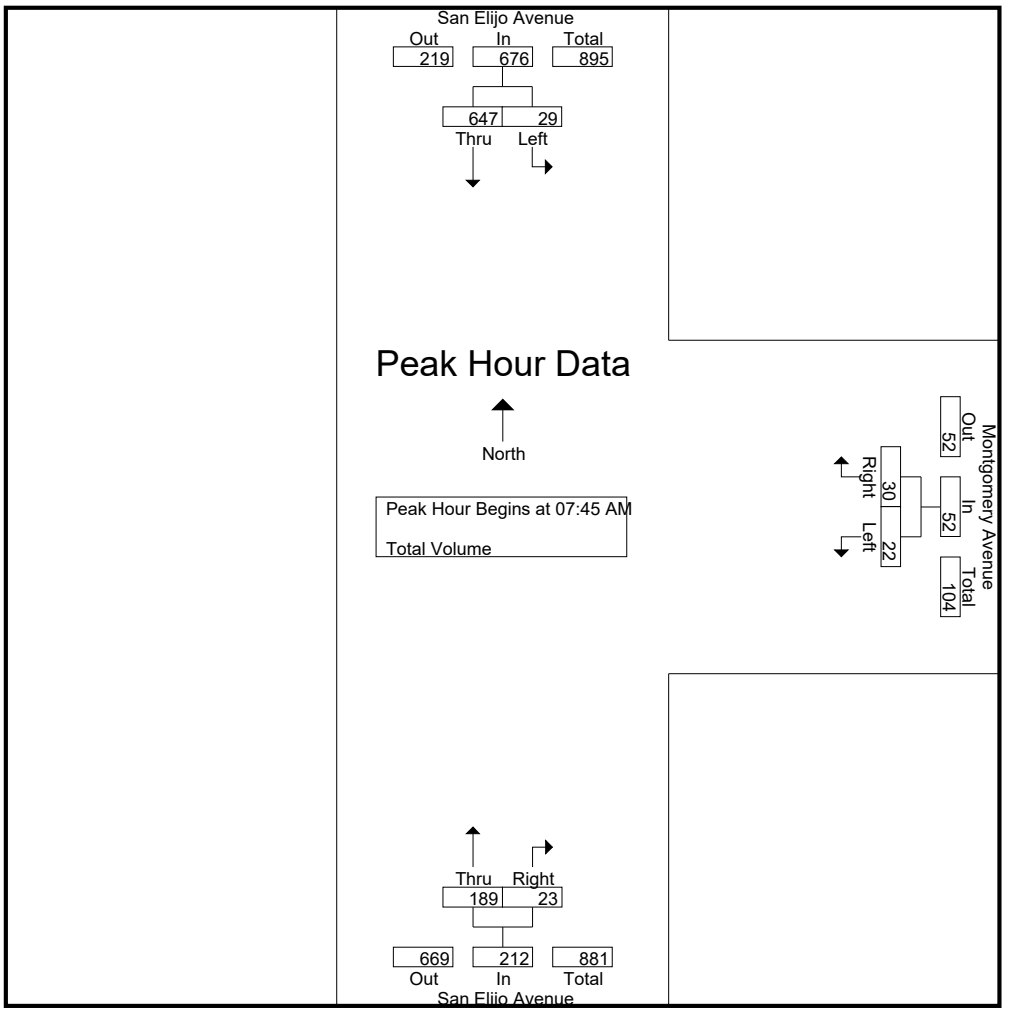
	San Elijo Avenue Southbound			Montgomery Avenue Westbound			San Elijo Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	3	70	73	4	1	5	22	2	24	102
07:15 AM	4	128	132	0	1	1	27	3	30	163
07:30 AM	6	138	144	3	0	3	35	1	36	183
07:45 AM	5	156	161	7	8	15	36	5	41	217
Total	18	492	510	14	10	24	120	11	131	665
08:00 AM	15	172	187	3	6	9	67	13	80	276
08:15 AM	5	173	178	10	11	21	55	4	59	258
08:30 AM	4	146	150	2	5	7	31	1	32	189
08:45 AM	6	140	146	4	9	13	45	3	48	207
Total	30	631	661	19	31	50	198	21	219	930
Grand Total	48	1123	1171	33	41	74	318	32	350	1595
Apprch %	4.1	95.9		44.6	55.4		90.9	9.1		
Total %	3	70.4	73.4	2.1	2.6	4.6	19.9	2	21.9	

	San Elijo Avenue Southbound			Montgomery Avenue Westbound			San Elijo Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	5	156	161	7	8	15	36	5	41	217
08:00 AM	15	172	187	3	6	9	67	13	80	276
08:15 AM	5	173	178	10	11	21	55	4	59	258
08:30 AM	4	146	150	2	5	7	31	1	32	189
Total Volume	29	647	676	22	30	52	189	23	212	940
% App. Total	4.3	95.7		42.3	57.7		89.2	10.8		
PHF	.483	.935	.904	.550	.682	.619	.705	.442	.663	.851

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Site Code : 22117355
Start Date : 6/8/2017
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:45 AM			08:00 AM		
+0 mins.	5	156	161	7	8	15	67	13	80
+15 mins.	15	172	187	3	6	9	55	4	59
+30 mins.	5	173	178	10	11	21	31	1	32
+45 mins.	4	146	150	2	5	7	45	3	48
Total Volume	29	647	676	22	30	52	198	21	219
% App. Total	4.3	95.7		42.3	57.7		90.4	9.6	
PHF	.483	.935	.904	.550	.682	.619	.739	.404	.684

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File Name : ECNSEMOPM
Site Code : 22117355
Start Date : 6/8/2017
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Groups Printed- Total Volume

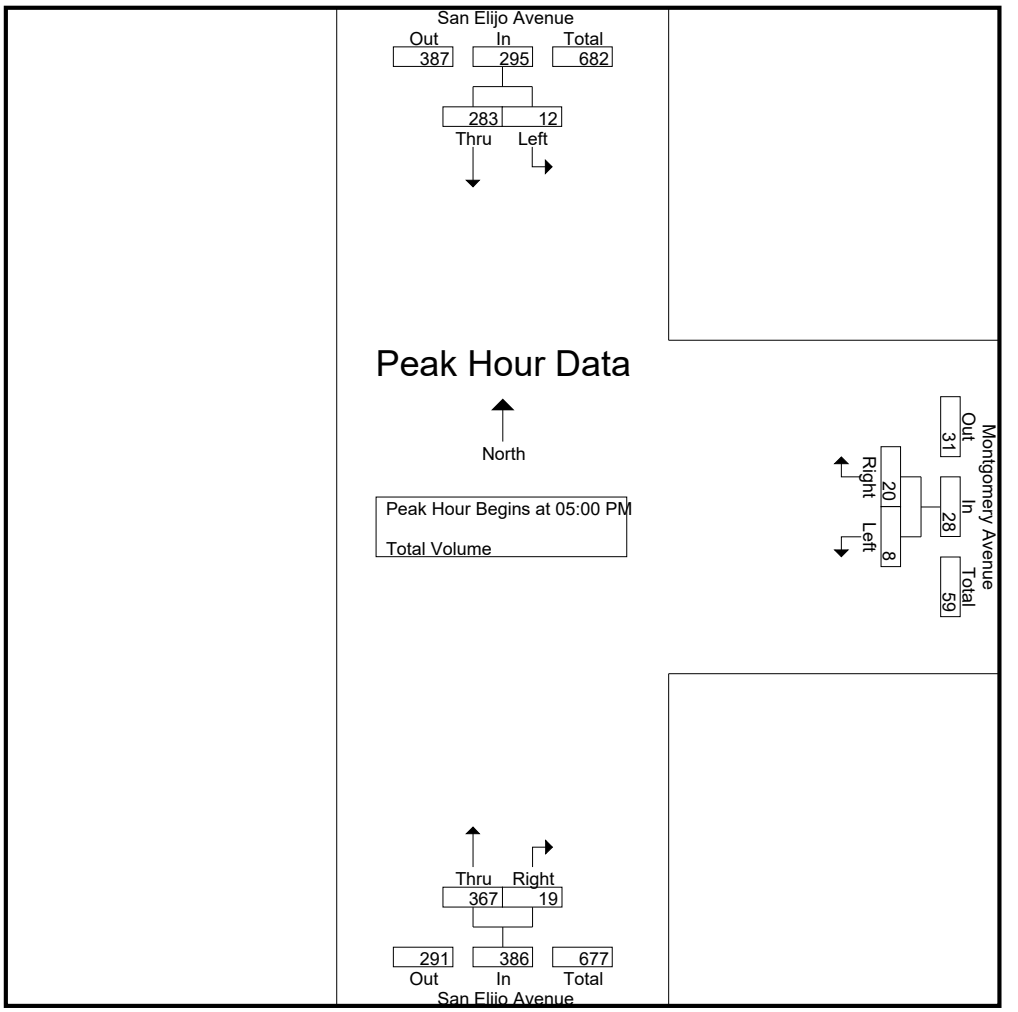
	San Elijo Avenue Southbound			Montgomery Avenue Westbound			San Elijo Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	4	71	75	2	4	6	105	6	111	192
04:15 PM	2	68	70	0	5	5	94	4	98	173
04:30 PM	4	54	58	3	7	10	89	3	92	160
04:45 PM	1	58	59	1	2	3	97	1	98	160
Total	11	251	262	6	18	24	385	14	399	685
05:00 PM	1	73	74	4	3	7	85	6	91	172
05:15 PM	5	73	78	3	6	9	90	2	92	179
05:30 PM	3	73	76	0	6	6	102	7	109	191
05:45 PM	3	64	67	1	5	6	90	4	94	167
Total	12	283	295	8	20	28	367	19	386	709
Grand Total	23	534	557	14	38	52	752	33	785	1394
Apprch %	4.1	95.9		26.9	73.1		95.8	4.2		
Total %	1.6	38.3	40	1	2.7	3.7	53.9	2.4	56.3	

	San Elijo Avenue Southbound			Montgomery Avenue Westbound			San Elijo Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	1	73	74	4	3	7	85	6	91	172
05:15 PM	5	73	78	3	6	9	90	2	92	179
05:30 PM	3	73	76	0	6	6	102	7	109	191
05:45 PM	3	64	67	1	5	6	90	4	94	167
Total Volume	12	283	295	8	20	28	367	19	386	709
% App. Total	4.1	95.9		28.6	71.4		95.1	4.9		
PHF	.600	.969	.946	.500	.833	.778	.900	.679	.885	.928

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City of Encinitas
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Site Code : 22117355
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:30 PM			04:00 PM		
+0 mins.	1	73	74	3	7	10	105	6	111
+15 mins.	5	73	78	1	2	3	94	4	98
+30 mins.	3	73	76	4	3	7	89	3	92
+45 mins.	3	64	67	3	6	9	97	1	98
Total Volume	12	283	295	11	18	29	385	14	399
% App. Total	4.1	95.9		37.9	62.1		96.5	3.5	
PHF	.600	.969	.946	.688	.643	.725	.917	.583	.899

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E/W: Mozart Avenue
Weather: Sunny

File Name : ECNSEMZAM
Site Code : 22117355
Start Date : 6/8/2017
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Groups Printed- Total Volume

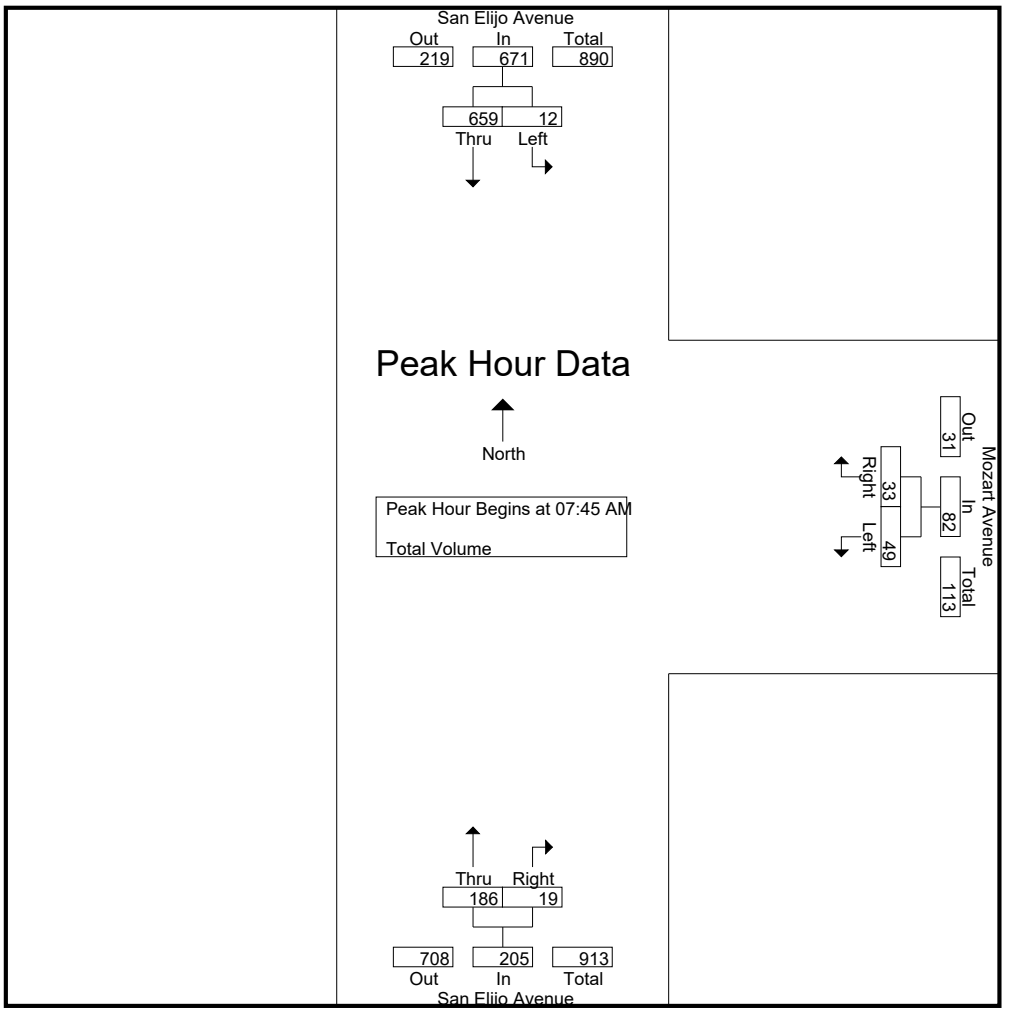
	San Elijo Avenue Southbound			Mozart Avenue Westbound			San Elijo Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	83	83	2	0	2	27	0	27	112
07:15 AM	1	150	151	2	0	2	31	1	32	185
07:30 AM	0	140	140	1	2	3	32	4	36	179
07:45 AM	1	159	160	5	1	6	37	3	40	206
Total	2	532	534	10	3	13	127	8	135	682
08:00 AM	7	160	167	18	16	34	60	7	67	268
08:15 AM	2	195	197	23	16	39	59	6	65	301
08:30 AM	2	145	147	3	0	3	30	3	33	183
08:45 AM	0	150	150	2	0	2	43	2	45	197
Total	11	650	661	46	32	78	192	18	210	949
Grand Total	13	1182	1195	56	35	91	319	26	345	1631
Apprch %	1.1	98.9		61.5	38.5		92.5	7.5		
Total %	0.8	72.5	73.3	3.4	2.1	5.6	19.6	1.6	21.2	

	San Elijo Avenue Southbound			Mozart Avenue Westbound			San Elijo Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	1	159	160	5	1	6	37	3	40	206
08:00 AM	7	160	167	18	16	34	60	7	67	268
08:15 AM	2	195	197	23	16	39	59	6	65	301
08:30 AM	2	145	147	3	0	3	30	3	33	183
Total Volume	12	659	671	49	33	82	186	19	205	958
% App. Total	1.8	98.2		59.8	40.2		90.7	9.3		
PHF	.429	.845	.852	.533	.516	.526	.775	.679	.765	.796

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City of Encinitas
N/S: San Elijo Avenue
E/W: Mozart Avenue
Weather: Sunny

File Name : ECNSEMZAM
Site Code : 22117355
Start Date : 6/8/2017
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:30 AM			08:00 AM		
+0 mins.	1	159	160	1	2	3	60	7	67
+15 mins.	7	160	167	5	1	6	59	6	65
+30 mins.	2	195	197	18	16	34	30	3	33
+45 mins.	2	145	147	23	16	39	43	2	45
Total Volume	12	659	671	47	35	82	192	18	210
% App. Total	1.8	98.2		57.3	42.7		91.4	8.6	
PHF	.429	.845	.852	.511	.547	.526	.800	.643	.784

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City of Encinitas
N/S: San Elijo Avenue
E/W: Mozart Avenue
Weather: Sunny

File Name : ECNSEMZPM
Site Code : 22117355
Start Date : 6/8/2017
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Groups Printed- Total Volume

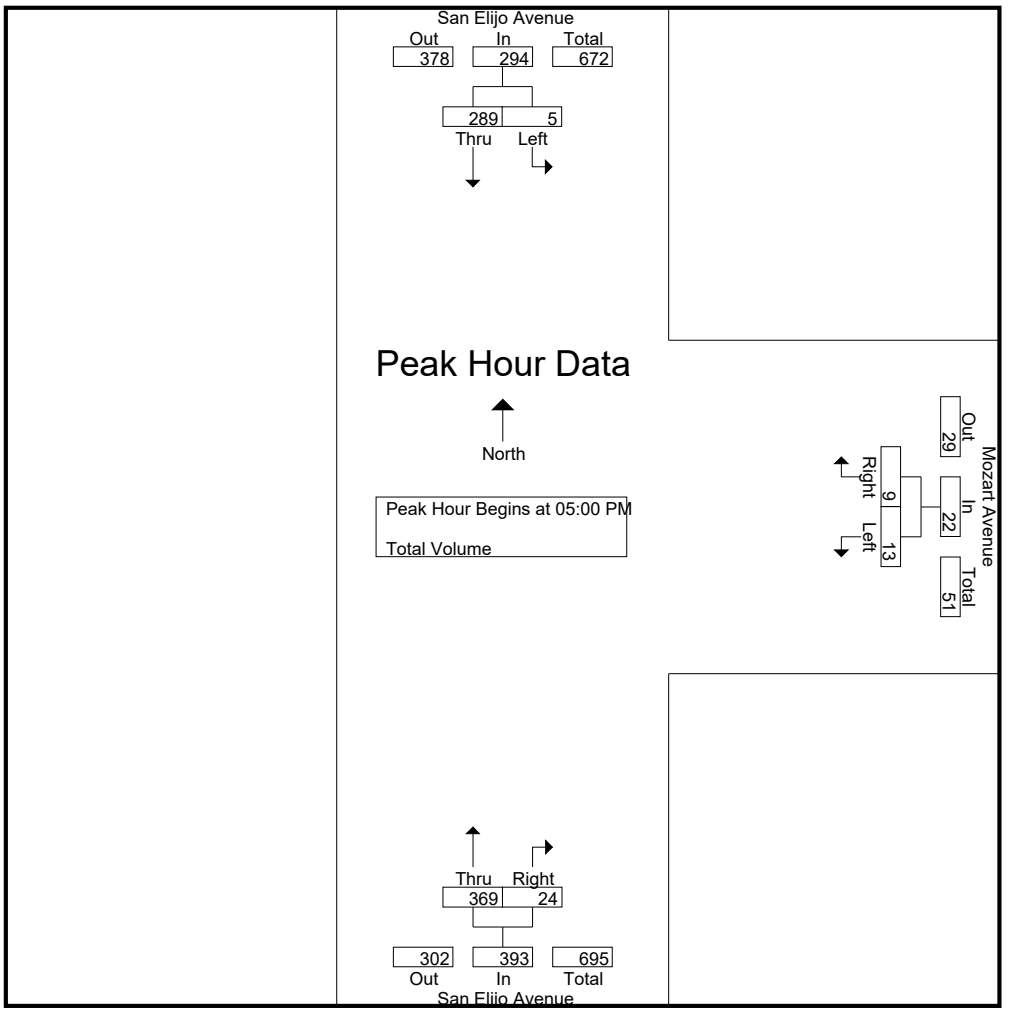
	San Elijo Avenue Southbound			Mozart Avenue Westbound			San Elijo Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	4	67	71	3	1	4	97	4	101	176
04:15 PM	3	67	70	4	1	5	101	3	104	179
04:30 PM	3	58	61	4	2	6	92	4	96	163
04:45 PM	0	56	56	7	3	10	96	5	101	167
Total	10	248	258	18	7	25	386	16	402	685
05:00 PM	1	76	77	4	2	6	90	5	95	178
05:15 PM	1	75	76	3	1	4	89	7	96	176
05:30 PM	1	67	68	2	6	8	101	7	108	184
05:45 PM	2	71	73	4	0	4	89	5	94	171
Total	5	289	294	13	9	22	369	24	393	709
Grand Total	15	537	552	31	16	47	755	40	795	1394
Apprch %	2.7	97.3		66	34		95	5		
Total %	1.1	38.5	39.6	2.2	1.1	3.4	54.2	2.9	57	

	San Elijo Avenue Southbound			Mozart Avenue Westbound			San Elijo Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	1	76	77	4	2	6	90	5	95	178
05:15 PM	1	75	76	3	1	4	89	7	96	176
05:30 PM	1	67	68	2	6	8	101	7	108	184
05:45 PM	2	71	73	4	0	4	89	5	94	171
Total Volume	5	289	294	13	9	22	369	24	393	709
% App. Total	1.7	98.3		59.1	40.9		93.9	6.1		
PHF	.625	.951	.955	.813	.375	.688	.913	.857	.910	.963

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City of Encinitas
N/S: San Elijo Avenue
E/W: Mozart Avenue
Weather: Sunny

File Name : ECNSEMZPM
Site Code : 22117355
Start Date : 6/8/2017
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:45 PM			04:00 PM		
+0 mins.	1	76	77	7	3	10	97	4	101
+15 mins.	1	75	76	4	2	6	101	3	104
+30 mins.	1	67	68	3	1	4	92	4	96
+45 mins.	2	71	73	2	6	8	96	5	101
Total Volume	5	289	294	16	12	28	386	16	402
% App. Total	1.7	98.3		57.1	42.9		96	4	
PHF	.625	.951	.955	.571	.500	.700	.955	.800	.966

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City of Encinitas
N/S: San Elijo Drive
E/W: Birmingham Drive
Weather: Clear

File Name : ENCSEBIAM
Site Code : 20218264
Start Date : 4/17/2018
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Groups Printed- Total Volume

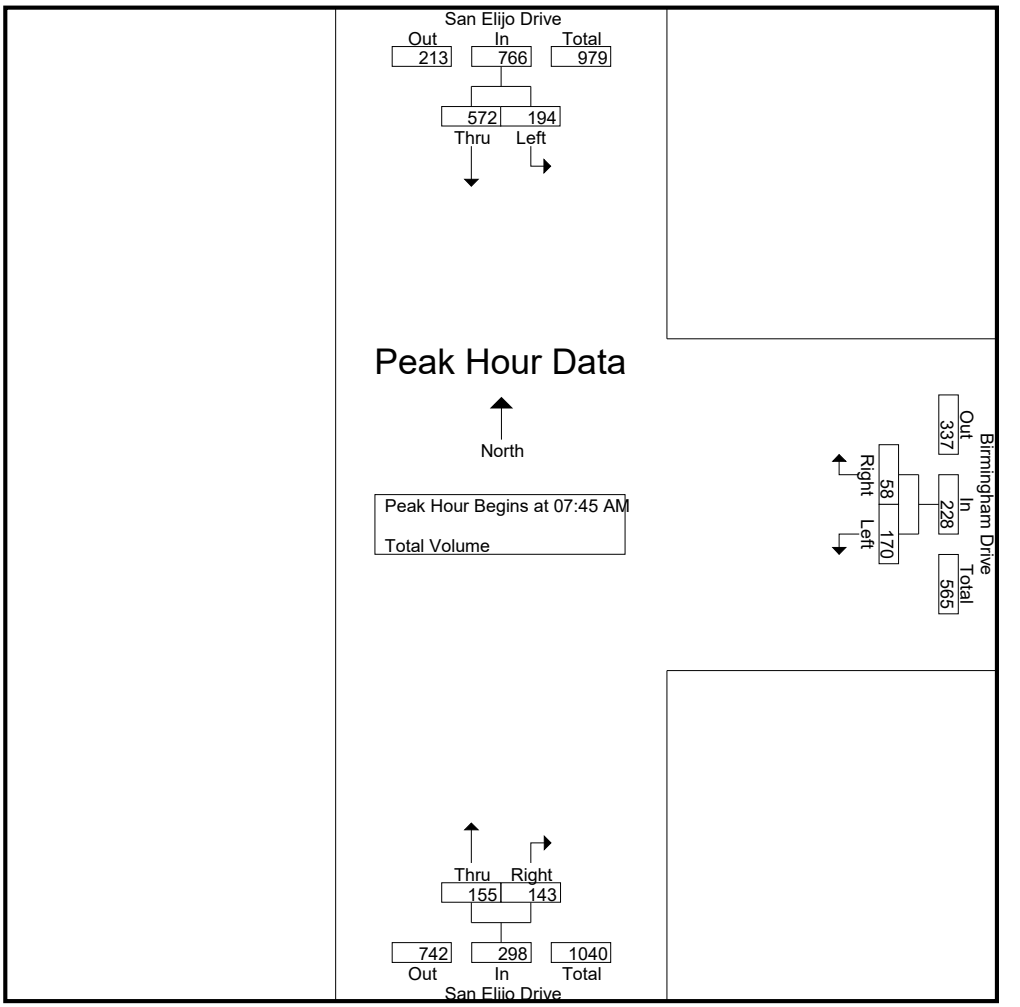
	San Elijo Drive Southbound			Birmingham Drive Westbound			San Elijo Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	20	73	93	34	12	46	23	19	42	181
07:15 AM	35	112	147	28	8	36	20	13	33	216
07:30 AM	43	111	154	31	8	39	31	31	62	255
07:45 AM	54	143	197	39	14	53	36	35	71	321
Total	152	439	591	132	42	174	110	98	208	973
08:00 AM	54	148	202	45	18	63	44	34	78	343
08:15 AM	54	170	224	46	16	62	39	37	76	362
08:30 AM	32	111	143	40	10	50	36	37	73	266
08:45 AM	42	114	156	36	18	54	34	31	65	275
Total	182	543	725	167	62	229	153	139	292	1246
Grand Total	334	982	1316	299	104	403	263	237	500	2219
Apprch %	25.4	74.6		74.2	25.8		52.6	47.4		
Total %	15.1	44.3	59.3	13.5	4.7	18.2	11.9	10.7	22.5	

	San Elijo Drive Southbound			Birmingham Drive Westbound			San Elijo Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	**54**	143	197	39	14	53	36	35	71	321
08:00 AM	54	148	202	45	**18**	**63**	**44**	34	**78**	343
08:15 AM	54	**170**	**224**	**46**	16	62	39	**37**	76	**362**
08:30 AM	32	111	143	40	10	50	36	37	73	266
Total Volume	194	572	766	170	58	228	155	143	298	1292
% App. Total	25.3	74.7		74.6	25.4		52	48		
PHF	.898	.841	.855	.924	.806	.905	.881	.966	.955	.892

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(951) 268-6268

City of Encinitas
N/S: San Elijo Drive
E/W: Birmingham Drive
Weather: Clear

File Name : ENCSEBIAM
Site Code : 20218264
Start Date : 4/17/2018
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM			08:00 AM			07:45 AM		
+0 mins.	43	111	154	45	**18**	**63**	36	35	71
+15 mins.	**54**	143	197	**46**	16	62	**44**	34	**78**
+30 mins.	54	148	202	40	10	50	39	**37**	76
+45 mins.	54	**170**	**224**	36	18	54	36	37	73
Total Volume	205	572	777	167	62	229	155	143	298
% App. Total	26.4	73.6		72.9	27.1		52	48	
PHF	.949	.841	.867	.908	.861	.909	.881	.966	.955

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City of Encinitas
N/S: San Elijo Drive
E/W: Birmingham Drive
Weather: Clear

File Name : ENCSEBIPM
Site Code : 20218264
Start Date : 4/17/2018
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Groups Printed- Total Volume

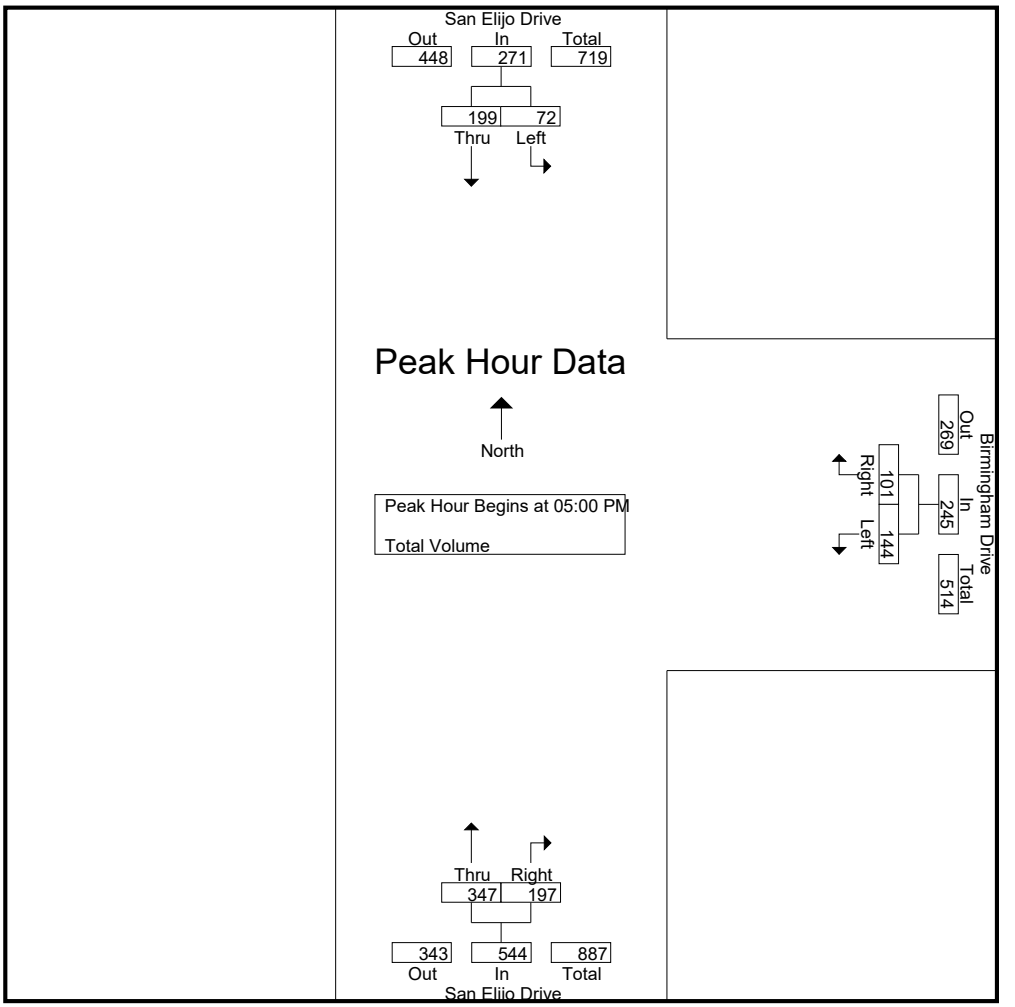
	San Elijo Drive Southbound			Birmingham Drive Westbound			San Elijo Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	16	42	58	33	17	50	67	41	108	216
04:15 PM	9	41	50	37	24	61	65	42	107	218
04:30 PM	9	47	56	31	18	49	61	39	100	205
04:45 PM	13	46	59	21	18	39	61	34	95	193
Total	47	176	223	122	77	199	254	156	410	832
05:00 PM	18	39	57	41	25	66	75	63	138	261
05:15 PM	24	53	77	33	24	57	103	36	139	273
05:30 PM	19	54	73	31	16	47	80	52	132	252
05:45 PM	11	53	64	39	36	75	89	46	135	274
Total	72	199	271	144	101	245	347	197	544	1060
Grand Total	119	375	494	266	178	444	601	353	954	1892
Apprch %	24.1	75.9		59.9	40.1		63	37		
Total %	6.3	19.8	26.1	14.1	9.4	23.5	31.8	18.7	50.4	

	San Elijo Drive Southbound			Birmingham Drive Westbound			San Elijo Drive Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	18	39	57	**41**	25	66	75	**63**	138	261
05:15 PM	**24**	53	**77**	33	24	57	**103**	36	**139**	273
05:30 PM	19	**54**	73	31	16	47	80	52	132	252
05:45 PM	11	53	64	39	**36**	**75**	89	46	135	**274**
Total Volume	72	199	271	144	101	245	347	197	544	1060
% App. Total	26.6	73.4		58.8	41.2		63.8	36.2		
PHF	.750	.921	.880	.878	.701	.817	.842	.782	.978	.967

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City of Encinitas
N/S: San Elijo Drive
E/W: Birmingham Drive
Weather: Clear

File Name : ENCSEBIPM
Site Code : 20218264
Start Date : 4/17/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	18	39	57	**41**	25	66	75	**63**	138
+15 mins.	**24**	53	**77**	33	24	57	**103**	36	**139**
+30 mins.	19	**54**	73	31	16	47	80	52	132
+45 mins.	11	53	64	39	**36**	**75**	89	46	135
Total Volume	72	199	271	144	101	245	347	197	544
% App. Total	26.6	73.4		58.8	41.2		63.8	36.2	
PHF	.750	.921	.880	.878	.701	.817	.842	.782	.978

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City of Encinitas
Montgomery Avenue
B/ San Elijo Avenue - Mozart Avenue
24 Hour Directional Volume Count

ECN002
Site Code: 221-17355

Start	6/8/2017	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	9			0	7				
12:15		0	8			0	7				
12:30		0	5			0	2				
12:45		0	7	0	29	0	12	0	28	0	57
01:00		0	10			0	6				
01:15		0	5			0	9				
01:30		0	4			0	7				
01:45		0	7	0	26	0	10	0	32	0	58
02:00		0	6			0	8				
02:15		0	8			0	5				
02:30		0	**16**			0	10				
02:45		1	**21**	1	51	0	14	0	37	1	88
03:00		0	**5**			0	5				
03:15		0	**19**			0	9				
03:30		0	13			0	8				
03:45		0	6	0	43	0	**10**	0	32	0	75
04:00		0	9			0	**7**				
04:15		0	7			0	**11**				
04:30		0	6			0	**11**				
04:45		0	6	0	28	0	6	0	35	0	63
05:00		0	5			1	4				
05:15		0	9			0	10				
05:30		1	11			1	9				
05:45		0	7	1	32	1	1	3	24	4	56
06:00		1	4			5	5				
06:15		2	3			1	6				
06:30		2	6			4	7				
06:45		4	4	9	17	2	4	12	22	21	39
07:00		8	1			6	3				
07:15		5	6			6	4				
07:30		7	4			9	3				
07:45		**16**	4	36	15	**24**	6	45	16	81	31
08:00		**13**	5			**28**	2				
08:15		**16**	2			**29**	2				
08:30		**10**	2			**12**	1				
08:45		7	1	46	10	11	0	80	5	126	15
09:00		8	3			2	1				
09:15		4	2			5	1				
09:30		2	0			7	1				
09:45		9	0	23	5	13	2	27	5	50	10
10:00		7	2			3	1				
10:15		5	0			3	0				
10:30		3	0			3	0				
10:45		6	0	21	2	5	1	14	2	35	4
11:00		4	0			5	0				
11:15		3	0			8	0				
11:30		7	0			2	0				
11:45		10	0	24	0	5	0	20	0	44	0
Total		161	258	161	258	201	238	201	238	362	496
Combined Total		419		419		439		439		858	
AM Peak	-	07:45	-	-	-	07:45	-	-	-	-	-
Vol.	-	55	-	-	-	93	-	-	-	-	-
P.H.F.		0.859				0.802					
PM Peak	-	-	02:30	-	-	-	03:45	-	-	-	-
Vol.	-	-	61	-	-	-	39	-	-	-	-
P.H.F.			0.726				0.696				
Percentage		38.4%	61.6%			45.8%	54.2%				
ADT/AADT		ADT 858		AADT 858							

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City of Encinitas
San Elijo Avenue
B/ Mozart Avenue - Montgomery Avenue
24 Hour Directional Volume Count

ECN001
Site Code: 221-17355

Start Time	6/8/2017 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	83			4	60				
12:15		1	71			4	74				
12:30		4	82			4	68				
12:45		4	85	11	321	2	77	14	279	25	600
01:00		1	87			1	67				
01:15		3	56			2	53				
01:30		2	72			0	79				
01:45		4	67	10	282	1	62	4	261	14	543
02:00		0	77			2	69				
02:15		0	88			0	67				
02:30		2	90			1	74				
02:45		0	76	2	331	0	**87**	3	297	5	628
03:00		1	98			2	**79**				
03:15		0	80			0	**84**				
03:30		0	97			1	**78**				
03:45		1	89	2	364	0	65	3	306	5	670
04:00		2	**109**			2	78				
04:15		1	**98**			4	64				
04:30		2	**98**			1	57				
04:45		2	**95**	7	400	4	65	11	264	18	664
05:00		1	94			3	82				
05:15		5	98			7	83				
05:30		10	89			10	60				
05:45		10	109	26	390	16	61	36	286	62	676
06:00		22	104			20	72				
06:15		25	93			29	59				
06:30		18	81			41	47				
06:45		34	90	99	368	66	57	156	235	255	603
07:00		27	72			112	34				
07:15		32	67			146	50				
07:30		37	65			155	32				
07:45		54	52	150	256	**158**	34	571	150	721	406
08:00		75	51			**186**	42				
08:15		54	42			**179**	40				
08:30		34	47			**162**	32				
08:45		52	46	215	186	121	22	648	136	863	322
09:00		43	25			104	27				
09:15		65	29			78	20				
09:30		49	29			70	13				
09:45		57	20	214	103	57	17	309	77	523	180
10:00		55	22			69	12				
10:15		68	19			56	13				
10:30		64	16			67	19				
10:45		76	11	263	68	50	7	242	51	505	119
11:00		**60**	11			61	5				
11:15		**60**	6			62	8				
11:30		**69**	9			83	3				
11:45		**87**	10	276	36	61	2	267	18	543	54
Total		1275	3105	1275	3105	2264	2360	2264	2360	3539	5465
Combined Total		4380		4380		4624		4624		9004	
AM Peak	-	11:00	-	-	-	07:45	-	-	-	-	-
Vol.	-	276	-	-	-	685	-	-	-	-	-
P.H.F.		0.793				0.921					
PM Peak	-	-	04:00	-	-	-	02:45	-	-	-	-
Vol.	-	-	400	-	-	-	328	-	-	-	-
P.H.F.			0.917				0.943				
Percentage		29.1%	70.9%			49.0%	51.0%				
ADT/AADT		ADT 9,004		AADT 9,004							

APPENDIX B

Speed Survey Data

Counts Unlimited, Inc.

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City of Encinitas
Montgomery Avenue
B/ San Elijo Avenue - Mozart Avenue
24 Hour Directional Speed Survey

ECN002
Site Code: 202-18264

Eastbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
04/17/18	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00	1	0	3	1	0	0	0	0	0	0	0	0	0	0	5
07:00	12	5	11	7	0	0	0	0	0	0	0	0	0	0	35
08:00	24	20	12	2	0	0	0	0	0	0	0	0	0	0	58
09:00	4	9	5	0	0	0	0	0	0	0	0	0	0	0	18
10:00	3	4	9	6	0	0	0	0	0	0	0	0	0	0	22
11:00	9	4	6	0	0	0	0	0	0	0	0	0	0	0	19
12 PM	3	7	4	6	0	0	0	0	0	0	0	0	0	0	20
13:00	2	5	7	3	0	0	0	0	0	0	0	0	0	0	17
14:00	29	15	5	0	0	0	0	0	0	0	0	0	0	0	49
15:00	8	12	6	5	1	0	0	0	0	0	0	0	0	0	32
16:00	6	5	5	5	0	0	0	0	0	0	0	0	0	0	21
17:00	4	7	9	10	0	0	0	0	0	0	0	0	0	0	30
18:00	1	1	5	2	1	0	0	0	0	0	0	0	0	0	10
19:00	3	1	6	1	0	0	0	0	0	0	0	0	0	0	11
20:00	0	1	4	0	0	0	0	0	0	0	0	0	0	0	5
21:00	1	1	2	1	0	0	0	0	0	0	0	0	0	0	5
22:00	1	1	2	2	0	0	0	0	0	0	0	0	0	0	6
23:00	1	1	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	112	100	102	52	2	0	0	0	0	0	0	0	0	0	368

Daily

15th Percentile :	7 MPH
50th Percentile :	18 MPH
85th Percentile :	24 MPH
95th Percentile :	28 MPH

Statistics

Mean Speed(Average) :	18 MPH
10 MPH Pace Speed :	16-25 MPH
Number in Pace :	202
Percent in Pace :	54.9%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

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City of Encinitas
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24 Hour Directional Speed Survey

ECN002
Site Code: 202-18264

Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
04/17/18	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00	5	1	3	2	0	0	0	0	0	0	0	0	0	0	11
07:00	39	7	6	1	1	0	0	0	0	0	0	0	0	0	54
08:00	63	18	5	0	1	0	0	0	0	0	0	0	0	0	87
09:00	27	2	9	1	0	0	0	0	0	0	0	0	0	0	39
10:00	6	5	12	2	0	0	0	0	0	0	0	0	0	0	25
11:00	6	4	13	3	0	0	0	0	0	0	0	0	0	0	26
12 PM	18	5	9	3	0	0	0	0	0	0	0	0	0	0	35
13:00	9	2	7	2	0	0	0	0	0	0	0	0	0	0	20
14:00	43	11	5	0	0	0	0	0	0	0	0	0	0	0	59
15:00	22	10	8	1	0	0	0	0	0	0	0	0	0	0	41
16:00	12	3	4	2	0	0	0	0	0	0	0	0	0	0	21
17:00	7	6	11	3	0	0	0	0	0	0	0	0	0	0	27
18:00	3	4	8	2	0	0	0	0	0	0	0	0	0	0	17
19:00	2	1	2	2	0	0	0	0	0	0	0	0	0	0	7
20:00	0	2	5	0	1	1	0	0	0	0	0	0	0	0	9
21:00	0	1	6	0	0	0	0	0	0	0	0	0	0	0	7
22:00	3	0	2	0	0	0	0	0	0	0	0	0	0	0	5
23:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
Total	266	82	117	25	3	1	0	0	0	0	0	0	0	0	494

Daily

15th Percentile :	4 MPH
50th Percentile :	13 MPH
85th Percentile :	23 MPH
95th Percentile :	25 MPH

Statistics

Mean Speed(Average) :	14 MPH
10 MPH Pace Speed :	16-25 MPH
Number in Pace :	199
Percent in Pace :	40.3%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

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City of Encinitas
Montgomery Avenue
B/ San Elijo Avenue - Mozart Avenue
24 Hour Directional Speed Survey

ECN002
Site Code: 202-18264

Eastbound, Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
04/17/18	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00	6	1	6	3	0	0	0	0	0	0	0	0	0	0	16
07:00	51	12	17	8	1	0	0	0	0	0	0	0	0	0	89
08:00	87	38	17	2	1	0	0	0	0	0	0	0	0	0	145
09:00	31	11	14	1	0	0	0	0	0	0	0	0	0	0	57
10:00	9	9	21	8	0	0	0	0	0	0	0	0	0	0	47
11:00	15	8	19	3	0	0	0	0	0	0	0	0	0	0	45
12 PM	21	12	13	9	0	0	0	0	0	0	0	0	0	0	55
13:00	11	7	14	5	0	0	0	0	0	0	0	0	0	0	37
14:00	72	26	10	0	0	0	0	0	0	0	0	0	0	0	108
15:00	30	22	14	6	1	0	0	0	0	0	0	0	0	0	73
16:00	18	8	9	7	0	0	0	0	0	0	0	0	0	0	42
17:00	11	13	20	13	0	0	0	0	0	0	0	0	0	0	57
18:00	4	5	13	4	1	0	0	0	0	0	0	0	0	0	27
19:00	5	2	8	3	0	0	0	0	0	0	0	0	0	0	18
20:00	0	3	9	0	1	1	0	0	0	0	0	0	0	0	14
21:00	1	2	8	1	0	0	0	0	0	0	0	0	0	0	12
22:00	4	1	4	2	0	0	0	0	0	0	0	0	0	0	11
23:00	1	1	1	2	0	0	0	0	0	0	0	0	0	0	5
Total	378	182	219	77	5	1	0	0	0	0	0	0	0	0	862

Daily

15th Percentile :	5 MPH
50th Percentile :	16 MPH
85th Percentile :	23 MPH
95th Percentile :	27 MPH

Statistics

Mean Speed(Average) :	16 MPH
10 MPH Pace Speed :	16-25 MPH
Number in Pace :	401
Percent in Pace :	46.5%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

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City of Encinitas
Mozart Avenue
B/ San Elijo Avenue - Montgomery Avenue
24 Hour Directional Speed Survey

ECN001
Site Code: 202-18264

Northbound

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
04/17/18	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
06:00	2	0	1	1	0	0	0	0	0	0	0	0	0	0	4
07:00	9	5	1	4	0	0	0	0	0	0	0	0	0	0	19
08:00	37	7	1	1	0	0	0	0	0	0	0	0	0	0	46
09:00	2	0	3	0	0	0	0	0	0	0	0	0	0	0	5
10:00	6	1	1	0	0	0	0	0	0	0	0	0	0	0	8
11:00	1	3	2	1	0	0	0	0	0	0	0	0	0	0	7
12 PM	4	3	2	0	0	0	0	0	0	0	0	0	0	0	9
13:00	10	1	2	1	0	0	0	0	0	0	0	0	0	0	14
14:00	35	6	3	1	0	0	0	0	0	0	0	0	0	0	45
15:00	13	8	6	1	0	0	0	0	0	0	0	0	0	0	28
16:00	9	13	9	1	1	0	0	0	0	0	0	0	0	0	33
17:00	3	10	7	2	0	0	0	0	0	0	0	0	0	0	22
18:00	12	6	7	1	0	0	0	0	0	0	0	0	0	0	26
19:00	3	2	6	0	0	0	0	0	0	0	0	0	0	0	11
20:00	2	1	3	0	0	0	0	0	0	0	0	0	0	0	6
21:00	5	1	3	1	0	0	0	0	0	0	0	0	0	0	10
22:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	153	68	58	15	2	0	0	0	0	0	0	0	0	0	296

Daily

15th Percentile :	4 MPH
50th Percentile :	14 MPH
85th Percentile :	22 MPH
95th Percentile :	25 MPH

Statistics

Mean Speed(Average) :	14 MPH
10 MPH Pace Speed :	16-25 MPH
Number in Pace :	126
Percent in Pace :	42.6%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

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Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
04/17/18	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	6	1	1	0	1	0	0	0	0	0	0	0	0	0	9
07:00	19	6	2	0	0	0	0	0	0	0	0	0	0	0	27
08:00	88	8	6	0	0	0	0	0	0	0	0	0	0	0	102
09:00	7	1	1	1	0	0	0	0	0	0	0	0	0	0	10
10:00	7	2	1	0	0	0	0	0	0	0	0	0	0	0	10
11:00	6	1	1	1	0	0	0	0	0	0	0	0	0	0	9
12 PM	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
13:00	9	4	0	2	0	0	0	0	0	0	0	0	0	0	15
14:00	45	3	3	0	0	0	0	0	0	0	0	0	0	0	51
15:00	32	9	5	1	1	0	0	0	0	0	0	0	0	0	48
16:00	25	5	4	0	0	0	0	0	0	0	0	0	0	0	34
17:00	21	4	0	2	0	0	0	0	0	0	0	0	0	0	27
18:00	24	2	0	1	0	0	0	0	0	0	0	0	0	0	27
19:00	5	0	1	1	0	0	0	0	0	0	0	0	0	0	7
20:00	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
21:00	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
22:00	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
23:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	311	50	25	10	2	1	0	0	0	0	0	0	0	0	399

Daily

15th Percentile :	2 MPH
50th Percentile :	9 MPH
85th Percentile :	17 MPH
95th Percentile :	23 MPH

Statistics

Mean Speed(Average) :	11 MPH
10 MPH Pace Speed :	6-15 MPH
Number in Pace :	207
Percent in Pace :	51.9%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

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Northbound, Southbound

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
04/17/18	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
06:00	8	1	2	1	1	0	0	0	0	0	0	0	0	0	13
07:00	28	11	3	4	0	0	0	0	0	0	0	0	0	0	46
08:00	125	15	7	1	0	0	0	0	0	0	0	0	0	0	148
09:00	9	1	4	1	0	0	0	0	0	0	0	0	0	0	15
10:00	13	3	2	0	0	0	0	0	0	0	0	0	0	0	18
11:00	7	4	3	2	0	0	0	0	0	0	0	0	0	0	16
12 PM	9	4	2	0	0	0	0	0	0	0	0	0	0	0	15
13:00	19	5	2	3	0	0	0	0	0	0	0	0	0	0	29
14:00	80	9	6	1	0	0	0	0	0	0	0	0	0	0	96
15:00	45	17	11	2	1	0	0	0	0	0	0	0	0	0	76
16:00	34	18	13	1	1	0	0	0	0	0	0	0	0	0	67
17:00	24	14	7	4	0	0	0	0	0	0	0	0	0	0	49
18:00	36	8	7	2	0	0	0	0	0	0	0	0	0	0	53
19:00	8	2	7	1	0	0	0	0	0	0	0	0	0	0	18
20:00	7	3	3	0	0	0	0	0	0	0	0	0	0	0	13
21:00	8	2	3	1	0	0	0	0	0	0	0	0	0	0	14
22:00	2	0	1	1	0	0	0	0	0	0	0	0	0	0	4
23:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	464	118	83	25	4	1	0	0	0	0	0	0	0	0	695

Daily

15th Percentile :	3 MPH
50th Percentile :	11 MPH
85th Percentile :	20 MPH
95th Percentile :	24 MPH

Statistics

Mean Speed(Average) :	12 MPH
10 MPH Pace Speed :	6-15 MPH
Number in Pace :	309
Percent in Pace :	44.5%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

APPENDIX C

HCM 2010 Methodology Reports

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	31	193	24	30	660
Future Vol, veh/h	23	31	193	24	30	660
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	34	210	26	33	717

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1006	223	0	0	236	0
Stage 1	223	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	267	817	-	-	1331	-
Stage 1	814	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	256	817	-	-	1331	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	432	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	423	1331	-
HCM Lane V/C Ratio	-	-	0.139	0.024	-
HCM Control Delay (s)	-	-	14.9	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	34	190	20	13	673
Future Vol, veh/h	50	34	190	20	13	673
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	37	207	22	14	732

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	977	217	0	0	228	0
Stage 1	217	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	278	823	-	-	1340	-
Stage 1	819	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	273	823	-	-	1340	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	454	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.7	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	374	1340	-
HCM Lane V/C Ratio	-	-	0.244	0.011	-
HCM Control Delay (s)	-	-	17.7	7.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.9	0	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	170	58	155	143	194	572
Future Volume (veh/h)	170	58	155	143	194	572
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	185	63	168	155	211	622
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	710	633	357	330	435	745
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	1583	893	824	1052	1863
Grp Volume(v), veh/h	185	63	0	323	211	622
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1717	1052	1863
Q Serve(g_s), s	3.1	1.1	0.0	6.3	8.3	13.5
Cycle Q Clear(g_c), s	3.1	1.1	0.0	6.3	14.6	13.5
Prop In Lane	1.00	1.00		0.48	1.00	
Lane Grp Cap(c), veh/h	710	633	0	687	435	745
V/C Ratio(X)	0.26	0.10	0.00	0.47	0.49	0.83
Avail Cap(c_a), veh/h	710	633	0	687	435	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	8.4	0.0	10.0	15.4	12.2
Incr Delay (d2), s/veh	0.9	0.3	0.0	2.3	3.8	10.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.5	0.0	3.4	2.9	9.1
LnGrp Delay(d),s/veh	9.9	8.7	0.0	12.3	19.2	22.8
LnGrp LOS	A	A		B	B	C
Approach Vol, veh/h	248		323			833
Approach Delay, s/veh	9.6		12.3			21.9
Approach LOS	A		B			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		22.5				22.5		22.5
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		18.0				18.0		18.0
Max Q Clear Time (g_c+I1), s		8.3				16.6		5.1
Green Ext Time (p_c), s		4.9				0.9		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	10	60	83	19	107	87
Future Vol, veh/h	10	60	83	19	107	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	65	90	21	116	95

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	428	101	0	0	111	0
Stage 1	101	-	-	-	-	-
Stage 2	327	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	584	954	-	-	1479	-
Stage 1	923	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	536	954	-	-	1479	-
Mov Cap-2 Maneuver	536	-	-	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	670	-	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	9.6	0	4.2
HCM LOS	A		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1479	-	858	-	-
HCM Lane V/C Ratio	0.079	-	0.089	-	-
HCM Control Delay (s)	7.6	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.3	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			↑	
Traffic Vol, veh/h	4	386	0	18	386	69	2	12	26	76	8	8
Future Vol, veh/h	4	386	0	18	386	69	2	12	26	76	8	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	420	0	20	420	75	2	13	28	83	9	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	495	0	0	420	0	0	933	962	420	945	924	457
Stage 1	-	-	-	-	-	-	428	428	-	496	496	-
Stage 2	-	-	-	-	-	-	505	534	-	449	428	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1069	-	-	1139	-	-	246	256	633	242	269	604
Stage 1	-	-	-	-	-	-	605	585	-	556	545	-
Stage 2	-	-	-	-	-	-	549	524	-	589	585	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1069	-	-	1139	-	-	231	249	633	217	261	604
Mov Cap-2 Maneuver	-	-	-	-	-	-	231	249	-	217	261	-
Stage 1	-	-	-	-	-	-	602	582	-	553	532	-
Stage 2	-	-	-	-	-	-	519	511	-	547	582	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	14.9	15.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	408	1069	-	-	1139	-	-	364
HCM Lane V/C Ratio	0.107	0.004	-	-	0.017	-	-	0.048
HCM Control Delay (s)	14.9	8.4	0	-	8.2	0	-	15.4
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	21	375	20	13	289
Future Vol, veh/h	9	21	375	20	13	289
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	23	408	22	14	314

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	760	418	0	0	429	0
Stage 1	418	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	374	635	-	-	1130	-
Stage 1	664	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	368	635	-	-	1130	-
Mov Cap-2 Maneuver	368	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	521	1130	-
HCM Lane V/C Ratio	-	-	0.063	0.013	-
HCM Control Delay (s)	-	-	12.4	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

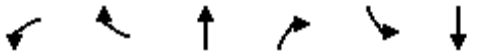
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	10	377	25	6	295
Future Vol, veh/h	14	10	377	25	6	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	11	410	27	7	321

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	757	423	0	0	437	0
Stage 1	423	-	-	-	-	-
Stage 2	334	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	375	631	-	-	1123	-
Stage 1	661	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	372	631	-	-	1123	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	661	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	449	1123	-
HCM Lane V/C Ratio	-	-	0.058	0.006	-
HCM Control Delay (s)	-	-	13.5	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	144	101	347	197	72	199
Future Volume (veh/h)	144	101	347	197	72	199
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	157	110	377	214	78	216
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	710	633	447	254	238	745
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	1583	1117	634	822	1863
Grp Volume(v), veh/h	157	110	0	591	78	216
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1751	822	1863
Q Serve(g_s), s	2.6	2.0	0.0	13.8	4.2	3.5
Cycle Q Clear(g_c), s	2.6	2.0	0.0	13.8	18.0	3.5
Prop In Lane	1.00	1.00		0.36	1.00	
Lane Grp Cap(c), veh/h	710	633	0	700	238	745
V/C Ratio(X)	0.22	0.17	0.00	0.84	0.33	0.29
Avail Cap(c_a), veh/h	710	633	0	700	238	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	8.7	0.0	12.2	20.4	9.2
Incr Delay (d2), s/veh	0.7	0.6	0.0	11.9	3.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.0	0.0	8.9	1.2	2.0
LnGrp Delay(d),s/veh	9.6	9.3	0.0	24.1	24.1	10.1
LnGrp LOS	A	A		C	C	B
Approach Vol, veh/h	267		591			294
Approach Delay, s/veh	9.5		24.1			13.8
Approach LOS	A		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		22.5				22.5		22.5
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		18.0				18.0		18.0
Max Q Clear Time (g_c+I1), s		15.8				20.0		4.6
Green Ext Time (p_c), s		1.2				0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	7	19	47	7	24	55
Future Vol, veh/h	7	19	47	7	24	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	21	51	8	26	60

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	167	55	0	0	59	0
Stage 1	55	-	-	-	-	-
Stage 2	112	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	823	1012	-	-	1545	-
Stage 1	968	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	809	1012	-	-	1545	-
Mov Cap-2 Maneuver	809	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	897	-	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	8.9	0	2.2
HCM LOS	A		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1545	-	948	-	-
HCM Lane V/C Ratio	0.017	-	0.03	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↑	
Traffic Vol, veh/h	13	475	4	19	372	53	4	3	33	35	5	8
Future Vol, veh/h	13	475	4	19	372	53	4	3	33	35	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	516	4	21	404	58	4	3	36	38	5	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	462	0	0	521	0	0	1029	1050	518	1040	1023	433
Stage 1	-	-	-	-	-	-	547	547	-	474	474	-
Stage 2	-	-	-	-	-	-	482	503	-	566	549	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1099	-	-	1045	-	-	212	227	558	208	236	623
Stage 1	-	-	-	-	-	-	521	517	-	571	558	-
Stage 2	-	-	-	-	-	-	565	541	-	509	516	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1099	-	-	1045	-	-	198	217	558	186	225	623
Mov Cap-2 Maneuver	-	-	-	-	-	-	198	217	-	186	225	-
Stage 1	-	-	-	-	-	-	512	508	-	561	543	-
Stage 2	-	-	-	-	-	-	537	526	-	465	507	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.4	14.3	15.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	429	1099	-	-	1045	-	-	371
HCM Lane V/C Ratio	0.101	0.013	-	-	0.02	-	-	0.038
HCM Control Delay (s)	14.3	8.3	0	-	8.5	0	-	15.1
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	33	205	26	32	701
Future Vol, veh/h	25	33	205	26	32	701
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	36	223	28	35	762

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1069	237	0	0	251	0
Stage 1	237	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	245	802	-	-	1314	-
Stage 1	802	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	234	802	-	-	1314	-
Mov Cap-2 Maneuver	234	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	407	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.9	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	392	1314	-
HCM Lane V/C Ratio	-	-	0.161	0.026	-
HCM Control Delay (s)	-	-	15.9	7.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	37	202	22	14	715
Future Vol, veh/h	54	37	202	22	14	715
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	40	220	24	15	777

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1040	232	0	0	243	0
Stage 1	232	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	255	807	-	-	1323	-
Stage 1	807	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	250	807	-	-	1323	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	429	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.4	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	348	1323	-
HCM Lane V/C Ratio	-	-	0.284	0.012	-
HCM Control Delay (s)	-	-	19.4	7.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	181	62	165	152	206	608
Future Volume (veh/h)	181	62	165	152	206	608
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	197	67	179	165	224	661
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	710	633	357	329	418	745
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	1583	894	824	1032	1863
Grp Volume(v), veh/h	197	67	0	344	224	661
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1717	1032	1863
Q Serve(g_s), s	3.4	1.2	0.0	6.8	9.4	14.9
Cycle Q Clear(g_c), s	3.4	1.2	0.0	6.8	16.1	14.9
Prop In Lane	1.00	1.00		0.48	1.00	
Lane Grp Cap(c), veh/h	710	633	0	687	418	745
V/C Ratio(X)	0.28	0.11	0.00	0.50	0.54	0.89
Avail Cap(c_a), veh/h	710	633	0	687	418	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.1	8.5	0.0	10.1	16.2	12.6
Incr Delay (d2), s/veh	1.0	0.3	0.0	2.6	4.9	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.6	0.0	3.6	3.2	10.6
LnGrp Delay(d),s/veh	10.1	8.8	0.0	12.7	21.0	27.3
LnGrp LOS	B	A		B	C	C
Approach Vol, veh/h	264		344			885
Approach Delay, s/veh	9.8		12.7			25.7
Approach LOS	A		B			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		22.5				22.5		22.5
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		18.0				18.0		18.0
Max Q Clear Time (g_c+I1), s		8.8				18.1		5.4
Green Ext Time (p_c), s		5.0				0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	11	64	89	21	114	93
Future Vol, veh/h	11	64	89	21	114	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	70	97	23	124	101

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	457	108	0	0	120	0
Stage 1	108	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	562	946	-	-	1468	-
Stage 1	916	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	512	946	-	-	1468	-
Mov Cap-2 Maneuver	512	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	650	-	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	9.7	0	4.2
HCM LOS	A		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1468	-	841	-	-
HCM Lane V/C Ratio	0.084	-	0.097	-	-
HCM Control Delay (s)	7.7	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.3	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			↑	
Traffic Vol, veh/h	5	410	0	20	410	74	3	13	28	81	9	9
Future Vol, veh/h	5	410	0	20	410	74	3	13	28	81	9	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	446	0	22	446	80	3	14	30	88	10	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	526	0	0	446	0	0	996	1027	446	1008	986	486
Stage 1	-	-	-	-	-	-	457	457	-	529	529	-
Stage 2	-	-	-	-	-	-	539	570	-	479	457	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1041	-	-	1114	-	-	223	234	612	219	248	581
Stage 1	-	-	-	-	-	-	583	568	-	533	527	-
Stage 2	-	-	-	-	-	-	527	505	-	568	568	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1041	-	-	1114	-	-	207	226	612	193	240	581
Mov Cap-2 Maneuver	-	-	-	-	-	-	207	226	-	193	240	-
Stage 1	-	-	-	-	-	-	580	565	-	530	512	-
Stage 2	-	-	-	-	-	-	494	491	-	523	565	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	16	16.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	374	1041	-	-	1114	-	-	340
HCM Lane V/C Ratio	0.128	0.005	-	-	0.02	-	-	0.058
HCM Control Delay (s)	16	8.5	0	-	8.3	0	-	16.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	23	398	22	14	307
Future Vol, veh/h	10	23	398	22	14	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	25	433	24	15	334

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	809	445	0	0	457	0
Stage 1	445	-	-	-	-	-
Stage 2	364	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	350	613	-	-	1104	-
Stage 1	646	-	-	-	-	-
Stage 2	703	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	344	613	-	-	1104	-
Mov Cap-2 Maneuver	344	-	-	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	691	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	496	1104	-
HCM Lane V/C Ratio	-	-	0.072	0.014	-
HCM Control Delay (s)	-	-	12.8	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	11	401	27	7	314
Future Vol, veh/h	15	11	401	27	7	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	12	436	29	8	341

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	808	451	0	0	465	0
Stage 1	451	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	350	608	-	-	1096	-
Stage 1	642	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	347	608	-	-	1096	-
Mov Cap-2 Maneuver	347	-	-	-	-	-
Stage 1	642	-	-	-	-	-
Stage 2	702	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	424	1096	-
HCM Lane V/C Ratio	-	-	0.067	0.007	-
HCM Control Delay (s)	-	-	14.1	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	153	108	369	210	77	212
Future Volume (veh/h)	153	108	369	210	77	212
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	166	117	401	228	84	230
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	710	633	446	254	210	745
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	1583	1116	635	794	1863
Grp Volume(v), veh/h	166	117	0	629	84	230
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1751	794	1863
Q Serve(g_s), s	2.8	2.2	0.0	15.1	2.9	3.8
Cycle Q Clear(g_c), s	2.8	2.2	0.0	15.1	18.0	3.8
Prop In Lane	1.00	1.00		0.36	1.00	
Lane Grp Cap(c), veh/h	710	633	0	700	210	745
V/C Ratio(X)	0.23	0.18	0.00	0.90	0.40	0.31
Avail Cap(c_a), veh/h	710	633	0	700	210	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	8.7	0.0	12.6	21.6	9.2
Incr Delay (d2), s/veh	0.8	0.6	0.0	16.6	5.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.1	0.0	10.4	1.4	2.1
LnGrp Delay(d),s/veh	9.7	9.4	0.0	29.3	27.2	10.3
LnGrp LOS	A	A		C	C	B
Approach Vol, veh/h	283		629			314
Approach Delay, s/veh	9.6		29.3			14.8
Approach LOS	A		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		22.5				22.5		22.5
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		18.0				18.0		18.0
Max Q Clear Time (g_c+I1), s		17.1				20.0		4.8
Green Ext Time (p_c), s		0.5				0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	8	21	50	8	26	59
Future Vol, veh/h	8	21	50	8	26	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	23	54	9	28	64

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	180	59	0	0	63	0
Stage 1	59	-	-	-	-	-
Stage 2	121	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	810	1007	-	-	1540	-
Stage 1	964	-	-	-	-	-
Stage 2	904	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	795	1007	-	-	1540	-
Mov Cap-2 Maneuver	795	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	887	-	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	9	0	2.3
HCM LOS	A		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1540	-	938	-	-
HCM Lane V/C Ratio	0.018	-	0.034	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↑	
Traffic Vol, veh/h	14	505	5	21	395	57	5	4	36	38	6	9
Future Vol, veh/h	14	505	5	21	395	57	5	4	36	38	6	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	549	5	23	429	62	5	4	39	41	7	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	491	0	0	554	0	0	1096	1119	552	1110	1091	460
Stage 1	-	-	-	-	-	-	582	582	-	506	506	-
Stage 2	-	-	-	-	-	-	514	537	-	604	585	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1072	-	-	1016	-	-	191	207	533	187	215	601
Stage 1	-	-	-	-	-	-	499	499	-	549	540	-
Stage 2	-	-	-	-	-	-	543	523	-	485	498	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1072	-	-	1016	-	-	176	197	533	164	204	601
Mov Cap-2 Maneuver	-	-	-	-	-	-	176	197	-	164	204	-
Stage 1	-	-	-	-	-	-	489	489	-	538	523	-
Stage 2	-	-	-	-	-	-	511	507	-	436	488	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.4	15.6	16.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	387	1072	-	-	1016	-	-	338
HCM Lane V/C Ratio	0.126	0.014	-	-	0.022	-	-	0.048
HCM Control Delay (s)	15.6	8.4	0	-	8.6	0	-	16.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	33	193	24	33	660
Future Vol, veh/h	23	33	193	24	33	660
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	36	210	26	36	717

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1012	223	0	0	236	0
Stage 1	223	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	265	817	-	-	1331	-
Stage 1	814	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	253	817	-	-	1331	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	428	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	427	1331	-
HCM Lane V/C Ratio	-	-	0.143	0.027	-
HCM Control Delay (s)	-	-	14.8	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

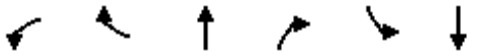
Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	34	190	30	13	673
Future Vol, veh/h	56	34	190	30	13	673
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	37	207	33	14	732

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	983	223	0	0	239	0
Stage 1	223	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	276	817	-	-	1328	-
Stage 1	814	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	271	817	-	-	1328	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	454	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	363	1328	-
HCM Lane V/C Ratio	-	-	0.269	0.011	-
HCM Control Delay (s)	-	-	18.5	7.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	170	63	160	143	197	575
Future Volume (veh/h)	170	63	160	143	197	575
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	185	68	174	155	214	625
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	710	633	364	324	430	745
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	1583	910	810	1047	1863
Grp Volume(v), veh/h	185	68	0	329	214	625
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1720	1047	1863
Q Serve(g_s), s	3.1	1.2	0.0	6.4	8.6	13.6
Cycle Q Clear(g_c), s	3.1	1.2	0.0	6.4	15.0	13.6
Prop In Lane	1.00	1.00		0.47	1.00	
Lane Grp Cap(c), veh/h	710	633	0	688	430	745
V/C Ratio(X)	0.26	0.11	0.00	0.48	0.50	0.84
Avail Cap(c_a), veh/h	710	633	0	688	430	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	8.5	0.0	10.0	15.6	12.2
Incr Delay (d2), s/veh	0.9	0.3	0.0	2.4	4.1	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.6	0.0	3.5	2.9	9.2
LnGrp Delay(d),s/veh	9.9	8.8	0.0	12.4	19.6	23.1
LnGrp LOS	A	A		B	B	C
Approach Vol, veh/h	253		329			839
Approach Delay, s/veh	9.6		12.4			22.2
Approach LOS	A		B			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		22.5				22.5		22.5
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		18.0				18.0		18.0
Max Q Clear Time (g_c+I1), s		8.4				17.0		5.1
Green Ext Time (p_c), s		4.9				0.7		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	10	62	88	19	110	94
Future Vol, veh/h	10	62	88	19	110	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	67	96	21	120	102

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	447	106	0	0	116	0
Stage 1	106	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	569	948	-	-	1473	-
Stage 1	918	-	-	-	-	-
Stage 2	720	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	520	948	-	-	1473	-
Mov Cap-2 Maneuver	520	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	658	-	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	9.7	0	4.1
HCM LOS	A		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1473	-	851	-	-
HCM Lane V/C Ratio	0.081	-	0.092	-	-
HCM Control Delay (s)	7.7	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.3	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			↑	
Traffic Vol, veh/h	4	386	0	18	386	79	2	12	26	82	8	8
Future Vol, veh/h	4	386	0	18	386	79	2	12	26	82	8	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	420	0	20	420	86	2	13	28	89	9	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	505	0	0	420	0	0	938	973	420	951	930	463
Stage 1	-	-	-	-	-	-	428	428	-	502	502	-
Stage 2	-	-	-	-	-	-	510	545	-	449	428	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1060	-	-	1139	-	-	244	252	633	240	267	599
Stage 1	-	-	-	-	-	-	605	585	-	552	542	-
Stage 2	-	-	-	-	-	-	546	519	-	589	585	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1060	-	-	1139	-	-	229	244	633	215	259	599
Mov Cap-2 Maneuver	-	-	-	-	-	-	229	244	-	215	259	-
Stage 1	-	-	-	-	-	-	602	582	-	549	528	-
Stage 2	-	-	-	-	-	-	516	506	-	547	582	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	15	15.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	404	1060	-	-	1139	-	-	362
HCM Lane V/C Ratio	0.108	0.004	-	-	0.017	-	-	0.048
HCM Control Delay (s)	15	8.4	0	-	8.2	0	-	15.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	22	375	20	14	289
Future Vol, veh/h	9	22	375	20	14	289
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	24	408	22	15	314

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	763	418	0	0	429	0
Stage 1	418	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	372	635	-	-	1130	-
Stage 1	664	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	366	635	-	-	1130	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	523	1130	-
HCM Lane V/C Ratio	-	-	0.064	0.013	-
HCM Control Delay (s)	-	-	12.4	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

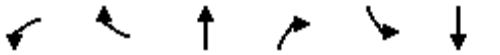
Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	10	377	27	6	295
Future Vol, veh/h	17	10	377	27	6	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	11	410	29	7	321

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	758	424	0	0	439	0
Stage 1	424	-	-	-	-	-
Stage 2	334	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	375	630	-	-	1121	-
Stage 1	660	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	372	630	-	-	1121	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	660	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	439	1121	-
HCM Lane V/C Ratio	-	-	0.067	0.006	-
HCM Control Delay (s)	-	-	13.8	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	144	102	348	197	74	201
Future Volume (veh/h)	144	102	348	197	74	201
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	157	111	378	214	80	218
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	710	633	447	253	237	745
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	1583	1118	633	821	1863
Grp Volume(v), veh/h	157	111	0	592	80	218
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1751	821	1863
Q Serve(g_s), s	2.6	2.0	0.0	13.8	4.2	3.6
Cycle Q Clear(g_c), s	2.6	2.0	0.0	13.8	18.0	3.6
Prop In Lane	1.00	1.00		0.36	1.00	
Lane Grp Cap(c), veh/h	710	633	0	700	237	745
V/C Ratio(X)	0.22	0.18	0.00	0.85	0.34	0.29
Avail Cap(c_a), veh/h	710	633	0	700	237	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	8.7	0.0	12.2	20.5	9.2
Incr Delay (d2), s/veh	0.7	0.6	0.0	12.0	3.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.0	0.0	8.9	1.2	2.0
LnGrp Delay(d),s/veh	9.6	9.3	0.0	24.2	24.3	10.2
LnGrp LOS	A	A		C	C	B
Approach Vol, veh/h	268		592			298
Approach Delay, s/veh	9.5		24.2			14.0
Approach LOS	A		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		22.5				22.5		22.5
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		18.0				18.0		18.0
Max Q Clear Time (g_c+I1), s		15.8				20.0		4.6
Green Ext Time (p_c), s		1.2				0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	7	20	49	7	25	57
Future Vol, veh/h	7	20	49	7	25	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	22	53	8	27	62

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	173	57	0	0	61	0
Stage 1	57	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	817	1009	-	-	1542	-
Stage 1	966	-	-	-	-	-
Stage 2	909	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	802	1009	-	-	1542	-
Mov Cap-2 Maneuver	802	-	-	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	8.9	0	2.2
HCM LOS	A		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1542	-	946	-	-
HCM Lane V/C Ratio	0.018	-	0.031	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↑	
Traffic Vol, veh/h	13	475	4	19	372	55	4	3	33	38	5	8
Future Vol, veh/h	13	475	4	19	372	55	4	3	33	38	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	516	4	21	404	60	4	3	36	41	5	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	464	0	0	521	0	0	1030	1052	518	1042	1025	434
Stage 1	-	-	-	-	-	-	547	547	-	476	476	-
Stage 2	-	-	-	-	-	-	483	505	-	566	549	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1097	-	-	1045	-	-	212	227	558	208	235	622
Stage 1	-	-	-	-	-	-	521	517	-	570	557	-
Stage 2	-	-	-	-	-	-	565	540	-	509	516	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1097	-	-	1045	-	-	198	217	558	186	225	622
Mov Cap-2 Maneuver	-	-	-	-	-	-	198	217	-	186	225	-
Stage 1	-	-	-	-	-	-	512	508	-	560	542	-
Stage 2	-	-	-	-	-	-	537	525	-	465	507	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.4	14.3	15.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	429	1097	-	-	1045	-	-	371
HCM Lane V/C Ratio	0.101	0.013	-	-	0.02	-	-	0.038
HCM Control Delay (s)	14.3	8.3	0	-	8.5	0	-	15.1
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	35	205	26	35	701
Future Vol, veh/h	25	35	205	26	35	701
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	38	223	28	38	762

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1075	237	0	0	251	0
Stage 1	237	-	-	-	-	-
Stage 2	838	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	243	802	-	-	1314	-
Stage 1	802	-	-	-	-	-
Stage 2	424	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	231	802	-	-	1314	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	403	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.9	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	395	1314	-
HCM Lane V/C Ratio	-	-	0.165	0.029	-
HCM Control Delay (s)	-	-	15.9	7.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

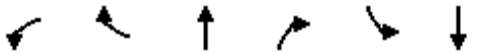
Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	37	202	32	14	715
Future Vol, veh/h	60	37	202	32	14	715
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	40	220	35	15	777

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1045	237	0	0	254	0
Stage 1	237	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	253	802	-	-	1311	-
Stage 1	802	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	248	802	-	-	1311	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	429	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	337	1311	-
HCM Lane V/C Ratio	-	-	0.313	0.012	-
HCM Control Delay (s)	-	-	20.5	7.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.3	0	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	181	67	170	152	209	611
Future Volume (veh/h)	181	67	170	152	209	611
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	197	73	185	165	227	664
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	710	633	364	324	413	745
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	1583	909	811	1027	1863
Grp Volume(v), veh/h	197	73	0	350	227	664
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1720	1027	1863
Q Serve(g_s), s	3.4	1.3	0.0	6.9	9.6	15.0
Cycle Q Clear(g_c), s	3.4	1.3	0.0	6.9	16.5	15.0
Prop In Lane	1.00	1.00		0.47	1.00	
Lane Grp Cap(c), veh/h	710	633	0	688	413	745
V/C Ratio(X)	0.28	0.12	0.00	0.51	0.55	0.89
Avail Cap(c_a), veh/h	710	633	0	688	413	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.1	8.5	0.0	10.2	16.4	12.6
Incr Delay (d2), s/veh	1.0	0.4	0.0	2.7	5.2	15.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.6	0.0	3.7	3.3	10.7
LnGrp Delay(d),s/veh	10.1	8.9	0.0	12.8	21.6	27.7
LnGrp LOS	B	A		B	C	C
Approach Vol, veh/h	270		350			891
Approach Delay, s/veh	9.8		12.8			26.1
Approach LOS	A		B			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		22.5				22.5		22.5
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		18.0				18.0		18.0
Max Q Clear Time (g_c+I1), s		8.9				18.5		5.4
Green Ext Time (p_c), s		5.0				0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	11	66	94	21	117	100
Future Vol, veh/h	11	66	94	21	117	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	72	102	23	127	109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	477	114	0	0	125	0
Stage 1	114	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	547	939	-	-	1462	-
Stage 1	911	-	-	-	-	-
Stage 2	704	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	497	939	-	-	1462	-
Mov Cap-2 Maneuver	497	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	9.8	0	4.1
HCM LOS	A		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1462	-	833	-	-
HCM Lane V/C Ratio	0.087	-	0.1	-	-
HCM Control Delay (s)	7.7	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.3	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↑	
Traffic Vol, veh/h	5	410	0	20	410	84	3	13	28	87	9	9
Future Vol, veh/h	5	410	0	20	410	84	3	13	28	87	9	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	446	0	22	446	91	3	14	30	95	10	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	537	0	0	446	0	0	1002	1037	446	1014	992	491
Stage 1	-	-	-	-	-	-	457	457	-	535	535	-
Stage 2	-	-	-	-	-	-	545	580	-	479	457	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1031	-	-	1114	-	-	221	231	612	217	246	578
Stage 1	-	-	-	-	-	-	583	568	-	529	524	-
Stage 2	-	-	-	-	-	-	523	500	-	568	568	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1031	-	-	1114	-	-	205	223	612	191	237	578
Mov Cap-2 Maneuver	-	-	-	-	-	-	205	223	-	191	237	-
Stage 1	-	-	-	-	-	-	580	565	-	526	509	-
Stage 2	-	-	-	-	-	-	490	486	-	523	565	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	16.1	16.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	371	1031	-	-	1114	-	-	336
HCM Lane V/C Ratio	0.129	0.005	-	-	0.02	-	-	0.058
HCM Control Delay (s)	16.1	8.5	0	-	8.3	0	-	16.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	24	398	22	15	307
Future Vol, veh/h	10	24	398	22	15	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	26	433	24	16	334

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	811	445	0	0	457	0
Stage 1	445	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	349	613	-	-	1104	-
Stage 1	646	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	343	613	-	-	1104	-
Mov Cap-2 Maneuver	343	-	-	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	689	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	498	1104	-
HCM Lane V/C Ratio	-	-	0.074	0.015	-
HCM Control Delay (s)	-	-	12.8	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

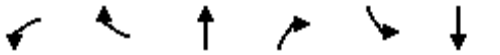
Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	11	401	29	7	314
Future Vol, veh/h	18	11	401	29	7	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	12	436	32	8	341

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	809	452	0	0	467	0
Stage 1	452	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	350	608	-	-	1094	-
Stage 1	641	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	347	608	-	-	1094	-
Mov Cap-2 Maneuver	347	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	702	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	414	1094	-
HCM Lane V/C Ratio	-	-	0.076	0.007	-
HCM Control Delay (s)	-	-	14.4	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	153	109	370	210	79	214
Future Volume (veh/h)	153	109	370	210	79	214
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	166	118	402	228	86	233
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	710	633	447	253	210	745
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	1583	1117	634	793	1863
Grp Volume(v), veh/h	166	118	0	630	86	233
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1751	793	1863
Q Serve(g_s), s	2.8	2.2	0.0	15.2	2.8	3.9
Cycle Q Clear(g_c), s	2.8	2.2	0.0	15.2	18.0	3.9
Prop In Lane	1.00	1.00		0.36	1.00	
Lane Grp Cap(c), veh/h	710	633	0	700	210	745
V/C Ratio(X)	0.23	0.19	0.00	0.90	0.41	0.31
Avail Cap(c_a), veh/h	710	633	0	700	210	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	8.8	0.0	12.7	21.7	9.3
Incr Delay (d2), s/veh	0.8	0.6	0.0	16.8	5.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.1	0.0	10.4	1.4	2.2
LnGrp Delay(d),s/veh	9.7	9.4	0.0	29.4	27.5	10.4
LnGrp LOS	A	A		C	C	B
Approach Vol, veh/h	284		630			319
Approach Delay, s/veh	9.6		29.4			15.0
Approach LOS	A		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		22.5				22.5		22.5
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		18.0				18.0		18.0
Max Q Clear Time (g_c+I1), s		17.2				20.0		4.8
Green Ext Time (p_c), s		0.5				0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	8	22	52	8	27	61
Future Vol, veh/h	8	22	52	8	27	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	24	57	9	29	66

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	186	61	0	0	65	0
Stage 1	61	-	-	-	-	-
Stage 2	125	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	803	1004	-	-	1537	-
Stage 1	962	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	787	1004	-	-	1537	-
Mov Cap-2 Maneuver	787	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	883	-	-	-	-	-

Approach	EB	SE	NW
HCM Control Delay, s	9	0	2.3
HCM LOS	A		

Minor Lane/Major Mvmt	NWL	NWT	EBLn1	SET	SER
Capacity (veh/h)	1537	-	935	-	-
HCM Lane V/C Ratio	0.019	-	0.035	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↑	
Traffic Vol, veh/h	14	505	5	21	395	59	5	4	36	41	6	9
Future Vol, veh/h	14	505	5	21	395	59	5	4	36	41	6	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	549	5	23	429	64	5	4	39	45	7	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	493	0	0	554	0	0	1097	1121	552	1111	1092	461
Stage 1	-	-	-	-	-	-	582	582	-	507	507	-
Stage 2	-	-	-	-	-	-	515	539	-	604	585	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1071	-	-	1016	-	-	191	206	533	186	215	600
Stage 1	-	-	-	-	-	-	499	499	-	548	539	-
Stage 2	-	-	-	-	-	-	543	522	-	485	498	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	1016	-	-	176	196	533	163	204	600
Mov Cap-2 Maneuver	-	-	-	-	-	-	176	196	-	163	204	-
Stage 1	-	-	-	-	-	-	489	489	-	537	522	-
Stage 2	-	-	-	-	-	-	511	506	-	436	488	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.4	15.6	16.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	387	1071	-	-	1016	-	-	338
HCM Lane V/C Ratio	0.126	0.014	-	-	0.022	-	-	0.048
HCM Control Delay (s)	15.6	8.4	0	-	8.6	0	-	16.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.2

Appendix 5.10-2 Parking Analysis

Appendices

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Memorandum

To/Attention	Placeworks	**Date**	July 25, 2018
From	IBI Group	**Project No**	115487
Subject	Cardiff Elementary School Modernization – Parking Analysis		

The Cardiff School District is proposing the Cardiff Elementary School Modernization Project. This project proposes to replace the school's older classrooms, multi-purpose room, food service, and other support spaces on the existing campus with new facilities that would accommodate the school's educational program. The school improvements would result in a net addition of one classroom and additional square feet of auditorium space, which would accommodate the existing school population. The project would also improve vehicle drop-off/pick-up zones in order to enhance the safety and onsite vehicular circulation. The purpose of this memorandum is to provide an overview of the project's proposed parking capacity to ensure adequate spaces are being provided for the additional classroom and auditorium space.

Cardiff Elementary School currently includes 19 classrooms and a total of 2,260 square feet of auditorium space with 28 off-street parking stalls. The proposed project would result in 20 classrooms and 3,141 square feet of auditorium space with 45 parking spaces (31 off-street spaces and 14 parallel spaces at drop-off/pick-up zones)[1] resulting in a net addition of 1 classroom, 881 square feet of auditorium space, and 17 parking spaces. The proposed parking locations are identified in the attached figure. In addition, there is approximately 104 existing on-street parking available along Montgomery Avenue, Mozart Avenue, and San Elijo Avenue.[2] The proposed project includes two driveways along Montgomery Avenue which will result in the removal of approximately two parking spaces.[3] Vehicles can enter the proposed parking lot and drop-off/pick-up zone where one-way entrances will be utilized for both which can be seen in the figure. The project will not effect on-street parking along San Elijo Avenue and Mozart Avenue.

The City of Encinitas Municipal Code has an established minimum parking requirement for Schools at 1.5 spaces for each classroom plus 1 space for each 100 square feet of auditorium floor area. The following table summarizes the existing and proposed parking capacity and the additional parking requirement to accommodate the net additions per City Code.

[1] Parallel spaces at drop-off/pick-up zones for Lot 1 and Lot 3 (9 spaces and 5 spaces, respectively) will be available for parking when not used for passenger loading
[2] On-Street spaces are estimated based on 22 feet of curb per parking space. Approximately 1,585 ft. of available curb space along both sides of Montgomery and Mozart Avenue. Approximately 705 ft of available curb space along San Elijo Avenue.
[3] Parking space removals are based on existing and proposed driveway widths and existing fire hydrant location

Unit Type	Municipal Code Requirement	Existing	Proposed	Net Gain	Required Spaces
Classroom	1.5 spaces/unit	19 rooms	20 rooms	1 room	2
Auditorium	1 space/100 sq ft	2,260 sq ft	3,141 sq ft	881 sq ft	9
				Total	**11**

Source: City of Encinitas Municipal Code 30.54.030 Schedule of Required Off-Street Parking

Based on the City of Encinitas Municipal Code, a total of 11 additional spaces are required for the additional classroom and auditorium space. The proposed project would result in 17 additional parking spaces (exceeding the required parking spaces by 6 parking stalls). The additional 17 parking spaces, as well as the on-street spaces, will be sufficient to meet the required parking spaces for the additional classroom and auditorium space.

Figure 2.2: Study Area Site Plan and Circulation

MUNICIPAL CODE PARKING REQUIREMENTS

1.5 Spaces for each classroom

1 for each 100 SF auditorium

Existing: 19 Classrooms
2,260 SF Auditorium

Proposed: 20 Classrooms
3,141 SF Auditorium

Net Gain: 1 Classroom
881 SF Auditorium

Additional Parking Req'd: 10.31 spaces = **11 spaces**

EXISTING ON-SITE PARKING

Lot 1 – 28 Parking Stalls (includes 2 HC)

Lot 2 – N/A

Total existing: 28 Parking Stalls

Total required: 28 + 11 = 39 Parking Stalls

PROPOSED ON-SITE PARKING

Lot 1 – 31 Parking Stalls (includes 2 HC and 2 future EV charging)

9 Parallel Parking Stalls at Drop Off

Lot 2 – 5 Parallel Parking Stalls at Drop Off

Total proposed: 45 Parking Stalls

Proposed exceeds required by 6 Parking Stalls



PARKING

Appendix 5.12-1 Energy Calculations

Appendices

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Construction Worker Trips

Activity	Number of Daily Trips[1]	Number of Days	Average Trip Distance (Miles)	TOTAL VMT (vehicle miles traveled)
2019 Construction Activity VMT				
1A – Demolition + Demo Haul	15	23	10.8	3,726
1A – Site Preparation	18	5	10.8	972
1A – Grading	15	3	10.8	486
1A – Utility Trenching	5	4	10.8	216
1A – Concrete Curb and Gutter	20	7	10.8	1,512
1A – Canopy Installation	5	7	10.8	216
1A – Paving	20	10	10.8	2,160
1A – Landscaping	9	6	10.8	583
1B – Site Preparation	18	15	10.8	2,916
1B – Rough Grading + Grading Haul	15	15	10.8	2,430
1B – Utility Trenching	5	15	10.8	810
1B – Building Construction[3]	43	84	10.8	39,010
			2019 Total	**55,037**
2020 Construction Activity VMT				
1B - Building Construction[3]	43	167	10.8	77,555
1B – Asphalt Paving	20	14	10.8	3,024
1B – Architectural Coating	9	16	10.8	1,555
2 – Demolition and Demo Haul	13	8	10.8	1,123
2 – Site Preparation	8	3	10.8	259
2 – Grading and Grading Haul	10	2	10.8	216
2 – Utility Trenching	5	3	10.8	162
2 – Building Construction	16	106	10.8	18,317
2 – Paving	15	7	10.8	1,134
2 – Architectural Coating	3	14	10.8	454
			2020 Total	**103,799**
TOTAL CONSTRUCTION WORKER TRIPS				**158,836**

Source: [1] Based on information provided by the project applicant.
[2] Based on CalEEMod defaults.
[3] Building construction would occur in 2019 and 2020. Approximately 33.47 and 66.53 percent of the trips would occur in 2019 and 2020, respectively.

Construction Vendor Trips

Activity	Number of Daily Trips[1]	Number of Days	Average Trip Distance (Miles)	TOTAL VMT (vehicle miles traveled)
2019 Construction Activity VMT				
1A – Demolition + Demo Haul	4	23	7.3	672
1A – Site Preparation	4	5	7.3	146
1A – Grading	4	3	7.3	88
1A – Utility Trenching	4	4	7.3	117
1A – Concrete Curb and Gutter	0	7	7.3	0
1A – Canopy Installation	0	7	7.3	0
1A – Paving	0	10	7.3	0
1A – Landscaping	0	6	7.3	0

Construction Vendor Trips

Activity	Number of Daily Trips[1]	Number of Days	Average Trip Distance (Miles)	TOTAL VMT (vehicle miles traveled)
1B – Site Preparation	4	15	7.3	438
1B – Rough Grading + Grading Haul	0	15	7.3	438
1B – Utility Trenching	4	15	7.3	438
1B – Building Construction[3]	17	84	7.3	10,424
			2019 Total	**12,761**
2020 Construction Activity VMT				
1B - Building Construction[3]	17	167	7.3	20,725
1B – Asphalt Paving	0	14	7.3	0
1B – Architectural Coating	0	16	7.3	0
2 – Demolition and Demo Haul	4	8	7.3	234
2 – Site Preparation	4	3	7.3	88
2 – Grading and Grading Haul	4	2	7.3	58
2 – Utility Trenching	4	3	7.3	88
2 – Building Construction	6	106	7.3	4,643
2 – Paving	0	7	7.3	0
2 – Architectural Coating	0	14	7.3	0
			2020 Total	**25,836**
TOTAL CONSTRUCTION WORKER TRIPS				**38,597**

Source: [1] Based on information provided by the project applicant.
[2] Based on CalEEMod defaults.
[3] Building construction would occur in 2019 and 2020. Approximately 33.47 and 66.53 percent of the trips would occur in 2019 and 2020, respectively.

Construction Haul Trips

Activity	Number of Daily Trips[1]	Number of Days	Average Trip Distance (Miles)	TOTAL VMT (vehicle miles traveled)
2019 Haul VMT				
Building Demolition Haul	7	23	20	3,060
Asphalt Demolition Haul	7	15	20	2,240
			2019 Total	**5,300**
2020 Haul VMT				
Site Preparation Soil Haul	23	8	20	3,740
Rough Grading Soil Haul	14	2	20	560
			2020 Total	**4,300**
TOTAL CONSTRUCTION HAUL TRIPS				**9,600**

Source: [1] Based on information provided by the project applicant.
[2] Based on CalEEMod defaults.

Off-Road Construction Equipment Fuel Use

Construction Activity	Units	Working Days	Gasoline Days	Gasoline gallons	Diesel Days	Diesel Gallons
2019 Construction Equipment Fuel Use						
1A – Demolition						
Concrete/Industrial Saws	1	23	22	17	1	3

Excavators	3	23	0	0	23	1,455
Rubber Tired Dozers	2	23	0	0	23	2,230
1A – Site Preparation						
Rubber Tired Dozers	3	5	0	0	5	727
Tractors/Loaders/Backhoes	4	5	0	0	5	161
1A – Grading						
Excavators	1	3	0	0	3	63
Graders	1	3	0	0	3	47
Rubber Tired Dozers	1	3	0	0	3	145
Tractors/Loaders/Backhoes	3	3	0	0	3	72
1A - Utility Trenching						
Tractors/Loaders/Backhoes	1	4	0	0	4	32
Skid Steer Loaders	1	4	1	1	3	11
1A – Canopy Installation						
Forklifts	3	4	3	90	1	38
Tractor/Loader/Backhoe	1	4	0	0	4	32
1A – Concrete Curb and Gutter						
Cement and Mortar Mixers	2	7	7	1	0	0
Pavers	1	7	0	0	7	57
Paving Equipment	2	7	7	3	0	3
Rollers	2	7	1	2	6	66
Tractors/Loaders/Backhoes	1	7	0	0	7	56
1B – Site Preparation						
Rubber Tired Dozers	3	15	0	0	15	2,181
Tractors/Loaders/Backhoes	4	15	0	1	15	482
1B – Rough Grading						
Excavators	1	15	0	0	15	316
Graders	1	15	0	0	15	235
Rubber Tired Dozers	1	15	0	0	15	727
Tractors/Loaders/Backhoes	3	15	0	1	15	361
1B – Utility Trenching						
Tractors/Loaders/Backhoes	2	15	0	0	15	241
Skid Steer Loaders	1	15	2	2	13	42
1B – Building Construction						
Cranes	1	84	2	8	82	1,734
Forklifts	3	84	62	1,885	22	796
Generator Sets	1	84	78	21	6	16
Tractors/Loaders/Backhoes	3	84	0	4	84	2,023
Welders	1	84	64	39	20	42
2020 Construction Equipment Fuel Use						
1B – Building Construction						
Cranes	1	167	5	16	162	3,448
Forklifts	3	167	124	3,750	43	1,582
Generator Sets	1	167	155	41	12	31
Tractors/Loaders/Backhoes	3	167	0	8	167	4,020
Welders	1	167	127	77	40	83
1B – Asphalt Paving						

Cement and Mortar Mixers	2	14	14	3	0	0
Pavers	1	14	0	0	14	113
Paving Equipment	2	14	14	7	0	6
Rollers	2	14	3	5	11	132
1B – Architectural Coating						
Air Compressors	1	16	9	10	7	43
2 – Demolition						
Concrete Industrial Saws	1	8	8	6	0	1
Excavators	1	8	0	0	8	169
Rubber Tires Dozers	3	8	0	0	8	1,162
2 – Site Preparation						
Graders	1	3	0	0	3	47
Scrapers	1	3	0	0	3	109
Tractors/Loaders/Backhoes	1	3	0	0	3	24
2 – Grading						
Graders	1	2	0	0	2	31
Rubber Tired Dozers	1	2	0	0	2	97
Tractors/Loaders/Backhoes	2	2	0	0	2	32
2 – Utility Trenching						
Tractor/Loader/Backhoe	1	3	0	0	3	24
Skid Steer Loader	1	3	0	0	3	8
2 – Building Construction						
Cranes	1	106	3	10	103	2,188
Forklifts	2	106	79	1,587	27	669
Generator Sets	1	106	98	26	8	20
Tractors/Loaders/Backhoes	1	106	0	2	106	851
Welders	3	106	80	147	26	158
2 – Asphalt Paving						
Cement and Mortar Mixers	1	7	7	1	0	0
Pavers	1	7	0	0	7	57
Paving Equipment	1	7	7	2	0	2
Rollers	2	7	1	2	6	66
Tractors/Loaders/Backhoes	1	7	0	0	7	56
2 – Architectural Coating						
Air Compressors	1	14	8	9	6	38
			Total Gasoline Gallons 2019	**2,075**	**Total Diesel Gallons 2019**	**14,394**
			Total Gasoline Gallons 2020	**5,709**	**Total Diesel Gallons 2020**	**15,267**

WORKER COMMUTE

Year	Gas		Diesel		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	kWh
2019	54,217	2,102	387	10	386	129
2020	102,057	3,856	752	18	878	293
Total	**156,274**	**5,959**	**1,139**	**28**	**1,264**	**423**

VENDOR AND HAULER ACTIVITIES

Year	Gas		Diesel	
	VMT	Gallons	VMT	Gallons
2019	956	206	17,105	2,520
2020	1,933	413	28,202	3,983
Total	**2,889**	**618**	**45,306**	**6,503**

OFF-ROAD EQUIPMENT

Year	Gasoline gallons	Diesel gallons
2018	0	0
2019	2,077	14,395
2020	5,707	15,267
Total	**7,784**	**29,661**

Construction Worker Trips Fuel Usage Worksheet

Note: Worker vehicles are "LD_Mix", which is 50% LDA, 25% LDT1, and 25% LDT2

Activity[1]	Daily trips[1,2]	Trip miles[2]	Percent in year	Trip days[1]	Annual VMT
2019					
1A Demolition	15	10.8	100.00%	23	3,726
1A Demo Haul	0	10.8	100.00%	23	0
1A Site Preparation	18	10.8	100.00%	5	972
1A Grading	15	10.8	100.00%	3	486
1A Trenching	5	10.8	100.00%	4	216
1A Concrete Curb & Gutter	20	10.8	100.00%	7	1,512
1B Site Preparation	18	10.8	100.00%	15	2,916
1A Canopy Installation	5	10.8	100.00%	4	216
1A Paving	20	10.8	100.00%	10	2,160
1B Rough Grading	15	10.8	100.00%	15	2,430
1B Grading Haul	0	10.8	100.00%	15	0
1A Landscaping	9	10.8	100.00%	6	583
1B Trenching	5	10.8	100.00%	15	810
1B Building Construction	43	10.8	33.47%	84	39,010
2020					
1B Building Construction	43	10.8	66.53%	167	77,555
1B Asphalt Paving	20	10.8	100.00%	14	3,024
1B Architectural Coating	9	10.8	100.00%	16	1,555
Demolition	13	10.8	100.00%	8	1,123
Demolition Haul	0	10.8	100.00%	8	0
Site Preparation	8	10.8	100.00%	3	259
Grading	10	10.8	100.00%	2	216
Grading Haul	0	10.8	100.00%	2	0
Utility Trenching	5	10.8	100.00%	3	162
Building Construction	16	10.8	100.00%	106	18,317
Paving	15	10.8	100.00%	7	1,134
Architectural Coating	3	10.8	100.00%	14	454

[1] *Based on information provided by the Applicant.*

[2] *Based on CalEEMod defaults.*

Year	LDA VMT	LDT1 VMT	LDT2 VMT	Gasoline[1]						Diesel[1]						Electricity[1]			
				LDA mpg	LDA gallons	LDT1 mpg	LDT1 gallons	LDT2 mpg	LDT2 gallons	LDA mpg	LDA gallons	LDT1 mpg	LDT1 gallons	LDT2 mpg	LDT2 gallons	LDA m/kWh	LDA kWh	LDT1 m/kWh	LDT1 kWh
2019	27,518	13,759	13,759	28.97	927	24.49	560	22.17	615	43.50	7	22.22	0	31.81	2	2.98	121	2.98	8
2020	51,899	25,950	25,950	29.72	1,700	25.04	1,033	22.86	1,123	44.47	13	22.36	0	32.65	5	2.99	268	2.99	25

Gasoline		Diesel		Electricity	
VMT	Gallons	VMT	Gallons	VMT	kWh
54,217	2,102	387	10	386	129
102,057	3,856	752	18	878	293
156,274	**5,959**	**1,139**	**28**	**1,264**	**423**

[1] *EMFAC2017 v1.0.2.*

Year	VMT from gasoline			VMT from diesel			VMT from electricity	
	LDA	LDT1	LDT2	LDA	LDT1	LDT2	LDA	LDT1
2019	97.59%	99.77%	99.10%	1.10%	0.05%	0.56%	1.31%	0.18%
2020	97.33%	99.67%	98.95%	1.12%	0.04%	0.62%	1.55%	0.29%

Appendix C: Evidence Used to Define the Average Number of KWH Required to Displace a Gallong of Gasoline

Table A 3: Evidence from U.S. Department of Energy and U.S. Environmental Protection Agency's fuel economy website[32]

Vehicle	Model year	Electric consumption	Gasoline fuel economy	Number of kWh that are equivalent to 1 gallon
Ford Fusion Energi & Ford C-Max Energi	2013	0.34 kWh per mile	43 mpg	14.6
Chevrolet Volt	2013	0.35 kWh per mile	37 mpg	12.9
Chevrolet Volt	2012	0.36 kWh per mile	37 mpg	13.3
Fisker Karma	2012	0.62 kWh per mile	20 mpg	12.4
Toyota Prius	2013	0.29 kWh per mile & 0.2 gal	50 mpg	13.1
Average for five models	-	-	-	13.3 +/- 0.8

Table A 5: Average power consumption per mile traveled over time for different PEV categories

Year range	2012- 2020	2020-2030	2030-2040	2040-2050	2050
Efficiency improvement per year	0.3%	0.8%	0.9%	0.9%	
Year	2012	2020	2030	2040	2050
Relative energy efficiency	1.000	0.976	0.901	0.823	0.752

https://www.fhwa.dot.gov/environment/climate_change/mitigation/publications_and_tools/ev_deployment/page08.cfm

0.34	14.6
0.35	12.9
0.36	13.3
0.34	13.3

2013	0.34
2014	0.34
2015	0.34
2016	0.34
2017	0.34
2018	0.34
2019	0.34
2020	0.33
2021	0.33
2022	0.33
2023	0.33
2024	0.32
2025	0.32
2026	0.32
2027	0.32
2028	0.31
2029	0.31
2030	0.31
2031	0.31
2032	0.30
2033	0.30
2034	0.30
2035	0.29

Vendor Trips Fuel Usage Worksheet

Note: Hauling vehicles are "HDT_Mix", which is 50% HHDT (T7), and 50% MHDT (T6)

Activity[1]	Daily trips[1,2]	Trip miles[2]	Percent in year	Trip days[1]	Annual VMT
2019					
1A Demolition	4	7.3	100.00%	23	672
1A Demo Haul	0	7.3	100.00%	23	0
1A Site Preparation	4	7.3	100.00%	5	146
1A Grading	4	7.3	100.00%	3	88
1A Trenching	4	7.3	100.00%	4	117
1A Concrete Curb & Gutter	0	7.3	100.00%	7	0
1B Site Preparation	4	7.3	100.00%	15	438
1A Canopy Installation	0	7.3	100.00%	4	0
1A Paving	0	7.3	100.00%	10	0
1B Rough Grading	4	7.3	100.00%	15	438
1B Grading Haul	0	7.3	100.00%	15	0
1A Landscaping	0	7.3	100.00%	6	0
1B Trenching	4	7.3	100.00%	15	438
1B Building Construction	17	7.3	33.47%	84	10,424
2020					
1B Building Construction	17	7.3	66.53%	167	20,725
1B Asphalt Paving	0	7.3	100.00%	14	0
1B Architectural Coating	0	7.3	100.00%	16	0
Demolition	4	7.3	100.00%	8	234
Demolition Haul	0	7.3	100.00%	8	0
Site Preparation	4	7.3	100.00%	3	88
Grading	4	7.3	100.00%	2	58
Grading Haul	0	7.3	100.00%	2	0
Utility Trenching	4	7.3	100.00%	3	88
Building Construction	6	7.3	100.00%	106	4,643
Paving	0	7.3	100.00%	7	0
Architectural Coating	0	7.3	100.00%	14	0

[1] *Based on information provided by the Applicant.*

[2] *Based on CalEEMod defaults.*

Year	HHDT (T7) VMT	MHDT (T6) VMT	Gasoline[1]				Diesel[1]			
			HHDT (T7) mpg	HHDT (T7) gallons	MHDT (T6) mpg	MHDT (T6) gallons	HHDT (T7) mpg	HHDT (T7) gallons	MHDT (T6) mpg	MHDT (T6) gallons
2019	6,380	6,380	3.83	2	4.65	203	6.10	1,044	8.94	608
2020	12,917	12,917	3.90	4	4.70	408	6.20	2,080	9.09	1,210

[1] *EMFAC2017 v1.0.2.*

Year	VMT from gasoline		VMT from diesel	
	HHDT (T7)	MHDT (T6)	HHDT (T7)	MHDT (T6)
2019	0.11%	14.78%	99.89%	85.22%
2020	0.11%	14.82%	99.89%	85.18%

VENDOR

Gasoline		Diesel	
VMT	Gallons	VMT	Gallons
950	204	11,810	1,653
1,928	411	23,906	3,290
2,878	**616**	**35,717**	**4,943**

VENDOR AND HAULING COMBINED

Gasoline		Diesel	
VMT	Gallons	VMT	Gallons
956	206	17,105	2,520
1,933	413	28,202	3,983
2,889	**618**	**45,306**	**6,503**

Truck Haul Trips Fuel Usage Worksheet

Note: Hauling vehicles are HHDT (T7)

Activity	Total trips
1A Demo Haul	153
1B Grading Haul	112
Demolition Haul	187
Grading Haul	28

Activity	Daily trips	Trip miles	Percent in year	Trip days	Annual VMT
2019					
Building Demolition Haul	7	20	100.00%	23	3,060
Asphalt Demolition Haul	7	20	100.00%	15	2,240
2020					
Site Preparation Soil Haul	23	20	100.00%	8	3,740
Rough Grading Soil Haul	14	20	100.00%	2	560

Year	VMT	Gasoline[1]		Diesel[1]	
		HHDT (T7) mpg	HHDT (T7) gallons	HHDT (T7) mpg	HHDT (T7) gallons
2018	0	3.76	0	6.00	0
2019	5,300	3.83	2	6.10	867
2020	4,300	3.90	1	6.20	692

Gasoline		Diesel	
VMT	Gallons	VMT	Gallons
0	0	0	0
6	2	5,294	867
5	1	4,295	692
11	**3**	**9,589**	**1,560**

[1] *EMFAC2017 v1.0.2.*

Year	VMT from gasoline	VMT from diesel
2019	0.11%	99.89%
2020	0.11%	99.89%

Off-Road Construction Equipment Fuel Usage Worksheet

Activity[1]	Number[1]	Percent in year	Working days[1]	Gasoline days[2]	Gasoline gallons[2]	Diesel days[2]	Diesel gallons[2]
2019							
1A Demolition							
Concrete/Industrial Saws	1	100.00%	23	22	17	1	3
Excavators	3	100.00%	23	0	0	23	1,455
Rubber Tired Dozers	2	100.00%	23	0	0	23	2,230
1A Site Preparation							
Rubber Tired Dozers	3	100.00%	5	0	0	5	727
Tractors/Loaders/Backhoes	4	100.00%	5	0	0	5	161
1A Grading							
Excavators	1	100.00%	3	0	0	3	63
Graders	1	100.00%	3	0	0	3	47
Rubber Tired Dozers	1	100.00%	3	0	0	3	145
Tractors/Loaders/Backhoes	3	100.00%	3	0	0	3	72
1A Utility Trenching							
Tractors/Loaders/Backhoes	1	100.00%	4	0	0	4	32
Skid Steer Loaders	1	100.00%	4	1	1	3	11
1A Canopy Installation							
Forklifts	3	100.00%	4	3	90	1	38
Tractors/Loaders/Backhoes	1	100.00%	4	0	0	4	32
1A Concrete Curb & Gutter							
Cement and Mortar Mixers	2	100.00%	7	7	1	0	0
Pavers	1	100.00%	7	0	0	7	57
Paving Equipment	2	100.00%	7	7	3	0	3
Rollers	2	100.00%	7	1	2	6	66
Tractors/Loaders/Backhoes	1	100.00%	7	0	0	7	56
1B Site Preparation							
Rubber Tired Dozers	3	100.00%	15	0	0	15	2,181
Tractors/Loaders/Backhoes	4	100.00%	15	0	1	15	482
1B Rough Grading							
Excavators	1	100.00%	15	0	0	15	316
Graders	1	100.00%	15	0	0	15	235
Rubber Tired Dozers	1	100.00%	15	0	0	15	727
Tractors/Loaders/Backhoes	3	100.00%	15	0	1	15	361
1B Utility Trenching							
Tractors/Loaders/Backhoes	2	100.00%	15	0	0	15	241
Skid Steer Loaders	1	100.00%	15	2	2	13	42
1B Building Construction							
Cranes	1	33.47%	84	2	8	82	1,734
Forklifts	3	33.47%	84	62	1,885	22	796
Generator Sets	1	33.47%	84	78	21	6	16
Tractors/Loaders/Backhoes	3	33.47%	84	0	4	84	2,023
Welders	1	33.47%	84	64	39	20	42
2020							
Building Construction							
Cranes	1	66.53%	167	5	16	162	3,448
Forklifts	3	66.53%	167	124	3,750	43	1,582
Generator Sets	1	66.53%	167	155	41	12	31
Tractors/Loaders/Backhoes	3	66.53%	167	0	8	167	4,020
Welders	1	66.53%	167	127	77	40	83
1B Asphalt Paving							
Cement and Mortar Mixers	2	100.00%	14	14	3	0	0
Pavers	1	100.00%	14	0	0	14	113
Paving Equipment	2	100.00%	14	14	7	0	6
Rollers	2	100.00%	14	3	5	11	132
1B Architectural Coating							
Air Compressors	1	100.00%	16	9	10	7	43
2 Demolition							
Concrete/Industrial Saws	1	100.00%	8	8	6	0	1
Excavators	1	100.00%	8	0	0	8	169
Rubber Tired Dozers	3	100.00%	8	0	0	8	1,162
2 Site Preparation							
Graders	1	100.00%	3	0	0	3	47
Scrapers	1	100.00%	3	0	0	3	109
Tractors/Loaders/Backhoes	1	100.00%	3	0	0	3	24
2 Grading							
Graders	1	100.00%	2	0	0	2	31

Rubber Tired Dozers	1	100.00%	2	0	0	2	97
Tractors/Loaders/Backhoes	2	100.00%	2	0	0	2	32
2 Utility Trenching							
Tractors/Loaders/Backhoes	1	100.00%	3	0	0	3	24
Skid Steer Loaders	1	100.00%	3	0	0	3	8
2 Building Construction							
Cranes	1	100.00%	106	3	10	103	2,188
Forklifts	2	100.00%	106	79	1,587	27	669
Generator Sets	1	100.00%	106	98	26	8	20
Tractors/Loaders/Backhoes	1	100.00%	106	0	2	106	851
Welders	3	100.00%	106	80	147	26	158
2 Asphalt Paving							
Cement and Mortar Mixers	1	100.00%	7	7	1	0	0
Pavers	1	100.00%	7	0	0	7	57
Paving Equipment	1	100.00%	7	7	2	0	2
Rollers	2	100.00%	7	1	2	6	66
Tractors/Loaders/Backhoes	1	100.00%	7	0	0	7	56
2 Architectural Coating							
Air Compressors	1	100.00%	14	8	9	6	38

Year	Gasoline gallons	Diesel gallons
2019	2,077	14,395
2020	5,707	15,267
Total	**7,784**	**29,661**

[1] Based on information provided.

[2] EMFAC2017 v.1.0.2.

EMFAC Fuel Usage: Year 2019

Vehicle type	Gasoline			Diesel			Natural Gas			Electricity
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day
All other buses	0	0	#DIV/0!	29,427	3,487	8.44	0	0	#DIV/0!	0
LDA	52,523,886	1,813,130	28.97	591,969	13,608	43.50	0	0	#DIV/0!	706,843
LDT1	5,870,445	239,667	24.49	2,721	122	22.22	0	0	#DIV/0!	10,565
LDT2	18,303,424	825,540	22.17	104,229	3,276	31.81	0	0	#DIV/0!	62,741
LHD1	1,338,981	162,786	8.23	1,159,049	65,699	17.64	0	0	#DIV/0!	0
LHD2	194,787	27,093	7.19	398,691	25,329	15.74	0	0	#DIV/0!	0
MCY	671,702	18,404	36.50	0	0	#DIV/0!	0	0	#DIV/0!	0
MDV	11,949,483	647,368	18.46	275,255	11,367	24.21	0	0	#DIV/0!	12,089
MH	105,761	22,846	4.63	35,905	3,760	9.55	0	0	#DIV/0!	0
Motor coach	0	0	#DIV/0!	23,498	3,862	6.08	0	0	#DIV/0!	0
OBUS	69,331	15,058	4.60	0	0	#DIV/0!	0	0	#DIV/0!	0
PTO	0	0	#DIV/0!	26,736	5,681	4.71	0	0	#DIV/0!	0
SBUS	9,805	1,069	9.17	75,145	9,598	7.83	0	0	#DIV/0!	0
T6	189,550	40,724	4.65	1,093,117	122,312	8.94	0	0	#DIV/0!	0
T7	1,990	520	3.83	1,781,260	291,858	6.10	27,663	11,542	2.40	0
UBUS	37,246	6,926	5.38	2,628	555	4.73	104,275	27,020	3.86	0
Total	**91,266,393**	**3,821,129**	**23.88**	**5,599,631**	**560,516**	**9.99**	**131,938**	**38,562**	**3.42**	**792,238**

1,325,931,638

1.01%

81875000 13415168.5

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: Orange
Calendar Year: 2019
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	Fuel_Consumption
San Diego (SD)	2019	All Other Buses	Aggregated	Aggregated	DSL	559.1868303	29426.79953	4697.169374	3.487410705
San Diego (SD)	2019	LDA	Aggregated	Aggregated	GAS	1344406.247	52523886.14	6338460.676	1813.1298
San Diego (SD)	2019	LDA	Aggregated	Aggregated	DSL	15026.56773	591969.3053	70444.74535	13.60798221
San Diego (SD)	2019	LDA	Aggregated	Aggregated	ELEC	18333.83525	706843.1707	91793.86049	0
San Diego (SD)	2019	LDT1	Aggregated	Aggregated	GAS	164988.733	5870445.074	748122.6427	239.6669216
San Diego (SD)	2019	LDT1	Aggregated	Aggregated	DSL	144.4296352	2721.383158	486.9054988	0.122472253
San Diego (SD)	2019	LDT1	Aggregated	Aggregated	ELEC	286.012665	10565.01905	1408.284212	0
San Diego (SD)	2019	LDT2	Aggregated	Aggregated	GAS	492012.6637	18303424.09	2287564.406	825.5396042
San Diego (SD)	2019	LDT2	Aggregated	Aggregated	DSL	2366.231951	104229.3644	11677.61487	3.276485661
San Diego (SD)	2019	LDT2	Aggregated	Aggregated	ELEC	1765.558567	62740.84285	9016.81681	0
San Diego (SD)	2019	LHD1	Aggregated	Aggregated	GAS	36760.80522	1338981.061	547681.2242	162.7858714
San Diego (SD)	2019	LHD1	Aggregated	Aggregated	DSL	30036.17125	1159049.221	377817.2488	65.69863562
San Diego (SD)	2019	LHD2	Aggregated	Aggregated	GAS	5297.23272	194787.1886	78920.87465	27.09307775
San Diego (SD)	2019	LHD2	Aggregated	Aggregated	DSL	10008.64946	398690.6184	125896.2193	25.32888227
San Diego (SD)	2019	MCY	Aggregated	Aggregated	GAS	77891.01626	671702.3837	155782.0325	18.4036948
San Diego (SD)	2019	MDV	Aggregated	Aggregated	GAS	325016.4395	11949483.27	1497366.159	647.3676997
San Diego (SD)	2019	MDV	Aggregated	Aggregated	DSL	6169.32466	275254.8377	30234.12248	11.36735973
San Diego (SD)	2019	MDV	Aggregated	Aggregated	ELEC	336.744095	12089.25876	1723.694329	0
San Diego (SD)	2019	MH	Aggregated	Aggregated	GAS	12216.59668	105760.8051	1222.148331	22.84575502
San Diego (SD)	2019	MH	Aggregated	Aggregated	DSL	3756.201522	35904.97708	375.6201522	3.760271512
San Diego (SD)	2019	Motor Coach	Aggregated	Aggregated	DSL	186.2157401	23497.93031	2718.749806	3.861856838
San Diego (SD)	2019	OBUS	Aggregated	Aggregated	GAS	1285.754091	69330.87235	25725.36785	15.05772279
San Diego (SD)	2019	PTO	Aggregated	Aggregated	DSL	0	26735.81766	0	5.680721932
San Diego (SD)	2019	SBUS	Aggregated	Aggregated	GAS	181.7676098	9804.980315	727.0704393	1.068996654
San Diego (SD)	2019	SBUS	Aggregated	Aggregated	DSL	2398.072352	75144.66691	27673.42246	9.597623008
San Diego (SD)	2019	T6 Ag	Aggregated	Aggregated	DSL	34.90319122	455.0663961	153.5740414	0.050947361
San Diego (SD)	2019	T6 CAIRP heavy	Aggregated	Aggregated	DSL	80.36539463	16108.5545	1173.334762	1.518555353
San Diego (SD)	2019	T6 CAIRP small	Aggregated	Aggregated	DSL	42.67873333	2275.634914	623.1095066	0.226828618
San Diego (SD)	2019	T6 instate construction heavy	Aggregated	Aggregated	DSL	663.6714573	44630.12639	3000.432855	5.672361097
San Diego (SD)	2019	T6 instate construction small	Aggregated	Aggregated	DSL	2315.076779	116728.9836	10466.37211	14.80172043
San Diego (SD)	2019	T6 instate heavy	Aggregated	Aggregated	DSL	2649.770957	353882.5753	30577.98947	37.38888243
San Diego (SD)	2019	T6 instate small	Aggregated	Aggregated	DSL	10344.46265	506929.2125	119373.6647	55.87969592
San Diego (SD)	2019	T6 OOS heavy	Aggregated	Aggregated	DSL	46.11926841	9262.898491	673.3413188	0.87312007
San Diego (SD)	2019	T6 OOS small	Aggregated	Aggregated	DSL	24.71980098	1310.254606	360.9090944	0.130673323
San Diego (SD)	2019	T6 Public	Aggregated	Aggregated	DSL	2347.324972	36329.45365	7120.219075	5.157253536
San Diego (SD)	2019	T6 utility	Aggregated	Aggregated	DSL	311.4471011	5204.712395	3581.641663	0.612217151
San Diego (SD)	2019	T6TS	Aggregated	Aggregated	GAS	3469.654951	189550.1207	69420.85627	40.72352851
San Diego (SD)	2019	T7 Ag	Aggregated	Aggregated	DSL	14.28251547	262.0509297	62.84306809	0.045481937
San Diego (SD)	2019	T7 CAIRP	Aggregated	Aggregated	DSL	1709.59245	321070.7891	24960.04978	49.54740282
San Diego (SD)	2019	T7 CAIRP construction	Aggregated	Aggregated	DSL	168.9670227	32058.20748	763.8933403	5.777942744
San Diego (SD)	2019	T7 NNOOS	Aggregated	Aggregated	DSL	1918.346757	391410.5823	28007.86265	58.83671776
San Diego (SD)	2019	T7 NOOS	Aggregated	Aggregated	DSL	673.466731	126144.7324	9832.614272	19.90664485
San Diego (SD)	2019	T7 other port	Aggregated	Aggregated	DSL	491.7445351	79503.97902	3737.258467	14.92518608
San Diego (SD)	2019	T7 POLA	Aggregated	Aggregated	DSL	218.6770454	26218.46382	1661.945545	5.147175417
San Diego (SD)	2019	T7 Public	Aggregated	Aggregated	DSL	1471.378401	29820.44622	4463.181144	6.013991694
San Diego (SD)	2019	T7 Single	Aggregated	Aggregated	DSL	2055.209502	134646.9218	23716.83271	23.01108629
San Diego (SD)	2019	T7 single construction	Aggregated	Aggregated	DSL	1143.709504	79530.51628	5170.666198	15.28934902
San Diego (SD)	2019	T7 SWCV	Aggregated	Aggregated	DSL	730.6600078	29853.58407	2849.574031	13.46932465
San Diego (SD)	2019	T7 SWCV	Aggregated	Aggregated	NG	680.6811335	27662.88817	2654.656421	11.5419868
San Diego (SD)	2019	T7 tractor	Aggregated	Aggregated	DSL	3290.612789	462625.6334	41790.78242	66.73526914
San Diego (SD)	2019	T7 tractor construction	Aggregated	Aggregated	DSL	936.0035236	65605.674	4231.635538	12.70231953
San Diego (SD)	2019	T7 utility	Aggregated	Aggregated	DSL	123.6167341	2508.905369	1421.592442	0.450545463
San Diego (SD)	2019	T7IS	Aggregated	Aggregated	GAS	22.61914946	1990.278482	452.5639424	0.520196015
San Diego (SD)	2019	UBUS	Aggregated	Aggregated	GAS	354.5052362	37246.48827	1418.020945	6.925770879
San Diego (SD)	2019	UBUS	Aggregated	Aggregated	DSL	25	2628.078835	100	0.555482686
San Diego (SD)	2019	UBUS	Aggregated	Aggregated	NG	926.1724999	104275.3376	3704.69	27.02021675

OFFROAD2007 Fuel Usage: Year 2019

	Gasoline			Diesel		
	Total population	Total fuel use	Fuel use per day per unit	Total population	Total fuel use	Fuel use per day per unit
Air Compressors	1,082	1,167	1.079	777	5,012	6.452
Bore/Drill rigs	33	33	1.005	120	2,141	17.823
Cement and Mortar Mixers	2,983	293	0.098	68	18	0.272
Concrete/Industrial Saws	431	328	0.760	12	53	4.245
Cranes	7	23	3.332	229	4,863	21.260
Excavators	0	0	#DIV/0!	2,151	45,337	21.082
Forklifts	1,000	10,106	10.101	350	4,268	12.185
Generator Sets	25,135	6,682	0.266	1,993	5,109	2.563
Graders	0	0	#DIV/0!	753	11,797	15.662
Pavers	0	0	#DIV/0!	331	2,681	8.112
Paving Equipment	2,142	531	0.248	68	488	7.199
Rollers	242	202	0.836	973	5,704	5.861
Rubber Tired Dozers	0	0	#DIV/0!	81	3,941	48.471
Scrapers	0	0	#DIV/0!	212	7,708	36.311
Skid Steer Loaders	497	615	1.236	3,471	11,163	3.216
Tractors/Loaders/Backhoes	8	54	6.982	3,386	27,246	8.048
Welders	3,343	2,036	0.609	1,060	2,185	2.061

CY	Season	AvgDays	Code	Equipment	Fuel	MaxHP	Class	C/R	Pre	Hand	Port	County	Air Basin	Air Dist.	Population	Activity	Consumption	ROG Exhaust	CO Exhaust	NOX Exhaust	CO2 Exhaust	SO2 Exhaust	PM Exhaust	N2O Exhaust	CH4 Exhaust
2019	Annual	Mon-Sun	2260002006	Tampers/Rammers	G2	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.28E+02	1.64E+02	3.30E+01	2.08E-03	8.91E-02	1.56E-03	1.70E-01	7.02E-06	1.43E-03	2.54E-04	1.29E-04
2019	Annual	Mon-Sun	2260002009	Plate Compactors	G2	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.81E+01	1.59E+01	3.20E+00	2.01E-04	8.65E-03	1.52E-04	1.65E-02	6.81E-07	1.39E-04	2.47E-05	1.25E-05
2019	Annual	Mon-Sun	2260003040	Other General Industrial Equipr	G2	15	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	6.42E+00	6.60E+00	2.59E+00	1.17E-04	7.06E-03	8.55E-05	1.35E-02	5.56E-07	6.28E-06	1.21E-05	7.26E-06
2019	Annual	Mon-Sun	2260006005	Generator Sets	G2	2	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	1.93E+02	7.10E+01	3.77E+00	5.63E-04	7.24E-03	1.41E-04	2.28E-02	9.41E-07	7.99E-05	4.74E-05	3.50E-05
2019	Annual	Mon-Sun	2260006005	Generator Sets	G2	2	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	1.52E+02	3.75E+01	2.07E+00	3.59E-04	4.14E-03	7.84E-05	1.21E-02	4.97E-07	4.30E-05	2.55E-05	2.23E-05
2019	Annual	Mon-Sun	2260006005	Generator Sets	G2	15	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	1.95E+00	7.16E-01	3.99E-01	1.82E-05	1.09E-03	1.33E-05	2.07E-03	8.54E-08	9.47E-07	1.59E-06	1.13E-06
2019	Annual	Mon-Sun	2260006005	Generator Sets	G2	15	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	1.48E+00	3.67E-01	2.08E-01	1.36E-05	5.70E-04	7.22E-06	1.06E-03	4.38E-08	5.95E-07	8.34E-07	8.43E-07
2019	Annual	Mon-Sun	2260006010	Pumps	G2	2	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	7.67E+02	5.42E+02	2.80E+01	3.79E-03	5.03E-02	1.01E-03	1.77E-01	7.29E-06	6.22E-04	3.52E-04	2.35E-04
2019	Annual	Mon-Sun	2260006010	Pumps	G2	2	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	6.03E+02	2.86E+02	1.52E+01	2.15E-03	2.85E-02	5.65E-04	9.35E-02	3.85E-06	3.26E-04	1.91E-04	1.34E-04
2019	Annual	Mon-Sun	2260006010	Pumps	G2	15	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	2.07E+02	1.46E+02	7.40E+01	4.75E-03	2.00E-01	3.58E-03	3.82E-01	1.57E-05	3.20E-03	3.75E-04	2.95E-04
2019	Annual	Mon-Sun	2260006010	Pumps	G2	15	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	1.63E+02	7.72E+01	3.91E+01	2.51E-03	1.06E-01	1.87E-03	2.02E-01	8.31E-06	1.69E-03	1.97E-04	1.56E-04
2019	Annual	Mon-Sun	2260006010	Pumps	G2	25	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	2.50E+00	1.77E+00	1.96E+00	1.29E-04	5.45E-03	8.49E-05	9.82E-03	4.04E-07	8.23E-05	6.50E-06	8.00E-06
2019	Annual	Mon-Sun	2260006010	Pumps	G2	25	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	1.95E+00	9.25E-01	1.02E+00	6.69E-05	2.85E-03	4.41E-05	5.13E-03	2.11E-07	4.30E-05	3.39E-06	4.16E-06
2019	Annual	Mon-Sun	2265002003	Asphalt Pavers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.15E+00	7.76E+00	4.49E+00	3.39E-04	1.28E-02	2.44E-04	2.18E-02	6.22E-07	1.83E-04	2.22E-05	1.92E-05
2019	Annual	Mon-Sun	2265002003	Asphalt Pavers	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.22E+01	1.33E+01	1.93E+01	1.50E-03	5.70E-02	9.43E-04	9.12E-02	2.31E-06	7.65E-04	5.87E-05	8.49E-05
2019	Annual	Mon-Sun	2265002003	Asphalt Pavers	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.29E+00	6.76E+00	1.56E+01	3.00E-04	1.67E-02	3.98E-04	1.23E-01	1.50E-06	9.44E-06	2.53E-05	1.70E-05
2019	Annual	Mon-Sun	2265002003	Asphalt Pavers	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.46E+00	3.71E+00	1.42E+01	1.64E-04	5.27E-03	4.09E-04	1.28E-01	1.23E-06	9.89E-06	1.78E-05	9.30E-06
2019	Annual	Mon-Sun	2265002006	Tampers/Rammers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.51E+01	7.55E+00	3.63E+00	2.71E-04	1.04E-02	1.96E-04	1.77E-02	5.04E-07	1.48E-04	1.95E-05	1.54E-05
2019	Annual	Mon-Sun	2265002009	Plate Compactors	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.55E+02	2.74E+02	4.96E+01	6.99E-03	1.06E-01	3.06E-03	2.85E-01	9.86E-06	9.30E-05	4.51E-04	3.97E-04
2019	Annual	Mon-Sun	2265002009	Plate Compactors	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.89E+02	3.33E+02	1.42E+02	1.06E-02	4.07E-01	7.67E-03	6.93E-01	1.98E-05	5.81E-03	8.06E-04	6.04E-04
2019	Annual	Mon-Sun	2265002015	Rollers	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.18E+01	1.41E+01	3.80E+00	4.55E-04	9.06E-03	1.99E-04	2.07E-02	7.13E-07	6.73E-06	2.63E-05	2.59E-05
2019	Annual	Mon-Sun	2265002015	Rollers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.00E+02	8.51E+01	4.62E+01	3.45E-03	1.32E-01	2.49E-03	2.25E-01	6.41E-06	1.88E-03	2.34E-04	1.96E-04
2019	Annual	Mon-Sun	2265002015	Rollers	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.75E+01	5.74E+01	6.78E+01	5.19E-03	2.00E-01	3.28E-03	3.20E-01	8.11E-06	2.68E-03	2.26E-04	2.95E-04
2019	Annual	Mon-Sun	2265002015	Rollers	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.43E+00	7.54E+00	2.04E+01	5.25E-04	2.88E-02	6.72E-04	1.49E-01	1.82E-06	1.14E-05	3.50E-05	2.97E-05
2019	Annual	Mon-Sun	2265002015	Rollers	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.33E+00	1.42E+01	6.44E+01	1.10E-03	3.45E-02	2.51E-03	5.63E-01	5.44E-06	4.36E-05	8.94E-05	6.26E-05
2019	Annual	Mon-Sun	2265002021	Paving Equipment	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.77E+02	3.62E+02	7.07E+01	9.84E-03	1.53E-01	4.30E-03	4.05E-01	1.40E-05	1.32E-04	6.16E-04	5.59E-04
2019	Annual	Mon-Sun	2265002021	Paving Equipment	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.31E+03	7.21E+02	4.14E+02	3.08E-02	1.18E+00	2.22E-02	2.01E+00	5.74E-05	1.69E-02	2.04E-03	1.75E-03
2019	Annual	Mon-Sun	2265002021	Paving Equipment	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.92E+01	1.60E+01	2.08E+01	1.59E-03	6.14E-02	1.00E-03	9.84E-02	2.49E-06	8.25E-04	6.62E-05	9.05E-05
2019	Annual	Mon-Sun	2265002021	Paving Equipment	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.72E+01	8.25E+00	1.84E+01	2.27E-04	1.38E-02	3.34E-04	1.55E-01	1.89E-06	1.19E-05	2.61E-05	1.29E-05
2019	Annual	Mon-Sun	2265002021	Paving Equipment	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.43E+00	2.13E+00	7.62E+00	4.54E-05	1.70E-03	1.18E-04	7.07E-02	6.83E-07	5.47E-06	7.40E-06	2.58E-06
2019	Annual	Mon-Sun	2265002024	Surfacing Equipment	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.43E+02	7.82E+01	1.56E+01	2.25E-03	3.29E-02	9.85E-04	9.07E-02	3.13E-06	2.96E-05	1.37E-04	1.28E-04
2019	Annual	Mon-Sun	2265002024	Surfacing Equipment	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.24E+02	5.85E+02	2.23E+02	1.75E-02	6.39E-01	1.26E-02	1.08E+00	3.09E-05	9.09E-03	1.37E-03	9.93E-04
2019	Annual	Mon-Sun	2265002024	Surfacing Equipment	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.80E+00	8.00E+00	7.48E+00	6.01E-04	2.21E-02	3.79E-04	3.53E-02	8.94E-07	2.96E-04	2.85E-05	3.41E-05
2019	Annual	Mon-Sun	2265002027	Signal Boards	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.76E+00	6.28E-01	2.03E-01	2.60E-05	4.66E-04	1.14E-05	1.13E-03	3.90E-08	3.68E-07	1.34E-06	1.48E-06
2019	Annual	Mon-Sun	2265002027	Signal Boards	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.25E+01	9.76E+00	5.77E+00	4.29E-04	1.65E-02	3.09E-04	2.81E-02	8.01E-07	2.36E-04	2.80E-05	2.44E-05
2019	Annual	Mon-Sun	2265002030	Trenchers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.16E+02	1.38E+02	8.87E+01	6.79E-03	2.54E-01	4.89E-03	4.31E-01	1.23E-05	3.61E-03	4.21E-04	3.85E-04
2019	Annual	Mon-Sun	2265002030	Trenchers	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.98E+01	1.07E+02	1.49E+02	1.17E-02	4.38E-01	7.35E-03	7.01E-01	1.78E-05	5.88E-03	4.64E-04	6.62E-04
2019	Annual	Mon-Sun	2265002030	Trenchers	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.03E+01	4.44E+01	9.78E+01	2.15E-03	1.12E-01	2.99E-03	7.60E-01	9.24E-06	5.82E-05	1.78E-04	1.22E-04
2019	Annual	Mon-Sun	2265002030	Trenchers	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.34E+01	1.47E+01	6.13E+01	8.57E-04	2.55E-02	2.21E-03	5.48E-01	5.30E-06	4.25E-05	8.36E-05	4.86E-05
2019	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	15	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	3.31E+00	1.13E+00	8.65E-01	6.26E-05	2.48E-03	4.51E-05	4.22E-03	1.20E-07	3.53E-05	3.66E-06	3.55E-06
2019	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	25	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.65E+01	5.60E+00	7.97E+00	5.91E-04	2.35E-02	3.73E-04	3.77E-02	9.55E-07	3.16E-04	2.39E-05	3.36E-05
2019	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.95E+00	5.72E-01	1.48E+00	2.40E-05	1.08E-03	3.99E-05	1.25E-02	1.52E-07	9.56E-07	2.31E-06	1.36E-06
2019	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	8.95E+00	2.63E+00	1.69E+01	1.60E-04	4.17E-03	5.40E-04	1.56E-01	1.51E-06	1.21E-05	1.69E-05	9.10E-06
2019	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	2.21E+00	6.50E-01	5.86E+00	3.46E-05	1.73E-03	2.11E-04	5.37E-02	5.34E-07	4.28E-06	5.33E-06	1.96E-06
2019	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.08E+01	2.17E+01	5.76E+00	7.36E-04	1.32E-02	3.22E-04	3.20E-02	1.11E-06	1.04E-05	4.15E-05	4.18E-05
2019	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.73E+02	2.32E+02	1.59E+02	1.19E-02	4.54E-01	8.56E-03	7.73E-01	2.20E-05	6.48E-03	7.23E-04	6.74E-04
2019	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.56E+01	7.27E+01	9.66E+01	7.41E-03	2.85E-01	4.67E-03	4.57E-01	1.16E-05	3.83E-03	3.05E-04	4.21E-04
2019	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.27E+00	1.22E+01	3.37E+01	3.51E-04	2.37E-02	5.02E-04	2.86E-01	3.48E-06	2.19E-05	4.02E-05	1.99E-05
2019	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.16E+00	6.97E+00	3.28E+01	1.44E-04	6.46E-03	3.21E-04	3.06E-01	2.96E-06	2.37E-05	2.44E-05	8.18E-06
2019	Annual	Mon-Sun	2265002042	Cement and Mortar Mixers	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.10E+03	2.79E+02	7.06E+01	8.80E-03	1.65E-01	3.85E-03	3.89E-01	1.34E-05	1.27E-04	5.13E-04	5.00E-04
2019	Annual	Mon-Sun	2265002042	Cement and Mortar Mixers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.87E+03	4.72E+02	2.20E+02	1.74E-02	6.36E-01	1.12E-02	1.05E+00	3.01E-05	8.83E-03	1.16E-03	9.88E-04
2019	Annual	Mon-Sun	2265002042	Cement and Mortar Mixers	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.87E+00	1.99E+00	2.96E+00	2.35E-04	8.79E-03	1.36E-04	1.39E-02	3.51E-07	1.16E-04	8.58E-06	1.34E-05
2019	Annual	Mon-Sun	2265002045	Cranes	G4	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	2.21E+00	2.52E+00	4.89E+00	1.09E-04	5.68E-03	1.50E-04	3.78E-02	4.60E-07	2.90E-06	9.46E-06	6.17E-06
2019	Annual	Mon-Sun	2265002045	Cranes	G4	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	4.43E+00	5.04E+00	1.68E+01	2.37E-04	7.09E-03	6.07E-04	1.50E-01	1.45E-06	1.16E-05	2.54E-05	1.35E-05
2019	Annual	Mon-Sun	2265002045	Cranes	G4	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.77E-01	2.02E-01	1.08E+00	9.65E-06	3.52E-04	4.60E-05	9.84E-03	9.77E-08	7.84E-07	1.42E-06	5.48E-07
2019	Annual	Mon-Sun	2265002054	Crushing/Proc. Equipment	G4	15	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	3.00E+00	2.38E+00	1.77E+00	1.32E-04	5.07E-03	9.50E-05	8.62E-03	2.46E-07	7.23E-05	7.73E-06	7.48E-06
2019	Annual	Mon-Sun	2265002054	Crushing/Proc. Equipment	G4	25	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.97E+00	1.56E+00	2.12E+00	1.62E-04	6.27E-03	1.02E-04	1.00E-02	2.54E-07	8.42E-05	6.60E-06	9.21E-06
2019	Annual	Mon-Sun	2265002054	Crushing/Proc. Equipment	G4	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	2.57E+00	1.70E+00	1.30E+01	1.50E-04	4.22E-03	4.40E-04	1.18E-01	1.14E-06	9.16E-06	1.26E-05	8.54E-06
2019	Annual	Mon-Sun	2265002057	Rough Terrain Forklifts	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.86E-01	1.00E+00	3.31E+00	7.36E-05	3.84E-03	1.02E-04	2.57E-02	3.12E-07	1.96E-06	5.00E-06	4.17E-06
2019	Annual	Mon-Sun	2265002057	Rough Terrain Forklifts	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.26E+01	1.42E+01	7.29E+01	1.03E-03	3.08E-02	2.64E-03	6.51E-01	6.29E-06	5.05E-05	9.05E-05	5.85E-05
2019	Annual	Mon-Sun	2265002057	Rough Terrain Forklifts	G4	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.43E-01	5.02E-01	4.09E+00	3.65E-05	1.33E-03	1.74E-04	3.73E-02	3.70E-07	2.97E-06	4.41E-06	2.07E-06
2019	Annual	Mon-Sun	2265002060	Rubber Tired Loaders	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.21E+00	3.11E+00	7.62E+00	1.69E-04	9.46E-03	2.20E-04	5.80E-02	7.05E-07	4.44E-06	1.28E-05	9.58E-06
2019	Annual	Mon-Sun	2265002060	Rubber Tired Loaders	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.47E+01	2.06E+01	7.71E+01	1.08E-03	3.48E-02	2.57E-03	6.85E-01	6.62E-06	5.31E-05	1.07E-04	6.13E-05
2019	Annual	Mon-Sun	2265002066	Tractors/Loaders/Backhoes	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.80E+00	1.86E+01	5.44E+01	4.94E-04	2.75E-02	1.11E-03	4.80E-01	4.64E-06	3.72E-05	7.15E-05	2.79E-05
2019	Annual	Mon-Sun	2265002072	Skid Steer Loaders	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.90E+00	5.16E+00	4.08E+00	3.09E-04	1.17E-02	2.23E-04	1.99E-02	5.66E-07	1.66E-04	1.75E-05	1.76E-05
2019	Annual	Mon-Sun	2265002072	Skid Steer Loaders	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.95E+02	3.45E+02	3.81E+02	2.96E-02	1.12E+00	1.87E-02	1.80E+00	4.57E-05	1.51E-02	1.32E-03	1.68E-03
2019	Annual	Mon-Sun	2265002072	Skid Steer Loaders	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.04E+01	5.14E+01	9.82E+01	1.08E-03	7.65E-02	1.49E-03	8.23E-01	1.00E-05	6.31E-05	1.41E-04	6.11E-05
2019	Annual	Mon-Sun	2265002072	Skid Steer Loaders	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.61E+01	3.07E+01	1.31E+02	6.18E-04	2.94E-02	1.38E-03	1.22E+00	1.18E-05	9.43E-05	1.06E-04	3.51E-05
2019	Annual	Mon-Sun	2265002078	Dumpers/Tenders	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.64E+01	2.30E+01	3.09E+00	4.43E-04	6.51E-03	1.94E-04	1.79E-02	6.17E-07	5.83E-06	3.26E-05	2.52E-05
2019	Annual	Mon-Sun	2265002078	Dumpers/Tenders	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.20E+02	4.91E+01	1.78E+01	1.42E-03	5.13E-02	9.45E-04	8.58E-02	2.45E-06	7.19E-04	1.08E-04	8.07E-05
2019	Annual	Mon-Sun	2265002078	Dumpers/Tenders	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.23E+01	9.10E+00	7.15E+00	5.75E-04	2.12E-02	3.41E-04	3.36E-02	8.50E-07	2.81E-04	2.85E-05	3.27E-05
2019	Annual	Mon-Sun	2265002078	Dumpers/Tenders	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.59E+00	5.55E-01	1.39E+00	1.37E-05	3.60E-04	4.50E-05	1.28E-02	1.24E-07	9.94E-07	2.18E-06	7.76E-07
2019	Annual	Mon-Sun	2265002081	Other Construction Equipment	G4	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.20E+00	6.31E+00	3.46E+01	1.35E-04	1.04E-02	3.93E-04	3.17E-01	3.15E-06	2.52E-05	2.60E-05	7.64E-06
2019	Annual	Mon-Sun	2265003010	Aerial Lifts	G4	15	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	1.24E+00	1.27E+00	7.42E-01	5.56E-05	2.12E-03	4.00E-05	3.61E-03	1.03E-07	3.02E-05	3.65E-06	3.15E-06

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2019	Annual	Mon-Sun	2270002024	Surfacing Equipment	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	6.098555	7.54967	75.53593	0.000400586	0.00183785	0.003521267	0.834273	8.18866E-06	0.00011983	0	3.61443E-05
2019	Annual	Mon-Sun	2270002024	Surfacing Equipment	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	0.8935342	1.10615	17.36347	0.000093105	0.00042246	0.000831848	0.1917704	1.9282E-06	2.7961E-05	0	8.40071E-06
2019	Annual	Mon-Sun	2270002027	Signal Boards	D	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	343.3486	706.122	198.8104	0.002533374	0.01328858	0.01586495	2.17634	3.38658E-05	0.00061993	0	0.000228582
2019	Annual	Mon-Sun	2270002027	Signal Boards	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.707595	2.50508	4.156109	7.07835E-05	0.0003617	0.000340421	0.04528975	5.85484E-07	1.883E-05	0	6.38668E-06
2019	Annual	Mon-Sun	2270002027	Signal Boards	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	27.93138	40.976	149.7561	0.001263487	0.01016886	0.0098513	1.641798	1.92591E-05	0.00062565	0	0.000114002
2019	Annual	Mon-Sun	2270002027	Signal Boards	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	17.31989	25.4087	178.5459	0.001110935	0.01050339	0.00897807	1.961624	2.20716E-05	0.00043181	0	0.000100238
2019	Annual	Mon-Sun	2270002027	Signal Boards	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	3.659133	5.36803	61.9381	0.000290098	0.00128849	0.002668209	0.6845924	7.70284E-06	8.0339E-05	0	2.6175E-05
2019	Annual	Mon-Sun	2270002030	Trenchers	D	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	9.147833	15.5021	5.988085	7.63042E-05	0.00040025	0.000477846	0.06555042	1.02002E-06	1.8672E-05	0	6.8848E-06
2019	Annual	Mon-Sun	2270002030	Trenchers	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	9.635716	16.3289	24.4577	0.00032393	0.00110562	0.002046981	0.268514	3.40693E-06	7.6472E-05	0	2.92277E-05
2019	Annual	Mon-Sun	2270002030	Trenchers	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	366.767	631.359	963.5189	0.03366931	0.1126718	0.0909724	10.38216	0.000134215	0.00747354	0	0.003037929
2019	Annual	Mon-Sun	2270002030	Trenchers	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	497.0321	855.6	2539.307	0.0386947	0.1911091	0.2376331	27.73721	0.000325372	0.01895524	0	0.00349136
2019	Annual	Mon-Sun	2270002030	Trenchers	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	54.3991	93.6436	614.2471	0.006680634	0.03935947	0.0478024	6.731506	7.5741E-05	0.00264456	0	0.000602783
2019	Annual	Mon-Sun	2270002030	Trenchers	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	4.878843	8.39852	84.81275	0.000708711	0.00236381	0.005992172	0.9351782	1.05224E-05	0.00022376	0	6.39459E-05
2019	Annual	Mon-Sun	2270002030	Trenchers	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	6.220526	10.7081	151.0866	0.001176584	0.00486649	0.009596434	1.665268	1.63452E-05	0.00036374	0	0.000106161
2019	Annual	Mon-Sun	2270002030	Trenchers	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	0.1787068	0.30763	8.182805	6.40032E-05	0.00026356	0.000531302	0.09018931	9.06828E-07	1.9931E-05	0	5.7749E-06
2019	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	15	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.219711	2.71245	1.280588	1.63181E-05	8.5595E-05	0.00010219	0.01401835	2.18138E-07	3.9931E-06	0	1.47236E-06
2019	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	25	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	3.659133	8.13734	5.920018	7.84078E-05	0.00026762	0.000495474	0.06499415	8.24653E-07	1.8489E-05	0	7.07461E-06
2019	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	15.97822	36.7798	52.06223	0.000366631	0.00405587	0.003340913	0.570251	7.37192E-06	4.8048E-05	0	3.30805E-05
2019	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	49.03238	112.866	395.902	0.001652455	0.02629462	0.01410433	4.348312	5.10079E-05	0.0003046	0	0.000149098
2019	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	11.34331	26.1108	167.3097	0.000568602	0.00983798	0.003050197	1.840158	2.07049E-05	8.9169E-05	0	5.1304E-05
2019	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	250	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	9.757688	22.4609	190.8104	0.000563701	0.00384431	0.002246	2.110575	2.37476E-05	6.003E-05	0	5.08619E-05
2019	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	500	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	21.71085	49.9756	702.5777	0.002070956	0.01376095	0.008087438	7.771929	7.6284E-05	0.00021957	0	0.000186859
2019	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	750	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	2.769956	6.37608	177.1089	0.000522341	0.00346892	0.002047481	1.959181	1.9699E-05	5.5484E-05	0	4.713E-05
2019	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	1000	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	4.646378	10.6847	447.9303	0.001385772	0.00877285	0.02173897	4.954741	4.98186E-05	0.00032804	0	0.000125036
2019	Annual	Mon-Sun	2270002036	Excavators	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.51293	17.2754	12.92292	0.000171158	0.00058418	0.00108158	0.1418769	1.80015E-06	4.0414E-05	0	1.54433E-05
2019	Annual	Mon-Sun	2270002036	Excavators	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	169.9057	659.483	758.9634	0.013390187	0.08166629	0.06350224	8.241922	0.000106548	0.0031116	0	0.001254343
2019	Annual	Mon-Sun	2270002036	Excavators	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	461.4167	1790.97	6016.004	0.05665543	0.4469306	0.3621846	65.86927	0.00077268	0.02184652	0	0.005111929
2019	Annual	Mon-Sun	2270002036	Excavators	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	890.1451	3455.07	17653.13	0.1309558	1.145555	0.7639204	193.6925	0.002179373	0.03910903	0	0.01181593
2019	Annual	Mon-Sun	2270002036	Excavators	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	362.0103	1405.13	10085.97	0.06157153	0.2314105	0.3639085	111.3849	0.001253271	0.01236609	0	0.005555502
2019	Annual	Mon-Sun	2270002036	Excavators	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	261.1401	1013.61	10714.66	0.06403063	0.234483	0.3491018	118.3515	0.001161659	0.01263993	0	0.005777381
2019	Annual	Mon-Sun	2270002036	Excavators	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.39987	5.43355	95.20211	0.000570261	0.00208342	0.00316371	1.051573	1.05733E-05	0.00011335	0	5.14538E-05
2019	Annual	Mon-Sun	2270002039	Concrete/Industrial Saws	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	0.4878843	0.79199	0.5938104	7.86473E-06	2.6843E-05	4.96988E-05	0.00651927	8.27172E-08	1.8567E-06	0	7.09622E-07
2019	Annual	Mon-Sun	2270002039	Concrete/Industrial Saws	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.268987	6.78948	9.406024	0.000162338	0.00083755	0.000781932	0.1024601	1.32455E-06	4.3787E-05	0	1.46475E-05
2019	Annual	Mon-Sun	2270002039	Concrete/Industrial Saws	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.440237	11.8331	39.98623	0.000342473	0.00273873	0.002654073	0.4383164	5.14168E-06	0.00017036	0	3.09008E-05
2019	Annual	Mon-Sun	2270002039	Concrete/Industrial Saws	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	0.2439422	0.38797	2.826423	1.80528E-05	0.00016786	0.000143063	0.03104852	3.49349E-07	7.0458E-06	0	1.62887E-06
2019	Annual	Mon-Sun	2270002042	Cement and Mortar Mixers	D	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	62.32723	51.2723	14.78792	0.000188438	0.00098843	0.001180067	0.1618805	2.519E-06	4.6237E-05	0	1.70024E-05
2019	Annual	Mon-Sun	2270002042	Cement and Mortar Mixers	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.610669	4.61551	3.68916	5.23856E-05	0.00017221	0.000318353	0.04047894	5.13601E-07	1.3995E-05	0	4.72667E-06
2019	Annual	Mon-Sun	2270002045	Cranes	D	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	4.147017	14.5455	15.58679	0.000427783	0.00179744	0.001421177	0.1684799	2.17803E-06	9.8862E-05	0	3.85981E-05
2019	Annual	Mon-Sun	2270002045	Cranes	D	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	45.49522	159.573	365.6551	0.00470955	0.02762792	0.02856388	3.997538	4.68932E-05	0.0021793	0	0.000424935
2019	Annual	Mon-Sun	2270002045	Cranes	D	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	45.49522	159.573	584.2011	0.005583344	0.03794163	0.03623073	6.404658	7.20634E-05	0.00201731	0	0.000503776
2019	Annual	Mon-Sun	2270002045	Cranes	D	250	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	88.1851	309.306	1570.304	0.01150876	0.03827126	0.08578153	17.33015	0.000194994	0.00294389	0	0.001038417
2019	Annual	Mon-Sun	2270002045	Cranes	D	500	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	32.32234	113.37	924.0832	0.006474394	0.02236878	0.04457824	10.19984	0.000100115	0.00161954	0	0.000584174
2019	Annual	Mon-Sun	2270002045	Cranes	D	750	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	5.807973	20.3713	279.4013	0.001967529	0.00676323	0.0138992	3.083931	3.10081E-05	0.00049796	0	0.000177527
2019	Annual	Mon-Sun	2270002045	Cranes	D	9999	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	7.297195	25.5691	1123.899	0.009003574	0.02913707	0.09474469	12.39761	0.000124655	0.00250691	0	0.000812378
2019	Annual	Mon-Sun	2270002048	Graders	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.707595	4.43433	5.632939	0.000137094	0.00062335	0.000493729	0.06100171	7.886E-07	3.1132E-05	0	1.23698E-05
2019	Annual	Mon-Sun	2270002048	Graders	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	113.921	295.833	1012.75	0.01180715	0.07557434	0.07297029	11.07859	0.000129958	0.00524063	0	0.00106534
2019	Annual	Mon-Sun	2270002048	Graders	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	389.2098	1010.71	5705.046	0.04994882	0.3679865	0.3181458	62.56816	0.000703999	0.01738058	0	0.004506801
2019	Annual	Mon-Sun	2270002048	Graders	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	241.5028	627.141	4884.492	0.03307906	0.1167184	0.2362657	53.92115	0.000606706	0.00806894	0	0.002984671
2019	Annual	Mon-Sun	2270002048	Graders	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	6.830382	17.7373	184.1902	0.001196756	0.00449298	0.007938157	2.03339	1.99584E-05	0.0002857	0	0.000107981
2019	Annual	Mon-Sun	2270002048	Graders	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	0.08935341	0.23204	5.100231	3.32809E-05	0.00012441	0.000225895	0.05630402	5.66121E-07	8.0298E-06	0	3.00288E-06
2019	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.92812	43.0646	245.3477	0.001943516	0.01621656	0.01119997	2.691006	3.02784E-05	0.00058187	0	0.00017536
2019	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	58.54613	318.015	2396.345	0.01557617	0.05622964	0.09207299	26.45822	0.0002977	0.00313747	0	0.001405413
2019	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	82.45246	447.872	5517.318	0.03505491	0.1230672	0.1907114	60.93055	0.000598053	0.00693232	0	0.003162948
2019	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	18.73443	101.763	2033.439	0.01295212	0.04535683	0.07177552	22.45617	0.000225791	0.00258044	0	0.001168649
2019	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	8.78642	47.679	1347.746	0.009113987	0.03120412	0.09776244	14.87974	0.000149612	0.00238668	0	0.00082234
2019	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	19.51537	51.105	103.4687	0.002107035	0.01051118	0.008885657	1.123705	1.45267E-05	0.00053264	0	0.000190114
2019	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	55.00896	144.052	546.3856	0.005469182	0.0393666	0.03730621	5.982951	7.01831E-05	0.00254321	0	0.000493476
2019	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	23.29648	61.0066	464.4506	0.003539003	0.02900349	0.02422018	5.097408	5.73546E-05	0.00127083	0	0.000319319
2019	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	250	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	2.317451	6.06872	67.11507	0.000397551	0.00147991	0.003001332	0.7413334	8.34127E-06	9.6598E-05	0	3.58704E-05
2019	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	500	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	13.05091	34.1765	577.4133	0.003315282	0.01220076	0.02296128	6.379211	6.26141E-05	0.00079904	0	0.000299133
2019	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	750	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	0.1489224	0.38998	10.38328	5.94256E-05	0.00021915	0.000420945	0.1147148	1.15343E-06	1.4366E-05	0	5.36187E-06
2019	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	9999	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	0.1489224	0.38998	23.07473	0.000154831	0.00052616	0.001760577	0.2547735	2.56168E-06	4.393E-05	0	1.39702E-05
2019	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	13.53879	41.961	65.32147	0.001210264	0.00675543	0.005543698	0.7097269	9.175E-06	0.00029862	0	0.0001092
2019	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	648.3984	2009.59	5724.83	0.05408978	0.4173412	0.3637725	62.69296	0.00073542	0.02319355	0	0.004880434
2019	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	83.06232	257.436	1463.64	0.01085665	0.09296644	0.06878089	16.06242	0.00018073	0.00361236	0	0.000979578
2019	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	4.634902	14.365	110.9717	0.000668853	0.00248932	0.00443153	1.225646	1.37906E-05	0.00014945	0	6.03495E-05
2019	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	3.049277	9.45067	109.6506	0.000645246	0.00234854	0.003931827	1.211295	1.18893E-05	0.00014246	0	5.82196E-05
2019	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.707595	4.48105	3.451791	4.57173E-05	0.00015604	0.000288897	0.0378962	4.80831E-07	1.0793E-05	0	4.125E-06
2019	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	33.17614	88.3754	126.9199	0.002989067	0.01385092	0.01106093	1.375197	1.77779E-05	0.00068595	0	0.000269699
2019	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	901.9761	2402.71	6463.026	0.07332581	0.4796375	0.4583213	70.7124	0.000829493	0.03260894	0	0.00661607
2019	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	508.3754	1354.22	6557.159	0.0559825	0.4208556	0.3582979	71.92264	0.000809253	0.0194845	0	0.005051211
2019	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	505.5702	1346.75	9078.414	0.06029598	0.2148666	0.429493	100.2271	0.001127728	0.01466945	0	0.00544041
2019	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	210.4001	560.469	6010.212	0.0383491	0.1434888	0.2529668	66.35831	0.000651329	0.0091258	0	0.003460179
2019	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	3.603921	9.60022	210.8991	0.0013516	0.00503499	0.009129237	2.328497	2.34124E-05	0.00032515	0	0.000121953
2019	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	0.3871982	1.0304	27.69753	0.000189862	0.00070114	0.002170278	0.3056889	3.07362E-06	5.5615E-05	0	1.7131E-05
2019	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.219711	5.41302	32.00172	0.000431144	0.00220498	0.002894603	0.3501154	3.9394E-06	0.00016339	0	3.89014E-05
2019	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	29.88292	132.619	1104.206	0.01187462	0.03607883	0.09199414	12.15601	0.000136776	0.00370285	0	0.001071427
2019	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	45.9831	204.071	2454.81	0.02453168	0.09947195	0.1850283	27.00209	0.000265034	0.0074211	0	0.002213453
2019	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	3.961335	17.5802	318.3997	0.003192615	0.01290178	0.0244519	3.502244	3.52141E-05	0.00097167	0	0.000288065
2019	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	0.2680603	1.18845	31.97023	0.000338786	0.00140945	0.003419671	0.3514019	3.53325E-06	0.000106	0	3.05682E-05
2019	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	34.39584	88.8465	64.13005	0.000849485	0.00289902	0.005368907	0.7040645	8.93324E-06	0.00020375	0	7.66476E-05
2019	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	205.5213	541.16	754.0084	0.01211566	0.07556137	0.06099285	8.203958	0.000106057	0.00278513	0	0.001093177
2019	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2748.985	7238.38	17071.96	0.1438653	1.234008	0.971499	187.0455	0.002194141	0.05582394	0	0.01298073
2019	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	205.1554	540.197	2492.294	0.01665031	0.15765	0.1000602	27.35987	0.000307846	0.00503599	0	0.00150233
2019	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	66.35226	174.713	1356.83	0.007512946	0.03021279	0.04489633	14.98887	0.000168651	0.00152031	0	0.000677881
2019	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	107.0906	281.982	4396.665	0.02384942	0.0943647	0.1316674	48.57751	0.00054658	0.00474138	0	0.002151895
2019	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	18.01961	47.4477	1109.713	0.006034133	0.02381743	0.03389347	12.26084	0.000137956	0.00120807	0	0.00054445
2019	Annual	Mon-Sun	2270002069	Crawler Tractors	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.707595	4.86161	5.60739	0.000183743	0.0006868	0.000527784	0.06042321	7.81121E-07	4.022E-05	0	1.65788E-05
2019	Annual	Mon-Sun	2270002069	Crawler Tractors	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	968.8164	2758.27	8302.494	0.1225505	0.6412195	0.7220426	90.68021	0.001063726	0.05648938	0	0.01105753
2019	Annual	Mon-Sun	2270002069	Crawler Tractors	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	327.8583	933.43	5157.874	0.05585866	0.3410371	0.3656738	56.50934	0.000635827	0.02046446	0	0.005040037
2019	Annual	Mon-Sun	2270002069	Crawler Tractors	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	281.7532	802.166	6036.813	0.05044995	0.1628369	0.3827838	66.57274	0.000749057	0.01399319	0	0.004552017
2019	Annual	Mon-Sun	2270002069	Crawler Tractors	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	193.0803	549.71	6456.279	0.05098588	0.1897096	0.3673539	71.18649	0.000698719	0.01379815	0	0.004600376
2019	Annual	Mon-Sun	2270002069	Crawler Tractors	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.382758	6.78384	142.8254	0.001132435	0.00419669	0.008318505	1.574765	1.58338E-05	0.00030905	0	0.000102178
2019	Annual	Mon-Sun	2270002069	Crawler Tractors	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.382758	6.77705	202.2022	0.001726569	0.00652608	0.0184958	2.228006	2.2402E-05	0.00052119	0	0.000155786
2019	Annual	Mon-Sun	2270002072	Skid Steer Loaders	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	234.1845	535.559	336.2554	0.00463595	0.01546408	0.02876628	3.690472	4.68251E-05	0.00121862	0	0.000418294
2019	Annual	Mon-Sun	2270002072	Skid Steer Loaders	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2124.126	4950.72	5776.673	0.06064605	0.4993408	0.4245436	63.11241	0.000815886	0.01319213	0	0.005471996
2019	Annual	Mon-Sun	2270002072	Skid Steer Loaders	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1112.986	2594.05	5050.276	0.03006117	0.3467712	0.2328637	55.41331	0.000650027	0.01018233	0	0.002712372
2019	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	0.1219711	0.37127	1.594203	2.85731E-05	0.00012675	0.000165472	0.01738518	2.03937E-07	1.3504E-05	0	2.5781E-06
2019	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	149.1707	454.06	2702.786	0.03485191	0.1826542	0.237143	29.58202	0.000332849	0.01338691	0	0.003144631

2019	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	140.9986	429.185	2538.964	0.02593868	0.07994943	0.2046197	27.96143	0.000314614	0.00812262	0	0.002340406
2019	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	14.95181	45.5117	1173.722	0.011191	0.04508612	0.08714376	12.91668	0.000129874	0.0034283	0	0.001009746
2019	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.578577	4.80022	177.5611	0.001793362	0.00744745	0.0185663	1.952636	1.96332E-05	0.00056716	0	0.000161812
2019	Annual	Mon-Sun	2270002078	Dumpers/Tenders	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.927306	5.31385	1.843511	2.44412E-05	8.3336E-05	0.000154634	0.02023927	2.56798E-07	5.9513E-06	0	2.20529E-06
2019	Annual	Mon-Sun	2270002081	Other Construction Equipment	D	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	40.37243	76.3866	35.23276	0.000448959	0.00235497	0.002811553	0.3856862	6.00162E-06	0.00010986	0	4.05089E-05
2019	Annual	Mon-Sun	2270002081	Other Construction Equipment	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.830381	12.9234	7.77228	0.00010294	0.00035135	0.000650499	0.08532959	1.08267E-06	2.4274E-05	0	9.28812E-06
2019	Annual	Mon-Sun	2270002081	Other Construction Equipment	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	10.48951	20.1111	25.78552	0.000365006	0.00230881	0.002033722	0.281197	3.63518E-06	9.2293E-05	0	3.29339E-05
2019	Annual	Mon-Sun	2270002081	Other Construction Equipment	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	17.3199	33.2066	122.3198	0.000903899	0.00845098	0.006924453	1.341318	1.57343E-05	0.0003893	0	8.15573E-05
2019	Annual	Mon-Sun	2270002081	Other Construction Equipment	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	23.90633	45.8345	221.9984	0.00128745	0.01341338	0.008950225	2.438858	2.74413E-05	0.00043223	0	0.000116165
2019	Annual	Mon-Sun	2270002081	Other Construction Equipment	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	55.49683	106.402	1222.544	0.005661734	0.02500202	0.03709403	13.51354	0.00013264	0.00128796	0	0.000510849
2019	Annual	Mon-Sun	2270003010	Aerial Lifts	D	15	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	30.3637	33.2209	13.1176	0.000167153	0.00087679	0.001046776	0.1435958	2.23448E-06	4.0842E-05	0	1.5082E-05
2019	Annual	Mon-Sun	2270003010	Aerial Lifts	D	25	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	49.57486	54.2397	27.06132	0.000378275	0.00125289	0.002326581	0.2969688	3.76797E-06	9.995E-05	0	3.41311E-05
2019	Annual	Mon-Sun	2270003010	Aerial Lifts	D	50	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	181.103	190.695	171.2604	0.002768119	0.01396318	0.01409406	1.868352	2.41531E-05	0.00078016	0	0.000249763
2019	Annual	Mon-Sun	2270003010	Aerial Lifts	D	120	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	160.5247	169.027	293.1484	0.002432008	0.01946268	0.01999901	3.214697	3.771E-05	0.0012443	0	0.000219436
2019	Annual	Mon-Sun	2270003010	Aerial Lifts	D	500	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	20.57824	21.6682	208.3871	0.000862985	0.00415078	0.008599061	2.304034	2.26148E-05	0.00026639	0	7.78657E-05
2019	Annual	Mon-Sun	2270003010	Aerial Lifts	D	750	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.654894	1.74255	30.29297	0.000127243	0.00060338	0.001281074	0.334927	3.3676E-06	3.9187E-05	0	1.14809E-05
2019	Annual	Mon-Sun	2270003020	Forklifts	D	50	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	54.8993	270.971	182.619	0.002805332	0.01923542	0.0153376	1.98605	2.56747E-05	0.00064061	0	0.000253121
2019	Annual	Mon-Sun	2270003020	Forklifts	D	120	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	86.12645	425.101	605.4015	0.005184595	0.04484214	0.03351037	6.630914	7.7784E-05	0.00190394	0	0.000467798
2019	Annual	Mon-Sun	2270003020	Forklifts	D	175	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	86.55814	427.232	1090.256	0.007806898	0.0709102	0.04371388	11.96336	0.000134608	0.00226013	0	0.000704404
2019	Annual	Mon-Sun	2270003020	Forklifts	D	250	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	85.9106	424.036	1479.054	0.00878392	0.03298654	0.04736174	16.33651	0.000183814	0.00161486	0	0.000792559
2019	Annual	Mon-Sun	2270003020	Forklifts	D	500	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	36.76742	181.476	910.727	0.005341284	0.01930414	0.02704625	10.06107	9.87527E-05	0.00097265	0	0.000481935
2019	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	15	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	4.029307	7.18169	3.910486	4.44173E-05	0.00026152	0.000312218	0.04282976	6.64669E-07	1.22E-05	0	4.0077E-06
2019	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	25	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	4.029306	7.1817	6.409059	8.48849E-05	0.00028972	0.000536404	0.07036318	8.92775E-07	2.0039E-05	0	7.65903E-06
2019	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	78.49952	262.609	380.5146	0.006203897	0.03859792	0.03226719	4.139068	5.35078E-05	0.00154784	0	0.000559768
2019	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	129.8732	434.473	1486.803	0.01304924	0.1080317	0.08850667	16.28681	0.000191053	0.00544856	0	0.001177412
2019	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	59.79204	200.026	1265.458	0.009058456	0.08043373	0.05527742	13.8888	0.000156273	0.00296236	0	0.00081733
2019	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	250	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	9.569605	32.0138	234.5646	0.001368043	0.00513285	0.008410904	2.591083	2.91541E-05	0.00028766	0	0.000123436
2019	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	15	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	10.57693	41.3293	12.05577	0.000136935	0.00080623	0.000962547	0.1320413	2.05468E-06	3.7612E-05	0	1.23555E-05
2019	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	25	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	14.17452	55.3868	38.68286	0.000512336	0.00174867	0.003237552	0.4246879	5.38848E-06	0.00012097	0	4.62272E-05
2019	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	17.55627	68.601	68.81694	0.001642104	0.00774761	0.006223036	0.74518	9.63332E-06	0.0004045	0	0.000148164
2019	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	70.22507	274.404	777.4264	0.009057874	0.0583704	0.05733682	8.503819	9.97541E-05	0.00413095	0	0.000817278
2019	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	70.4409	275.247	1202.865	0.01067453	0.07806652	0.06914674	13.19066	0.000148418	0.00374531	0	0.000963146
2019	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	250	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	70.1531	274.123	1681.733	0.01156994	0.03872517	0.08382003	18.56662	0.000208906	0.00272962	0	0.001043938
2019	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	500	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	70.0092	273.56	3284.519	0.02189821	0.07188124	0.1451299	36.27049	0.000356007	0.00511667	0	0.00197584
2019	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	750	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	17.48431	68.3198	1352.002	0.009046565	0.0295881	0.06126114	14.92982	0.000150115	0.00213226	0	0.000816257
2019	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	1000	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	10.64888	41.5688	1052.833	0.007675538	0.02492979	0.08602235	11.62058	0.000116842	0.00224347	0	0.000692552
2019	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	0.5036633	1.82028	2.546701	6.02272E-05	0.00028359	0.000229591	0.02758396	3.56592E-07	1.4936E-05	0	5.4342E-06
2019	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	3.02198	10.9217	30.25809	0.000349088	0.00226077	0.002228144	0.3310075	3.88289E-06	0.00016056	0	3.14977E-05
2019	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	3.237836	11.7018	65.07068	0.00057111	0.00420206	0.003735596	0.7136269	8.02953E-06	0.00020242	0	5.15304E-05
2019	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	250	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	7.698853	27.8243	182.5655	0.001241279	0.00418353	0.009092033	2.015648	2.26795E-05	0.00029607	0	0.000111999
2019	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	500	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.439038	5.20081	45.08215	0.000296927	0.00098285	0.00199018	0.4978568	4.88663E-06	7.0166E-05	0	2.67912E-05
2019	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	9999	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	0.4317114	1.56024	52.35897	0.000404281	0.00123519	0.004270469	0.5778215	5.67151E-06	0.00011116	0	3.64777E-05
2019	Annual	Mon-Sun	2270006005	Generator Sets	D	15	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	465.2252	430.278	200.483	0.002557193	0.01374807	0.01783719	2.194093	3.4142E-05	0.00087438	0	0.000230731
2019	Annual	Mon-Sun	2270006005	Generator Sets	D	25	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	340.2749	314.714	252.6758	0.003567694	0.0121847	0.02243873	2.771932	3.51706E-05	0.00105391	0	0.000321907
2019	Annual	Mon-Sun	2270006005	Generator Sets	D	50	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	415.556	384.34	538.5208	0.008177361	0.04239345	0.04395414	5.879529	7.60076E-05	0.00235805	0	0.00073783
2019	Annual	Mon-Sun	2270006005	Generator Sets	D	120	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	631.4293	583.997	2073.248	0.01651456	0.1361618	0.1399373	22.74066	0.00026676	0.0084781	0	0.001490082
2019	Annual	Mon-Sun	2270006005	Generator Sets	D	175	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	37.32047	34.517	222.7181	0.001268718	0.01263841	0.01170824	2.448147	2.75459E-05	0.00052165	0	0.000114474
2019	Annual	Mon-Sun	2270006005	Generator Sets	D	250	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	20.85555	19.2889	185.2082	0.000773768	0.00373689	0.008438167	2.047653	2.30396E-05	0.00023987	0	6.98158E-05
2019	Annual	Mon-Sun	2270006005	Generator Sets	D	500	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	46.37618	42.8924	652.7382	0.002570194	0.01289525	0.0266967	7.217729	7.08444E-05	0.00081375	0	0.000231905
2019	Annual	Mon-Sun	2270006005	Generator Sets	D	750	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	28.8136	26.6491	654.7011	0.002619651	0.01293372	0.02742945	7.239258	7.27888E-05	0.00082566	0	0.000236367
2019	Annual	Mon-Sun	2270006005	Generator Sets	D	9999	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	7.500682	6.93723	328.8659	0.001692778	0.00704758	0.02482686	3.633945	3.65383E-05	0.00056865	0	0.000152737
2019	Annual	Mon-Sun	2270006010	Pumps	D	15	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	349.4221	385.322	130.6532	0.001880745	0.00895395	0.01169238	1.428985	2.22363E-05	0.00061148	0	0.000169697
2019	Annual	Mon-Sun	2270006010	Pumps	D	25	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	104.3693	115.092	102.1724	0.001550305	0.00492506	0.009069744	1.120416	1.4216E-05	0.00044054	0	0.000139882
2019	Annual	Mon-Sun	2270006010	Pumps	D	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	181.9373	200.63	315.533	0.005219643	0.02609142	0.02606055	3.441207	4.44862E-05	0.00145816	0	0.00047096
2019	Annual	Mon-Sun	2270006010	Pumps	D	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	356.7397	393.392	1397.025	0.01175945	0.09315996	0.09565846	15.31857	0.000179695	0.00600998	0	0.001061036
2019	Annual	Mon-Sun	2270006010	Pumps	D	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	38.60107	42.567	271.1411	0.001644082	0.01561767	0.01447479	2.979639	3.35261E-05	0.00066851	0	0.000148343
2019	Annual	Mon-Sun	2270006010	Pumps	D	250	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	27.80741	30.6644	279.0486	0.001248475	0.00571974	0.01292212	3.084662	3.47077E-05	0.0003767	0	0.000112648
2019	Annual	Mon-Sun	2270006010	Pumps	D	500	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	0.5488304	0.60522	9.439959	3.99518E-05	0.00018876	0.000391186	0.1043683	1.02441E-06	1.2239E-05	0	3.60479E-06
2019	Annual	Mon-Sun	2270006010	Pumps	D	750	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	0.09147175	0.10087	2.601119	1.11547E-05	5.2009E-05	0.000110438	0.02875739	2.89148E-07	3.4123E-06	0	1.00647E-06
2019	Annual	Mon-Sun	2270006010	Pumps	D	9999	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	2.012378	2.21913	135.9405	0.000733746	0.0029515	0.01038075	1.50193	1.51015E-05	0.00024157	0	6.62047E-05
2019	Annual	Mon-Sun	2270006015	Air Compressors	D	15	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	4.75653	10.6076	3.499557	5.0376E-05	0.00023983	0.000313182	0.03827552	5.95601E-07	1.6379E-05	0	4.54534E-06
2019	Annual	Mon-Sun	2270006015	Air Compressors	D	25	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	9.421587	21.0112	13.82736	0.000209808	0.00066653	0.001227441	0.1516299	1.9239E-06	5.962E-05	0	1.89307E-05
2019	Annual	Mon-Sun	2270006015	Air Compressors	D	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	85.61753	190.937	195.7236	0.004292335	0.01991633	0.01714711	2.12429	2.74618E-05	0.00110427	0	0.000387291
2019	Annual	Mon-Sun	2270006015	Air Compressors	D	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	570.2347	1271.69	2724.345	0.02877275	0.1958007	0.1975442	29.82619	0.000349877	0.01404547	0	0.002596119
2019	Annual	Mon-Sun	2270006015	Air Compressors	D	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	21.58733	48.1421	193.8997	0.001530157	0.01203395	0.01096843	2.127971	2.39433E-05	0.0005781	0	0.000138064
2019	Annual	Mon-Sun	2270006015	Air Compressors	D	250	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	30.36862	67.7254	401.9343	0.00242317	0.00886463	0.01977547	4.439468	4.99516E-05	0.00063167	0	0.000218639
2019	Annual	Mon-Sun	2270006015	Air Compressors	D	500	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	39.60726	88.3286	925.5904	0.00538294	0.01958488	0.0403577	10.22551	0.000100367	0.00139483	0	0.000485694
2019	Annual	Mon-Sun	2270006015	Air Compressors	D	750	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	14.81842	33.0467	535.1875	0.003125247	0.01132411	0.02393047	5.912462	5.94482E-05	0.00081671	0	0.000281986
2019	Annual	Mon-Sun	2270006015	Air Compressors	D	1000	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	0.365887	0.81597	17.95364	0.000115274	0.00041231	0.001442081	0.1982475	1.99332E-06	3.6529E-05	0	1.0401E-05
2019	Annual	Mon-Sun	2270006025	Welders	D	15	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	157.9717	277.945	78.80217	0.001134353	0.00540049	0.007052142	0.8618783	1.34116E-05	0.00036881	0	0.000102351
2019	Annual	Mon-Sun	2270006025	Welders	D	25	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	139.037	244.63	125.7735	0.001908413	0.00606272	0.01116479	1.379224	1.74997E-05	0.0005423	0	0.000172193
2019	Annual	Mon-Sun	2270006025	Welders	D	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	427.9048	752.882	898.1998	0.0184251	0.08570258	0.07710712	9.762904	0.00012621	0.00481062	0	0.001662467
2019	Annual	Mon-Sun	2270006025	Welders	D	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	332.3168	584.699	1053.322	0.01039747	0.07379062	0.07520042	11.53784	0.000135345	0.00520542	0	0.000938147
2019	Annual	Mon-Sun	2270006025	Welders	D	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.646491	2.89694	12.94174	9.40911E-05	0.00078266	0.000721516	0.1420963	1.59883E-06	3.6751E-05	0	8.48969E-06
2019	Annual	Mon-Sun	2270006025	Welders	D	250	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	0.365887	0.64376	3.46578	1.89372E-05	7.4542E-05	0.000167972	0.03829159	4.30846E-07	5.2153E-06	0	1.70868E-06
2019	Annual	Mon-Sun	2270006025	Welders	D	500	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	0.9147173	1.60941	12.19359	6.39081E-05	0.00025302	0.000524349	0.1347465	1.32258E-06	1.7584E-05	0	5.76633E-06
2019	Annual	Mon-Sun	2270006030	Pressure Washers	D	15	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	21.58733	8.56517	1.912074	2.43888E-05	0.00013112	0.000170119	0.0209258	3.25624E-07	8.3393E-06	0	2.20056E-06
2019	Annual	Mon-Sun	2270006030	Pressure Washers	D	25	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	5.030944	1.99612	0.6497172	9.17378E-06	3.1331E-05	5.76978E-05	0.007127596	9.04357E-08	2.71E-06	0	8.27735E-07
2019	Annual	Mon-Sun	2270006030	Pressure Washers	D	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	9.970419	3.95595	2.579187	2.86932E-05	0.00017246	0.000203028	0.0282512	3.65218E-07	9.4237E-06	0	2.58895E-06
2019	Annual	Mon-Sun	2270006030	Pressure Washers	D	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	4.116228	1.63319	1.789196	1.18437E-05	0.00011213	0.000115557	0.01964352	2.30429E-07	6.1823E-06	0	1.06864E-06

EMFAC Fuel Usage: Year 2020

Vehicle type	Gasoline			Diesel			Natural Gas			Electricity
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day
All other buses	0	0	#DIV/0!	29,485	3,447	8.55	0	0	#DIV/0!	0
LDA	53,431,843	1,797,977	29.72	614,670	13,821	44.47	0	0	#DIV/0!	849,127
LDT1	5,889,126	235,172	25.04	2,464	110	22.36	0	0	#DIV/0!	17,134
LDT2	18,096,267	791,747	22.86	112,910	3,459	32.65	0	0	#DIV/0!	78,796
LHD1	1,308,636	157,917	8.29	1,175,504	65,874	17.84	0	0	#DIV/0!	0
LHD2	195,409	26,969	7.25	410,789	25,789	15.93	0	0	#DIV/0!	0
MCY	659,799	18,084	36.48	0	0	#DIV/0!	0	0	#DIV/0!	0
MDV	11,798,102	621,661	18.98	290,576	11,703	24.83	0	0	#DIV/0!	26,122
MH	100,811	21,662	4.65	35,417	3,696	9.58	0	0	#DIV/0!	0
Motor coach	0	0	#DIV/0!	23,947	3,893	6.15	0	0	#DIV/0!	0
OBUS	67,147	14,491	4.63	0	0	#DIV/0!	0	0	#DIV/0!	0
PTO	0	0	#DIV/0!	26,999	5,703	4.73	0	0	#DIV/0!	0
SBUS	11,222	1,213	9.25	75,333	9,581	7.86	0	0	#DIV/0!	0
T6	195,205	41,571	4.70	1,122,138	123,432	9.09	0	0	#DIV/0!	0
T7	1,997	512	3.90	1,806,000	291,123	6.20	30,816	12,768	2.41	0
UBUS	39,098	7,244	5.40	2,628	555	4.73	109,591	28,626	3.83	0
Total	**91,794,661**	**3,736,219**	**24.57**	**5,728,860**	**562,185**	**10.19**	**140,407**	**41,393**	**3.39**	**971,179**

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EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: Orange
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	Fuel_Consumption
San Diego (SD)	2020	All Other Buses	Aggregated	Aggregated	DSL	553.0162008	29485.27	4645.34	3.446820719
San Diego (SD)	2020	LDA	Aggregated	Aggregated	GAS	1374512.127	53431843	6486947	1797.976779
San Diego (SD)	2020	LDA	Aggregated	Aggregated	DSL	15765.94009	614670.2	73905.2	13.82067361
San Diego (SD)	2020	LDA	Aggregated	Aggregated	ELEC	21536.68509	849126.7	107483	0
San Diego (SD)	2020	LDT1	Aggregated	Aggregated	GAS	166319.2812	5889126	755001	235.1715444
San Diego (SD)	2020	LDT1	Aggregated	Aggregated	DSL	132.806786	2463.952	444.011	0.110218259
San Diego (SD)	2020	LDT1	Aggregated	Aggregated	ELEC	432.2377665	17133.52	2155.17	0
San Diego (SD)	2020	LDT2	Aggregated	Aggregated	GAS	490412.8473	18096267	2279627	791.7466996
San Diego (SD)	2020	LDT2	Aggregated	Aggregated	DSL	2611.900128	112909.7	12855.3	3.458711152
San Diego (SD)	2020	LDT2	Aggregated	Aggregated	ELEC	2269.034854	78796.12	11537.5	0
San Diego (SD)	2020	LHD1	Aggregated	Aggregated	GAS	36068.73905	1308636	537370	157.916549
San Diego (SD)	2020	LHD1	Aggregated	Aggregated	DSL	30650.0985	1175504	385540	65.8735366
San Diego (SD)	2020	LHD2	Aggregated	Aggregated	GAS	5336.42161	195409.4	79504.7	26.96903099
San Diego (SD)	2020	LHD2	Aggregated	Aggregated	DSL	10410.22003	410789	130947	25.78890113
San Diego (SD)	2020	MCY	Aggregated	Aggregated	GAS	78375.08078	659798.8	156750	18.08443051
San Diego (SD)	2020	MDV	Aggregated	Aggregated	GAS	323862.2667	11798102	1490892	621.6605794
San Diego (SD)	2020	MDV	Aggregated	Aggregated	DSL	6649.23127	290576.2	32474.7	11.7034523
San Diego (SD)	2020	MDV	Aggregated	Aggregated	ELEC	729.5148397	26122.33	3744.41	0
San Diego (SD)	2020	MH	Aggregated	Aggregated	GAS	11690.92506	100810.5	1169.56	21.66204892
San Diego (SD)	2020	MH	Aggregated	Aggregated	DSL	3786.461195	35416.53	378.646	3.695523514
San Diego (SD)	2020	Motor Coach	Aggregated	Aggregated	DSL	187.5391242	23946.72	2738.07	3.893151405
San Diego (SD)	2020	OBUS	Aggregated	Aggregated	GAS	1270.742037	67147.07	25425	14.49113552
San Diego (SD)	2020	PTO	Aggregated	Aggregated	DSL	0	26998.82	0	5.702802051
San Diego (SD)	2020	SBUS	Aggregated	Aggregated	GAS	209.9368033	11222.01	839.747	1.213163646
San Diego (SD)	2020	SBUS	Aggregated	Aggregated	DSL	2406.348585	75332.86	27768.9	9.580770365
San Diego (SD)	2020	T6 Ag	Aggregated	Aggregated	DSL	34.62220787	424.2341	152.338	0.047422816
San Diego (SD)	2020	T6 CAIRP heavy	Aggregated	Aggregated	DSL	82.63382239	16380.12	1206.45	1.518779565
San Diego (SD)	2020	T6 CAIRP small	Aggregated	Aggregated	DSL	44.01936337	2327.483	642.683	0.228493016
San Diego (SD)	2020	T6 instate construc	Aggregated	Aggregated	DSL	634.740284	43154.82	2869.64	5.447079125
San Diego (SD)	2020	T6 instate construc	Aggregated	Aggregated	DSL	2210.984116	112870.4	9995.77	14.17125294
San Diego (SD)	2020	T6 instate heavy	Aggregated	Aggregated	DSL	2768.978293	370814.2	31953.6	38.42598153
San Diego (SD)	2020	T6 instate small	Aggregated	Aggregated	DSL	10590.30977	523210	122211	56.80603168
San Diego (SD)	2020	T6 OOS heavy	Aggregated	Aggregated	DSL	47.35227764	9428.753	691.343	0.873618393
San Diego (SD)	2020	T6 OOS small	Aggregated	Aggregated	DSL	25.57192422	1341.429	373.35	0.131806263
San Diego (SD)	2020	T6 Public	Aggregated	Aggregated	DSL	2376.40705	36936.86	7208.43	5.174045864
San Diego (SD)	2020	T6 utility	Aggregated	Aggregated	DSL	314.5228093	5249.754	3617.01	0.607241363
San Diego (SD)	2020	T6TS	Aggregated	Aggregated	GAS	3500.704768	195204.5	70042.1	41.57062483
San Diego (SD)	2020	T7 Ag	Aggregated	Aggregated	DSL	14.4688476	255.7842	63.6629	0.044265011
San Diego (SD)	2020	T7 CAIRP	Aggregated	Aggregated	DSL	1807.112542	327143.3	26383.8	49.76341782
San Diego (SD)	2020	T7 CAIRP construc	Aggregated	Aggregated	DSL	168.5365323	30998.48	761.947	5.481493994
San Diego (SD)	2020	T7 NNOOS	Aggregated	Aggregated	DSL	1975.871273	398811.9	28847.7	58.9283554
San Diego (SD)	2020	T7 NOOS	Aggregated	Aggregated	DSL	710.3369034	128530.4	10370.9	20.00499118
San Diego (SD)	2020	T7 other port	Aggregated	Aggregated	DSL	514.1224946	82672.7	3907.33	15.36936387
San Diego (SD)	2020	T7 POLA	Aggregated	Aggregated	DSL	223.9470598	27497.4	1702	5.351699812
San Diego (SD)	2020	T7 Public	Aggregated	Aggregated	DSL	1479.247337	29982.85	4487.05	5.990040079
San Diego (SD)	2020	T7 Single	Aggregated	Aggregated	DSL	2046.343099	135971.5	23614.5	23.14854336
San Diego (SD)	2020	T7 single construc	Aggregated	Aggregated	DSL	1090.363582	76901.54	4929.49	14.70836138
San Diego (SD)	2020	T7 SWCV	Aggregated	Aggregated	DSL	684.5277991	27968.7	2669.66	12.61284862

San Diego (SD)	2020	T7 SWCV	Aggregated	Aggregated	NG	757.823436	30816.14	2955.51	12.76763706
San Diego (SD)	2020	T7 tractor	Aggregated	Aggregated	DSL	3416.58192	473298.4	43390.6	67.08091711
San Diego (SD)	2020	T7 tractor constru	Aggregated	Aggregated	DSL	902.6913091	63437	4081.03	12.1879921
San Diego (SD)	2020	T7 utility	Aggregated	Aggregated	DSL	124.6802813	2530.335	1433.82	0.451050595
San Diego (SD)	2020	T7IS	Aggregated	Aggregated	GAS	19.9406897	1996.635	398.973	0.512469279
San Diego (SD)	2020	UBUS	Aggregated	Aggregated	GAS	372.1315452	39098.42	1488.53	7.243801944
San Diego (SD)	2020	UBUS	Aggregated	Aggregated	DSL	25	2628.079	100	0.555482686
San Diego (SD)	2020	UBUS	Aggregated	Aggregated	NG	973.4656249	109590.7	3893.86	28.62554402

OFFROAD2007 Fuel Usage: Year 2020

All data here is daily

	Gasoline			Diesel		
	Total population	Total fuel use	Fuel use per day per unit	Total population	Total fuel use	Fuel use per day p
Air Compressors	1,079	1,164	1.078	775	4,998	6.450
Bore/Drill rigs	33	33	1.004	122	2,169	17.805
Cement and Mortar Mixers	2,977	292	0.098	69	19	0.272
Concrete/Industrial Saws	430	327	0.760	13	54	4.243
Cranes	7	23	3.327	232	4,930	21.252
Excavators	0	0	#DIV/0!	2,181	45,943	21.064
Forklifts	999	10,089	10.103	349	4,257	12.183
Generator Sets	25,088	6,658	0.265	1,988	5,095	2.562
Graders	0	0	#DIV/0!	764	11,953	15.646
Pavers	0	0	#DIV/0!	335	2,717	8.106
Paving Equipment	2,138	530	0.248	69	495	7.194
Rollers	242	202	0.836	987	5,781	5.857
Rubber Tired Dozers	0	0	#DIV/0!	82	3,992	48.411
Scrapers	0	0	#DIV/0!	215	7,812	36.284
Skid Steer Loaders	497	614	1.237	3,521	11,314	3.214
Tractors/Loaders/Backhoes	8	54	6.978	3,434	27,614	8.042
Welders	3,337	2,031	0.609	1,058	2,178	2.059

CY	Season	AvgDays	Code	Equipment	Fuel	MaxHP	Class	C/R	Pre	Hand	Port	County	Air Basin	Air Dist.	Population	Activity	Consumption	ROG Exhaust	CO Exhaust	NOX Exhaust	CO2 Exhaust	SO2 Exhaust	PM Exhaust	N2O Exhaust	CH4 Exhaust
2020	Annual	Mon-Sun	2260002006	Tampers/Rammers	G2	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.27E+02	1.63E+02	3.29E+01	2.07E-03	8.89E-02	1.56E-03	1.70E-01	7.00E-06	1.43E-03	2.54E-04	1.29E-04
2020	Annual	Mon-Sun	2260002009	Plate Compactors	G2	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.81E+01	1.59E+01	3.20E+00	2.01E-04	8.64E-03	1.51E-04	1.65E-02	6.80E-07	1.38E-04	2.46E-05	1.25E-05
2020	Annual	Mon-Sun	2260003040	Other General Industrial Equipr	G2	15	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	6.40E+00	6.59E+00	2.59E+00	1.17E-04	7.05E-03	8.54E-05	1.35E-02	5.55E-07	6.27E-06	1.21E-05	7.25E-06
2020	Annual	Mon-Sun	2260006005	Generator Sets	G2	2	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	1.93E+02	7.08E+01	3.73E+00	5.34E-04	7.09E-03	1.37E-04	2.28E-02	9.39E-07	7.93E-05	4.66E-05	3.32E-05
2020	Annual	Mon-Sun	2260006005	Generator Sets	G2	2	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	1.51E+02	3.74E+01	2.04E+00	3.31E-04	4.04E-03	7.57E-05	1.21E-02	4.96E-07	4.24E-05	2.51E-05	2.06E-05
2020	Annual	Mon-Sun	2260006005	Generator Sets	G2	15	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	1.94E+00	7.15E-01	3.98E-01	1.80E-05	1.08E-03	1.32E-05	2.07E-03	8.53E-08	9.45E-07	1.58E-06	1.12E-06
2020	Annual	Mon-Sun	2260006005	Generator Sets	G2	15	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	1.48E+00	3.66E-01	2.07E-01	1.22E-05	5.66E-04	7.08E-06	1.06E-03	4.37E-08	5.51E-07	8.26E-07	7.58E-07
2020	Annual	Mon-Sun	2260006010	Pumps	G2	2	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	7.65E+02	5.41E+02	2.80E+01	3.77E-03	5.02E-02	1.00E-03	1.77E-01	7.28E-06	6.20E-04	3.50E-04	2.35E-04
2020	Annual	Mon-Sun	2260006010	Pumps	G2	2	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	6.02E+02	2.86E+02	1.51E+01	2.09E-03	2.81E-02	5.54E-04	9.33E-02	3.84E-06	3.25E-04	1.89E-04	1.30E-04
2020	Annual	Mon-Sun	2260006010	Pumps	G2	15	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	2.06E+02	1.46E+02	7.38E+01	4.74E-03	1.99E-01	3.57E-03	3.81E-01	1.57E-05	3.19E-03	3.75E-04	2.95E-04
2020	Annual	Mon-Sun	2260006010	Pumps	G2	15	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	1.62E+02	7.70E+01	3.90E+01	2.50E-03	1.05E-01	1.87E-03	2.01E-01	8.29E-06	1.69E-03	1.97E-04	1.55E-04
2020	Annual	Mon-Sun	2260006010	Pumps	G2	25	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	2.50E+00	1.77E+00	1.95E+00	1.29E-04	5.44E-03	8.47E-05	9.80E-03	4.04E-07	8.22E-05	6.49E-06	7.99E-06
2020	Annual	Mon-Sun	2260006010	Pumps	G2	25	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	1.94E+00	9.23E-01	1.02E+00	6.68E-05	2.85E-03	4.40E-05	5.13E-03	2.11E-07	4.30E-05	3.38E-06	4.15E-06
2020	Annual	Mon-Sun	2265002003	Asphalt Pavers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.13E+00	7.75E+00	4.48E+00	3.38E-04	1.28E-02	2.44E-04	2.18E-02	6.21E-07	1.83E-04	2.22E-05	1.92E-05
2020	Annual	Mon-Sun	2265002003	Asphalt Pavers	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.22E+01	1.32E+01	1.93E+01	1.49E-03	5.69E-02	9.41E-04	9.11E-02	2.31E-06	7.63E-04	5.86E-05	8.47E-05
2020	Annual	Mon-Sun	2265002003	Asphalt Pavers	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.29E+00	6.76E+00	1.56E+01	2.89E-04	1.69E-02	3.73E-04	1.23E-01	1.50E-06	9.44E-06	2.46E-05	1.64E-05
2020	Annual	Mon-Sun	2265002003	Asphalt Pavers	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.46E+00	3.71E+00	1.41E+01	1.54E-04	5.26E-03	3.73E-04	1.28E-01	1.23E-06	9.89E-06	1.71E-05	8.72E-06
2020	Annual	Mon-Sun	2265002006	Tampers/Rammers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.51E+01	7.53E+00	3.63E+00	2.71E-04	1.04E-02	1.95E-04	1.77E-02	5.03E-07	1.48E-04	1.94E-05	1.54E-05
2020	Annual	Mon-Sun	2265002009	Plate Compactors	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.54E+02	2.74E+02	4.95E+01	6.98E-03	1.06E-01	3.05E-03	2.85E-01	9.84E-06	9.29E-05	4.50E-04	3.96E-04
2020	Annual	Mon-Sun	2265002009	Plate Compactors	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.88E+02	3.32E+02	1.42E+02	1.06E-02	4.07E-01	7.65E-03	6.92E-01	1.97E-05	5.80E-03	8.05E-04	6.03E-04
2020	Annual	Mon-Sun	2265002015	Rollers	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.17E+01	1.40E+01	3.79E+00	4.55E-04	9.04E-03	1.99E-04	2.06E-02	7.12E-07	6.72E-06	2.62E-05	2.58E-05
2020	Annual	Mon-Sun	2265002015	Rollers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	9.99E+01	8.49E+01	4.61E+01	3.45E-03	1.32E-01	2.48E-03	2.24E-01	6.39E-06	1.88E-03	2.34E-04	1.96E-04
2020	Annual	Mon-Sun	2265002015	Rollers	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.74E+01	5.73E+01	6.76E+01	5.18E-03	1.99E-01	3.27E-03	3.20E-01	8.10E-06	2.68E-03	2.25E-04	2.95E-04
2020	Annual	Mon-Sun	2265002015	Rollers	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.43E+00	7.54E+00	2.04E+01	4.92E-04	2.90E-02	6.20E-04	1.49E-01	1.82E-06	1.14E-05	3.36E-05	2.79E-05
2020	Annual	Mon-Sun	2265002015	Rollers	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.33E+00	1.42E+01	6.43E+01	1.01E-03	3.40E-02	2.25E-03	5.63E-01	5.44E-06	4.36E-05	8.49E-05	5.70E-05
2020	Annual	Mon-Sun	2265002021	Paving Equipment	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.76E+02	3.62E+02	7.05E+01	9.82E-03	1.52E-01	4.29E-03	4.04E-01	1.39E-05	1.32E-04	6.15E-04	5.58E-04
2020	Annual	Mon-Sun	2265002021	Paving Equipment	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.31E+03	7.20E+02	4.13E+02	3.08E-02	1.18E+00	2.22E-02	2.01E+00	5.73E-05	1.68E-02	2.04E-03	1.75E-03
2020	Annual	Mon-Sun	2265002021	Paving Equipment	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.92E+01	1.60E+01	2.08E+01	1.59E-03	6.13E-02	1.00E-03	9.83E-02	2.49E-06	8.24E-04	6.61E-05	9.03E-05
2020	Annual	Mon-Sun	2265002021	Paving Equipment	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.72E+01	8.25E+00	1.84E+01	2.16E-04	1.37E-02	3.15E-04	1.55E-01	1.89E-06	1.19E-05	2.56E-05	1.23E-05
2020	Annual	Mon-Sun	2265002021	Paving Equipment	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.43E+00	2.13E+00	7.61E+00	4.15E-05	1.66E-03	1.04E-04	7.07E-02	6.83E-07	5.47E-06	7.12E-06	2.36E-06
2020	Annual	Mon-Sun	2265002024	Surfacing Equipment	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.42E+02	7.81E+01	1.56E+01	2.25E-03	3.28E-02	9.84E-04	9.06E-02	3.13E-06	2.95E-05	1.37E-04	1.28E-04
2020	Annual	Mon-Sun	2265002024	Surfacing Equipment	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.23E+02	5.84E+02	2.23E+02	1.75E-02	6.38E-01	1.26E-02	1.08E+00	3.09E-05	9.08E-03	1.37E-03	9.91E-04
2020	Annual	Mon-Sun	2265002024	Surfacing Equipment	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.79E+00	7.99E+00	7.47E+00	6.00E-04	2.20E-02	3.78E-04	3.52E-02	8.92E-07	2.95E-04	2.84E-05	3.40E-05
2020	Annual	Mon-Sun	2265002027	Signal Boards	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.76E+00	6.27E-01	2.03E-01	2.59E-05	4.65E-04	1.13E-05	1.13E-03	3.89E-08	3.67E-07	1.33E-06	1.47E-06
2020	Annual	Mon-Sun	2265002027	Signal Boards	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.25E+01	9.74E+00	5.76E+00	4.28E-04	1.65E-02	3.08E-04	2.80E-02	8.00E-07	2.35E-04	2.80E-05	2.43E-05
2020	Annual	Mon-Sun	2265002030	Trenchers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.16E+02	1.38E+02	8.85E+01	6.77E-03	2.53E-01	4.88E-03	4.30E-01	1.23E-05	3.61E-03	4.20E-04	3.84E-04
2020	Annual	Mon-Sun	2265002030	Trenchers	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.96E+01	1.39E+02	1.48E+02	1.16E-02	4.38E-01	7.34E-03	7.00E-01	1.77E-05	5.87E-03	4.64E-04	6.60E-04
2020	Annual	Mon-Sun	2265002030	Trenchers	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.03E+01	4.44E+01	9.78E+01	2.02E-03	1.12E-01	2.75E-03	7.60E-01	9.24E-06	5.82E-05	1.71E-04	1.14E-04
2020	Annual	Mon-Sun	2265002030	Trenchers	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.34E+01	1.47E+01	6.12E+01	7.79E-04	2.50E-02	1.96E-03	5.48E-01	5.30E-06	4.25E-05	7.88E-05	4.42E-05
2020	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	15	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	3.31E+00	1.13E+00	8.63E-01	6.24E-05	2.47E-03	4.50E-05	4.21E-03	1.20E-07	3.53E-05	3.66E-06	3.55E-06
2020	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	25	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.64E+01	5.59E+00	7.95E+00	5.90E-04	2.35E-02	3.72E-04	3.76E-02	9.54E-07	3.15E-04	2.38E-05	3.35E-05
2020	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.95E+00	5.72E-01	1.48E+00	2.24E-05	1.07E-03	3.66E-05	1.25E-02	1.52E-07	9.56E-07	2.22E-06	1.27E-06
2020	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	8.95E+00	2.63E+00	1.69E+01	1.45E-04	3.98E-03	4.69E-04	1.56E-01	1.51E-06	1.21E-05	1.57E-05	8.21E-06
2020	Annual	Mon-Sun	2265002033	Bore/Drill Rigs	G4	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	2.21E+00	6.50E-01	5.86E+00	3.17E-05	1.73E-03	1.83E-04	5.37E-02	5.34E-07	4.28E-06	4.95E-06	1.80E-06
2020	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.07E+01	2.16E+01	5.75E+00	7.35E-04	1.32E-02	3.21E-04	3.20E-02	1.10E-06	1.04E-05	4.15E-05	4.18E-05
2020	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.73E+02	2.32E+02	1.58E+02	1.18E-02	4.53E-01	8.54E-03	7.71E-01	2.20E-05	6.46E-03	7.22E-04	6.73E-04
2020	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.54E+01	7.26E+01	9.64E+01	7.39E-03	2.84E-01	4.67E-03	4.56E-01	1.15E-05	3.82E-03	3.04E-04	4.20E-04
2020	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.27E+00	1.22E+01	3.37E+01	3.51E-04	2.37E-02	5.02E-04	2.86E-01	3.48E-06	2.19E-05	4.02E-05	1.99E-05
2020	Annual	Mon-Sun	2265002039	Concrete/Industrial Saws	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.16E+00	6.97E+00	3.28E+01	1.44E-04	6.46E-03	3.21E-04	3.06E-01	2.96E-06	2.37E-05	2.44E-05	8.18E-06
2020	Annual	Mon-Sun	2265002042	Cement and Mortar Mixers	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.10E+03	2.78E+02	7.05E+01	8.78E-03	1.64E-01	3.84E-03	3.88E-01	1.34E-05	1.27E-04	5.12E-04	4.99E-04
2020	Annual	Mon-Sun	2265002042	Cement and Mortar Mixers	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.87E+03	4.71E+02	2.19E+02	1.71E-02	6.31E-01	1.13E-02	1.05E+00	3.00E-05	8.82E-03	1.16E-03	9.73E-04
2020	Annual	Mon-Sun	2265002042	Cement and Mortar Mixers	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.86E+00	1.98E+00	2.95E+00	2.33E-04	8.75E-03	1.37E-04	1.38E-02	3.51E-07	1.16E-04	8.61E-06	1.32E-05
2020	Annual	Mon-Sun	2265002045	Cranes	G4	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	2.21E+00	2.52E+00	4.89E+00	1.02E-04	5.69E-03	1.38E-04	3.78E-02	4.60E-07	2.90E-06	9.08E-06	5.78E-06
2020	Annual	Mon-Sun	2265002045	Cranes	G4	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	4.43E+00	5.04E+00	1.67E+01	2.16E-04	6.94E-03	5.40E-04	1.50E-01	1.45E-06	1.16E-05	2.40E-05	1.23E-05
2020	Annual	Mon-Sun	2265002045	Cranes	G4	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.77E-01	2.02E-01	1.08E+00	9.14E-06	3.52E-04	4.07E-05	9.84E-03	9.77E-08	7.84E-07	1.33E-06	5.19E-07
2020	Annual	Mon-Sun	2265002054	Crushing/Proc. Equipment	G4	15	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	3.00E+00	2.38E+00	1.77E+00	1.31E-04	5.06E-03	9.48E-05	8.60E-03	2.45E-07	7.21E-05	7.72E-06	7.47E-06
2020	Annual	Mon-Sun	2265002054	Crushing/Proc. Equipment	G4	25	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.96E+00	1.56E+00	2.12E+00	1.62E-04	6.25E-03	1.02E-04	1.00E-02	2.54E-07	8.40E-05	6.59E-06	9.19E-06
2020	Annual	Mon-Sun	2265002054	Crushing/Proc. Equipment	G4	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	2.57E+00	1.70E+00	1.30E+01	1.36E-04	4.09E-03	3.87E-04	1.18E-01	1.14E-06	9.16E-06	1.18E-05	7.73E-06
2020	Annual	Mon-Sun	2265002057	Rough Terrain Forklifts	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.86E-01	1.00E+00	3.31E+00	6.89E-05	3.84E-03	9.37E-05	2.57E-02	3.12E-07	1.96E-06	4.80E-06	3.91E-06
2020	Annual	Mon-Sun	2265002057	Rough Terrain Forklifts	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.26E+01	1.42E+01	7.28E+01	9.37E-04	3.01E-02	2.25E-03	6.51E-01	6.29E-06	5.05E-05	8.54E-05	5.32E-05
2020	Annual	Mon-Sun	2265002057	Rough Terrain Forklifts	G4	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.43E-01	5.02E-01	4.09E+00	3.45E-05	1.33E-03	1.54E-04	3.73E-02	3.70E-07	2.97E-06	4.14E-06	1.96E-06
2020	Annual	Mon-Sun	2265002060	Rubber Tired Loaders	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.21E+00	3.11E+00	7.62E+00	1.62E-04	9.49E-03	2.04E-04	5.80E-02	7.05E-07	4.44E-06	1.23E-05	9.21E-06
2020	Annual	Mon-Sun	2265002060	Rubber Tired Loaders	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.47E+01	2.06E+01	7.70E+01	1.02E-03	3.44E-02	2.36E-03	6.85E-01	6.62E-06	5.31E-05	1.03E-04	5.78E-05
2020	Annual	Mon-Sun	2265002066	Tractors/Loaders/Backhoes	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.80E+00	1.86E+01	5.44E+01	4.64E-04	2.74E-02	1.05E-03	4.80E-01	4.64E-06	3.72E-05	7.03E-05	2.62E-05
2020	Annual	Mon-Sun	2265002072	Skid Steer Loaders	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.89E+00	5.16E+00	4.07E+00	3.09E-04	1.16E-02	2.22E-04	1.98E-02	5.65E-07	1.66E-04	1.75E-05	1.75E-05
2020	Annual	Mon-Sun	2265002072	Skid Steer Loaders	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.94E+02	3.45E+02	3.81E+02	2.96E-02	1.12E+00	1.87E-02	1.80E+00	4.56E-05	1.51E-02	1.32E-03	1.68E-03
2020	Annual	Mon-Sun	2265002072	Skid Steer Loaders	G4	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.04E+01	5.14E+01	9.82E+01	1.08E-03	7.65E-02	1.49E-03	8.23E-01	1.00E-05	6.31E-05	1.41E-04	6.11E-05
2020	Annual	Mon-Sun	2265002072	Skid Steer Loaders	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.61E+01	3.07E+01	1.31E+02	6.18E-04	2.94E-02	1.38E-03	1.22E+00	1.18E-05	9.43E-05	1.06E-04	3.51E-05
2020	Annual	Mon-Sun	2265002078	Dumpers/Tenders	G4	5	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.62E+01	2.30E+01	3.08E+00	4.42E-04	6.50E-03	1.93E-04	1.78E-02	6.16E-07	5.82E-06	3.25E-05	2.51E-05
2020	Annual	Mon-Sun	2265002078	Dumpers/Tenders	G4	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.20E+02	4.90E+01	1.77E+01	1.39E-03	5.10E-02	9.47E-04	8.56E-02	2.44E-06	7.18E-04	1.08E-04	7.91E-05
2020	Annual	Mon-Sun	2265002078	Dumpers/Tenders	G4	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.22E+01	9.08E+00	7.13E+00	5.67E-04	2.11E-02	3.42E-04	3.35E-02	8.49E-07	2.81E-04	2.86E-05	3.22E-05
2020	Annual	Mon-Sun	2265002078	Dumpers/Tenders	G4	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.59E+00	5.55E-01	1.39E+00	1.23E-05	3.45E-04	3.91E-05	1.28E-02	1.24E-07	9.94E-07	2.03E-06	7.00E-07
2020	Annual	Mon-Sun	2265002081	Other Construction Equipment	G4	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.20E+00	6.31E+00	3.46E+01	1.35E-04	1.04E-02	3.94E-04	3.17E-01	3.15E-06	2.52E-05	2.60E-05	7.64E-06
2020	Annual	Mon-Sun	2265003010	Aerial Lifts	G4	15	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	1.24E+00	1.27E+00	7.40E-01	5.55E-05	2.12E-03	4.00E-05	3.60E-03	1.03E-07	3.02E-05	3.64E-06	3.15E-06
2020	Annual	Mon-Sun	2265003010	Aerial Lifts	G4	25	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	5.28E+01	5.43E+01	4.76E+01	3.73E-03	1.40E-01	2.35E-03	2.24E-01	5.69E-06	1.88E-03	1.84E-04	2.12E-04
2020	Annual	Mon-Sun	2265003010	Aerial Lifts	G4	50	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	6.45E+01	6.38E+01	1.02E+02	1.18E-03	8.82E-02	1.58E-03	8.37E-01	1.02E-05	6.41E-05	1.61E-04	6.68E-05
2020	Annual	Mon-Sun	2265003010	Aerial Lifts	G4	120	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	6.45E+01	6.38E+01	1.82E+02	9.29E-04	4.69E-02	2.10E-03	1.68E+00	1.62E-05	1.30E-04	1.86E-04	5.27E-05
2020	Annual	Mon-Sun	2265003020	Forklifts	G4	25	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.24E+00	3.05E+00	2.10E+00	1.12E-04	6.27E-03	8.35E-05	9.97E-03	2.53E-07	5.57E-06	8.10E-06	6.31E-06
2020	Annual	Mon-Sun	2265003020	Forklifts	G4	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	2.15E+02	1.06E+03	1.70E+03	2.99E-02	3.21E+00	6.19E-02	1.13E+01	1.37E-04	8.64E-04	4.11E-03	1.66E-03

2020	Annual	Mon-Sun	2265003020	Forklifts	G4	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	7.55E+02	3.73E+03	7.84E+03	6.31E-02	5.47E+00	2.79E-01	6.68E+01	6.45E-04	5.17E-03	1.67E-02	3.51E-03
2020	Annual	Mon-Sun	2265003020	Forklifts	G4	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	2.76E+01	1.36E+02	5.48E+02	3.30E-03	2.08E-01	1.72E-02	4.95E+00	4.92E-05	3.94E-04	8.11E-04	1.83E-04
2020	Annual	Mon-Sun	2265003030	Sweepers/Scrubbers	G4	15	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	3.59E+01	2.66E+01	1.45E+01	7.41E-04	4.20E-02	5.17E-04	7.14E-02	2.04E-06	3.63E-05	5.88E-05	4.21E-05
2020	Annual	Mon-Sun	2265003030	Sweepers/Scrubbers	G4	25	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	3.50E+01	2.59E+01	3.28E+01	1.65E-03	9.78E-02	1.21E-03	1.57E-01	3.97E-06	8.22E-05	9.16E-05	9.35E-05
2020	Annual	Mon-Sun	2265003030	Sweepers/Scrubbers	G4	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	6.00E+01	8.49E+01	2.23E+02	2.56E-03	2.02E-01	4.96E-03	1.82E+00	2.21E-05	1.39E-04	3.37E-04	1.45E-04
2020	Annual	Mon-Sun	2265003030	Sweepers/Scrubbers	G4	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	5.01E+01	7.08E+01	3.17E+02	1.49E-03	8.62E-02	8.43E-03	2.92E+00	2.82E-05	2.26E-04	4.12E-04	8.46E-05
2020	Annual	Mon-Sun	2265003030	Sweepers/Scrubbers	G4	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	2.91E-01	4.12E-01	3.71E+00	1.16E-05	1.14E-03	9.99E-05	3.40E-02	3.38E-07	2.71E-06	3.50E-06	6.56E-07
2020	Annual	Mon-Sun	2265003040	Other General Industrial Equipr	G4	15	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	7.11E+01	7.31E+01	3.05E+01	1.63E-03	8.80E-02	1.13E-03	1.50E-01	4.26E-06	7.94E-05	1.43E-04	9.24E-05
2020	Annual	Mon-Sun	2265003040	Other General Industrial Equipr	G4	25	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	2.33E+01	2.75E+01	2.65E+01	1.38E-03	7.90E-02	1.03E-03	1.26E-01	3.20E-06	6.93E-05	8.64E-05	7.86E-05
2020	Annual	Mon-Sun	2265003040	Other General Industrial Equipr	G4	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	2.06E+01	4.03E+01	7.19E+01	9.25E-04	8.10E-02	1.83E-03	5.63E-01	6.85E-06	4.31E-05	1.39E-04	5.23E-05
2020	Annual	Mon-Sun	2265003040	Other General Industrial Equipr	G4	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	6.77E+00	1.32E+01	5.32E+01	2.86E-04	1.90E-02	1.51E-03	4.82E-01	4.66E-06	3.73E-05	7.51E-05	1.62E-05
2020	Annual	Mon-Sun	2265003040	Other General Industrial Equipr	G4	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	6.55E-01	1.28E+00	1.09E+01	4.02E-05	3.51E-03	3.04E-04	9.99E-02	9.93E-07	7.96E-06	1.07E-05	2.27E-06
2020	Annual	Mon-Sun	2265003050	Other Material Handling Equipr	G4	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	2.91E-01	3.08E-01	7.48E-01	1.39E-05	8.80E-04	2.42E-05	5.78E-03	7.03E-08	4.43E-07	1.39E-06	7.89E-07
2020	Annual	Mon-Sun	2265003050	Other Material Handling Equipr	G4	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.29E+01	1.36E+01	3.71E+01	3.99E-04	1.51E-02	1.48E-03	3.33E-01	3.22E-06	2.58E-05	7.17E-05	2.26E-05
2020	Annual	Mon-Sun	2265006005	Generator Sets	G4	5	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	2.53E+03	9.30E+02	2.04E+02	2.99E-02	4.18E-01	7.53E-03	1.20E+00	4.13E-05	4.15E-03	1.28E-03	1.70E-03
2020	Annual	Mon-Sun	2265006005	Generator Sets	G4	5	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	1.99E+03	4.91E+02	1.11E+02	1.66E-02	2.37E-01	4.18E-03	6.33E-01	2.19E-05	2.16E-03	6.92E-04	9.44E-04
2020	Annual	Mon-Sun	2265006005	Generator Sets	G4	15	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	6.95E+03	2.55E+03	1.51E+03	8.18E-02	4.35E+00	5.70E-02	7.40E+00	2.11E-04	3.90E-03	6.07E-03	4.65E-03
2020	Annual	Mon-Sun	2265006005	Generator Sets	G4	15	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	5.46E+03	1.35E+03	8.09E+02	5.12E-02	2.35E+00	3.13E-02	3.91E+00	1.12E-04	2.05E-03	3.27E-03	2.91E-03
2020	Annual	Mon-Sun	2265006005	Generator Sets	G4	25	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	3.73E+03	1.37E+03	1.76E+03	9.13E-02	5.24E+00	6.64E-02	8.39E+00	2.13E-04	4.43E-03	4.93E-03	5.19E-03
2020	Annual	Mon-Sun	2265006005	Generator Sets	G4	25	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	2.93E+03	7.25E+02	9.39E+02	5.64E-02	2.81E+00	3.54E-02	4.44E+00	1.12E-04	2.33E-03	2.61E-03	3.21E-03
2020	Annual	Mon-Sun	2265006005	Generator Sets	G4	50	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	1.24E+03	3.91E+02	8.71E+02	1.22E-02	6.48E-01	2.27E-02	7.34E+00	8.93E-05	5.63E-04	1.49E-03	6.94E-04
2020	Annual	Mon-Sun	2265006005	Generator Sets	G4	120	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	2.40E+02	7.55E+01	3.93E+02	2.95E-03	9.38E-02	1.41E-02	3.64E+00	3.51E-05	2.82E-04	5.27E-04	1.67E-04
2020	Annual	Mon-Sun	2265006005	Generator Sets	G4	175	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	2.27E+01	7.13E+00	6.41E+01	2.91E-04	1.89E-02	2.48E-03	5.88E-01	5.84E-06	4.68E-05	6.93E-05	1.66E-05
2020	Annual	Mon-Sun	2265006010	Pumps	G4	5	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	8.97E+02	6.34E+02	1.03E+02	1.64E-02	1.98E-01	7.18E-03	6.21E-01	2.14E-05	2.02E-04	1.05E-03	9.33E-04
2020	Annual	Mon-Sun	2265006010	Pumps	G4	5	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	7.05E+02	3.35E+02	5.57E+01	9.03E-03	1.11E-01	3.73E-03	3.28E-01	1.13E-05	1.84E-04	5.51E-04	5.13E-04
2020	Annual	Mon-Sun	2265006010	Pumps	G4	15	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	9.72E+02	6.87E+02	3.69E+02	2.82E-02	1.06E+00	2.03E-02	1.79E+00	5.12E-05	1.50E-02	1.90E-03	1.60E-03
2020	Annual	Mon-Sun	2265006010	Pumps	G4	15	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	7.64E+02	3.63E+02	1.95E+02	1.48E-02	5.58E-01	1.06E-02	9.48E-01	2.70E-05	7.95E-03	9.98E-04	8.40E-04
2020	Annual	Mon-Sun	2265006010	Pumps	G4	25	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	2.49E+02	1.76E+02	2.07E+02	1.60E-02	6.10E-01	1.01E-02	9.77E-01	2.48E-05	8.19E-03	6.94E-04	9.10E-04
2020	Annual	Mon-Sun	2265006010	Pumps	G4	25	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	1.96E+02	9.29E+01	1.09E+02	8.39E-03	3.22E-01	5.29E-03	5.16E-01	1.31E-05	4.33E-03	3.65E-04	4.77E-04
2020	Annual	Mon-Sun	2.27E+09	Pumps	G4	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	9.93E+01	6.00E+01	1.34E+02	1.89E-03	1.14E-01	2.69E-03	1.11E+00	1.35E-05	8.49E-05	1.98E-04	1.07E-04
2020	Annual	Mon-Sun	2.27E+09	Pumps	G4	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.26E+02	7.61E+01	4.53E+02	3.33E-03	1.21E-01	8.71E-03	4.17E+00	4.03E-05	3.23E-04	3.81E-04	1.89E-04
2020	Annual	Mon-Sun	2.27E+09	Pumps	G4	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	3.79E+00	2.29E+00	2.07E+01	1.07E-04	6.28E-03	4.41E-04	1.89E-01	1.88E-06	1.51E-05	1.50E-05	6.07E-06
2020	Annual	Mon-Sun	2.27E+09	Air Compressors	G4	5	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	3.24E+02	5.01E+02	1.10E+02	1.77E-02	2.10E-01	7.75E-03	6.65E-01	2.29E-05	2.17E-04	9.82E-04	1.00E-03
2020	Annual	Mon-Sun	2.27E+09	Air Compressors	G4	5	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	2.55E+02	2.65E+02	5.81E+01	9.36E-03	1.11E-01	4.09E-03	3.51E-01	1.21E-05	1.14E-04	5.19E-04	5.31E-04
2020	Annual	Mon-Sun	2.27E+09	Air Compressors	G4	15	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	1.64E+02	2.54E+02	9.71E+01	7.61E-03	2.78E-01	5.48E-03	4.71E-01	1.34E-05	3.95E-03	5.94E-04	4.31E-04
2020	Annual	Mon-Sun	2.27E+09	Air Compressors	G4	15	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	1.29E+02	1.34E+02	5.12E+01	3.92E-03	1.47E-01	2.83E-03	2.49E-01	7.10E-06	2.09E-03	3.10E-04	2.23E-04
2020	Annual	Mon-Sun	2.27E+09	Air Compressors	G4	25	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	2.21E+01	3.42E+01	3.27E+01	2.63E-03	9.66E-02	1.66E-03	1.54E-01	3.91E-06	1.29E-03	1.23E-04	1.49E-04
2020	Annual	Mon-Sun	2.27E+09	Air Compressors	G4	25	Light Commercial Equipment	R	P	NHH	P	Total	Total	Total	1.74E+01	1.81E+01	1.73E+01	1.36E-03	5.10E-02	8.60E-04	8.16E-02	2.07E-06	6.84E-04	6.46E-05	7.74E-05
2020	Annual	Mon-Sun	2.27E+09	Air Compressors	G4	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	3.78E+01	5.00E+01	1.12E+02	2.43E-03	1.42E-01	3.09E-03	8.46E-01	1.03E-05	6.48E-05	1.92E-04	1.38E-04
2020	Annual	Mon-Sun	2.27E+09	Air Compressors	G4	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.22E+02	1.62E+02	6.11E+02	8.31E-03	2.80E-01	1.95E-02	5.43E+00	5.24E-05	4.20E-04	8.33E-04	4.71E-04
2020	Annual	Mon-Sun	2.27E+09	Air Compressors	G4	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	8.23E+00	1.09E+01	7.47E+01	6.81E-04	2.48E-02	2.79E-03	6.80E-01	6.75E-06	5.41E-05	8.26E-05	3.86E-05
2020	Annual	Mon-Sun	2.27E+09	Welders	G4	15	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	6.34E+02	3.61E+02	1.97E+02	1.53E-02	5.66E-01	1.08E-02	9.58E-01	2.73E-05	8.03E-03	1.00E-03	8.68E-04
2020	Annual	Mon-Sun	2.27E+09	Welders	G4	25	Light Commercial Equipment	C	P	NHH	P	Total	Total	Total	2.29E+03	1.30E+03	1.13E+03	8.83E-02	3.34E+00	5.57E-02	5.35E+00	1.36E-04	4.49E-02	4.39E-03	5.01E-03
2020	Annual	Mon-Sun	2.27E+09	Welders	G4	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.97E+02	1.12E+02	2.71E+02	4.58E-03	2.39E-01	6.79E-03	2.22E+00	2.70E-05	1.70E-04	4.26E-04	2.60E-04
2020	Annual	Mon-Sun	2.27E+09	Welders	G4	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	2.01E+02	1.15E+02	3.82E+02	3.74E-03	1.13E-01	1.07E-02	3.49E+00	3.37E-05	2.71E-04	4.96E-04	2.12E-04
2020	Annual	Mon-Sun	2.27E+09	Welders	G4	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.39E+01	7.90E+00	4.75E+01	3.00E-04	1.45E-02	1.51E-03	4.35E-01	4.32E-06	3.46E-05	4.97E-05	1.70E-05
2020	Annual	Mon-Sun	2.27E+09	Pressure Washers	G4	5	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	6.79E+02	2.50E+02	8.40E+01	1.14E-02	1.68E-01	2.94E-03	5.03E-01	1.74E-05	1.72E-03	4.22E-04	6.49E-04
2020	Annual	Mon-Sun	2.27E+09	Pressure Washers	G4	5	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	5.34E+02	1.32E+02	4.61E+01	6.73E-03	3.76E-02	1.69E-03	2.66E-01	9.17E-06	9.03E-04	2.32E-04	3.82E-04
2020	Annual	Mon-Sun	2.27E+09	Pressure Washers	G4	15	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	6.06E+02	2.23E+02	1.28E+02	6.94E-03	3.69E-01	4.84E-03	6.28E-01	1.79E-05	3.31E-04	5.22E-04	3.94E-04
2020	Annual	Mon-Sun	2.27E+09	Pressure Washers	G4	15	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	4.76E+02	1.18E+02	6.86E+01	4.34E-03	2.00E-01	2.66E-03	3.32E-01	9.46E-06	1.74E-04	2.81E-04	2.47E-04
2020	Annual	Mon-Sun	2265006030	Pressure Washers	G4	25	Light Commercial Equipment	C	N	NHH	P	Total	Total	Total	1.14E+02	4.19E+01	6.35E+01	3.24E-03	1.89E-01	2.37E-03	3.03E-01	7.68E-06	1.59E-04	1.64E-04	1.84E-04
2020	Annual	Mon-Sun	2265006030	Pressure Washers	G4	25	Light Commercial Equipment	R	N	NHH	P	Total	Total	Total	8.94E+01	2.21E+01	3.38E+01	1.95E-03	1.01E-01	1.27E-03	1.60E-01	4.06E-06	8.39E-05	8.68E-05	1.11E-04
2020	Annual	Mon-Sun	2265006030	Pressure Washers	G4	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.11E+01	3.49E+00	8.74E+00	1.10E-04	6.07E-03	1.68E-04	7.44E-02	9.04E-07	5.70E-06	1.20E-05	6.23E-06
2020	Annual	Mon-Sun	2266003010	Aerial Lifts	C4	15	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	1.38E+00	1.42E+00	1.14E+00	2.65E-06	1.02E-03	2.79E-05	6.32E-03	0.00E+00	2.90E-06	0.00E+00	2.22E-05
2020	Annual	Mon-Sun	2266003010	Aerial Lifts	C4	25	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	5.93E+01	6.10E+01	7.27E+01	2.56E-04	6.75E-02	1.86E-03	3.96E-01	0.00E+00	2.05E-04	0.00E+00	2.15E-03
2020	Annual	Mon-Sun	2266003020	Forklifts	C4	25	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	5.82E-01	2.00E+00	1.96E+00	1.25E-05	1.97E-03	5.49E-05	1.02E-02	0.00E+00	6.75E-06	0.00E+00	1.04E-04
2020	Annual	Mon-Sun	2266003020	Forklifts	C4	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	3.94E+02	1.95E+03	2.60E+03	1.75E-03	2.88E-01	7.52E-02	1.78E+01	0.00E+00	1.58E-03	0.00E+00	1.46E-02
2020	Annual	Mon-Sun	2266003020	Forklifts	C4	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.38E+03	6.83E+03	1.63E+04	1.04E-02	4.85E+00	4.88E-01	1.07E+02	0.00E+00	9.49E-03	0.00E+00	8.68E-02
2020	Annual	Mon-Sun	2266003020	Forklifts	C4	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	5.07E+03	2.52E+04	1.21E+04	4.74E-02	2.84E+00	2.43E-02	7.24E+00	0.00E+00	7.24E-04	0.00E+00	3.98E-03
2020	Annual	Mon-Sun	2266006005	Generator Sets	C4	120	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	1.79E+01	5.62E+00	3.52E+01	1.25E-05	7.42E-03	9.02E-04	2.36E-01	0.00E+00	2.10E-05	0.00E+00	1.05E-04
2020	Annual	Mon-Sun	2266006005	Generator Sets	C4	175	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	1.48E+01	4.66E+00	5.08E+01	1.42E-05	8.89E-03	1.26E-03	3.44E-01	0.00E+00	3.06E-05	0.00E+00	1.19E-04
2020	Annual	Mon-Sun	2266006020	Gas Compressors	C4	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	2.78E+00	6.46E+01	2.21E+02	1.26E-04	2.23E-02	4.57E-03	1.52E+00	0.00E+00	1.16E-04	0.00E+00	1.05E-03
2020	Annual	Mon-Sun	2266006020	Gas Compressors	C4	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	5.74E+00	1.34E+02	1.29E+03	6.86E-04	3.56E-01	2.70E-02	8.53E+00	0.00E+00	6.61E-04	0.00E+00	5.75E-03
2020	Annual	Mon-Sun	2266006020	Gas Compressors	C4	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	9.25E-01	2.15E+01	3.32E+02	1.91E-04	7.25E-02	7.23E-03	2.22E+00	0.00E+00	1.77E-04	0.00E+00	1.60E-03
2020	Annual	Mon-Sun	2266006020	Gas Compressors	C4	250	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	7.40E-01	1.72E+01	3.44E+02	1.47E-04	8.34E-02	7.00E-03	2.29E+00	0.00E+00	2.03E-04	0.00E+00	1.23E-03
2020	Annual	Mon-Sun	2266006020	Gas Compressors	C4	500	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	6.48E-01	1.51E+01	4.84E+02	2.07E-04	1.18E-01	9.86E-03	3.22E+00	0.00E+00	2.87E-04	0.00E+00	1.74E-03
2020	Annual	Mon-Sun	2270002003	Pavers	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.86E+00	4.18E+00	3.55E+00	4.70E-05	1.60E-04	2.98E-04	3.89E-02	4.94E-07	1.15E-05	0.00E+00	4.24E-06
2020	Annual	Mon-Sun	2270002003	Pavers	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.08E+02	2.46E+02	3.19E+02	1.03E-02	3.75E-02	2.94E-02	3.44E+00	4.44E-05	2.26E-03	0.00E+00	9.27E-04
2020	Annual	Mon-Sun	2270002003	Pavers	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.27E+02	2.90E+02	9.16E+02	1.32E-02	6.96E-02	7.93E-02	1.00E+01	1.17E-04	6.22E-03	0.00E+00	1.19E-03
2020	Annual	Mon-Sun	2270002003	Pavers	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.90E+01	1.80E+02	1.05E+03	1.10E-02	6.84E-02	7.38E-02	1.15E+01	1.30E-04	4.14E-03	0.00E+00	9.91E-04
2020	Annual	Mon-Sun	2270002003	Pavers	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	9.53E+00	2.17E+01	1.91E+02	1.53E-03	5.11E-03	1.21E-02	2.11E+00	2.37E-05	4.42E-04	0.00E+00	1.38E-04
2020	Annual	Mon-Sun	2270002003	Pavers	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	9.77E+00	2.23E+01	2.35E+02	1.77E-03	7.01E-03	1.33E-02	2.59E+00	2.55E-05	5.01E-04	0.00E+00	1.60E-04
2020	Annual	Mon-Sun	2270002009	Plate Compactors	D	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.98E+01	6.55E+01	1.29E+01	1.64E-04	8.62E-04	1.03E-03	1.41E-01	2.20E-06	4.02E-05	0.00E+00	1.48E-05
2020	Annual	Mon-Sun	2270002015	Rollers	D	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.48E+01	1.43E+02	4.11E+01	5.24E-04	2.75E-03	3.28E-03	4.50E-01	7.01E-06	1.28E-04	0.00E+00	4.73E-05
2020	Annual	Mon-Sun	2270002015	Rollers	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.13E+01	5.96E+01	3.62E+01	4.80E-04	1.64E-03	3.03E-03	3.98E-01	5.04E-06	1.13E-04	0.00E+00	4.33E-05
2020	Annual	Mon-Sun	2270002015	Rollers	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	9.74E+01	1.87E+02	2.24E+02	5.08E-03	2.28E-02	1.90E-02	2.43E+00	3.14E-05	1.20E-03	0.00E+00	4.59E-04
2020	Annual	Mon-Sun	2270002015	Rollers	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.23E+02	1.00E+03	2.70E+03	2.89E-02	1.94E-01	1.91E-01	2.96E+01	3.47E-04	1.36E-02	0.00E+00	2.61E-03
2020	Annual	Mon-Sun	2270002015	Rollers	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.10E+02	4.03E+02	1.99E+03	1.56E-02	1.23E-01	1.08E-01	2.18E+01	2.45E-04	5.77E-03	0.00E+00	1.41E-03
2020	Annual	Mon-Sun	2270002015	Rollers	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.98E+01	5.72E+01	3.96E+02	2.41E-03	9.15E-03	1.89E-02	4.38E+00	4.92E-05	6.39E-04	0.00E+00	2.17E-04
2020	Annual	Mon-Sun	2270002015	Rollers	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.09E+01	4.01E+01	3.98E+02	2.31E-03	9.23E-03	1.68E-02	4.39E+00	4.31E-05	6.00E-04	0.00E+00	2.08E-04
2020	Annual	Mon-Sun	2270002018	Scrapers	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.82E+00	1.47E+01	6.29E+01	8.94E-04	4.84E-03	5.26E-03	6.87E-01	8.06E-06	4.05E-04	0.00E+00	8.07E-05
2020	Annual	Mon-Sun	2270002018	Scrapers	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.42E+01	1.34E+02	9.05E+02	9.41E-03	5.98E-02	6.06E-02	9.92E+00	1.12E-04	3.39E-03	0.00E+00	8.49E-04
2020	Annual	Mon-Sun	2270002018	Scrapers	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	4.30E+01	1.31E+02	1.24E+03	9.95E-03	3.29E-02	7.43E-02	1.37E+01	1.54E-04	2.70E-03	0.00E+00	8.98E-04
2020	Annual	Mon-Sun	2270002018	Scrapers	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.19E+02	3.60E+02	5.24E+03	3.98E-02	1.52E-01	2.81E-01	5.78E+01	5.67E-04	1.05E-02	0.00E+00	3.59E-03
2020	Annual	Mon-Sun	2270002018	Scrapers	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	4.74E+00	1.44E+01	3.62E+02	2.76E-03	1.05E-02	1.99E-02	4.00E+00	4.02E-05	7.36E-04	0.00E+00	2.49E-04
2020	Annual	Mon-Sun	2270002021	Paving Equipment	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.22E+00	7.31E+00	4.20E+00	5.56E-05	1.90E-04	3.52E-04	4.61E-02	5.85E-07	1.31E-05	0.00E+00	5.02E-06
2020	Annual	Mon-Sun	2270002021	Paving Equipment	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.72E+00	6.23E+00	6.90E+00	2.19E-04	8.03E-04	6.36E-04	7.45E-02	9.62E-07	4.89E-05	0.00E+00	1.98E-05
2020	Annual	Mon-Sun	2270002021	Paving Equipment	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.92E+01	8.98E+01	2.24E+02	3.18E-03	1.69E-02	1.92E-02	2.44E+00	2.87E-05	1.52E-03	0.00E+00	2.87E-04
2020	Annual	Mon-Sun	2270002021	Paving Equipment	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.84E+01	4.22E+01	1.94E+02	2.00E-03	1.25E-02	1.35E-02	2.13E+00	2.40E-05	7.61E-04	0.00E+00	1.80E-04
2020	Annual	Mon-Sun	2270002021	Paving Equipment	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	5.20E+00	1.19E+01	6.59E+01	5.13E-04	1.72E-03	4.13E-03	7.26E-01	8.17E-06	1.48E-04	0.00E+00	4.63E-05
2020	Annual	Mon-Sun	2270002024	Surfacing Equipment	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.47E+00	3.06E+00	1.98E+00	4.07E-05	1.82E-04	1.64E-04	2.16E-02	2.79E-07	9.71E-06	0.00E+00	3.67E-06
2020	Annual	Mon-Sun	2270002024	Surfacing Equipment	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.95E-01	6.12E-01	1.78E+00	1.75E-05	1.23E-04	1.24E-04	1.95E-02	2.29E-07	8.34E-06	0.00E+00	1.58E-06
2020	Annual	Mon-Sun	2270002024	Surfacing Equipment	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.71E-01	4.59E-01	1.79E+00	1.27E-05	1.07E-04	9.59E-05	1.97E-02	2.21E-07	4.84E-06	0.00E+00	1.14E-06
2020	Annual	Mon-Sun	2270002024	Surfacing Equipment	D	250

2020	Annual	Mon-Sun	2270002030	Trenchers	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.04E+02	8.67E+02	2.57E+03	3.69E-02	1.93E-01	2.27E-01	2.81E+01	3.30E-04	1.77E-02	0.00E+00	3.33E-03
2020	Annual	Mon-Sun	2270002030	Trenchers	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.52E+01	9.49E+01	6.23E+02	6.40E-03	3.98E-02	4.48E-02	6.82E+00	7.68E-05	2.48E-03	0.00E+00	5.78E-04
2020	Annual	Mon-Sun	2270002030	Trenchers	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	4.95E+00	8.51E+00	8.60E+01	6.81E-04	2.33E-03	5.60E-03	9.48E-01	1.07E-05	2.07E-04	0.00E+00	6.14E-05
2020	Annual	Mon-Sun	2270002030	Trenchers	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	6.31E+00	1.09E+01	1.53E+02	1.13E-03	4.72E-03	8.96E-03	1.69E+00	1.66E-05	3.38E-04	0.00E+00	1.02E-04
2020	Annual	Mon-Sun	2270002030	Trenchers	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.81E-01	3.12E-01	8.29E+00	6.17E-05	2.56E-04	4.96E-04	9.14E-02	9.19E-07	1.85E-05	0.00E+00	5.57E-06
2020	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	15	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.24E+00	2.75E+00	1.30E+00	1.66E-05	8.68E-05	1.04E-04	1.42E-02	2.21E-07	4.05E-06	0.00E+00	1.49E-06
2020	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	25	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	3.71E+00	8.25E+00	6.00E+00	7.95E-05	2.71E-04	5.03E-04	6.59E-02	8.36E-07	1.88E-05	0.00E+00	7.18E-06
2020	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.62E+01	3.73E+01	5.27E+01	3.65E-04	4.10E-03	3.27E-03	5.78E-01	7.47E-06	3.64E-05	0.00E+00	3.29E-05
2020	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	4.97E+01	1.14E+02	4.01E+02	1.60E-03	2.66E-02	1.33E-02	4.41E+00	5.17E-05	2.27E-04	0.00E+00	1.44E-04
2020	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.15E+01	2.65E+01	1.70E+02	5.31E-04	9.97E-03	2.46E-03	1.86E+00	2.10E-05	6.71E-05	0.00E+00	4.79E-05
2020	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	250	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	9.90E+00	2.28E+01	1.93E+02	5.39E-04	3.90E-03	1.84E-03	2.14E+00	2.41E-05	4.98E-05	0.00E+00	4.86E-05
2020	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	500	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	2.20E+01	5.06E+01	7.12E+02	1.98E-03	1.39E-02	6.64E-03	7.87E+00	7.73E-05	1.83E-04	0.00E+00	1.79E-04
2020	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	750	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	2.81E+00	6.46E+00	1.79E+02	5.00E-04	3.51E-03	1.68E-03	1.99E+00	2.00E-05	4.61E-05	0.00E+00	4.51E-05
2020	Annual	Mon-Sun	2270002033	Bore/Drill Rigs	D	1000	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	4.71E+00	1.08E+01	4.54E+02	1.32E-03	8.89E-03	2.16E-02	5.02E+00	5.05E-05	2.87E-04	0.00E+00	1.19E-04
2020	Annual	Mon-Sun	2270002036	Excavators	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.58E+00	1.75E+01	1.31E+01	1.74E-04	5.92E-04	1.10E-03	1.44E-01	1.83E-06	4.10E-05	0.00E+00	1.57E-05
2020	Annual	Mon-Sun	2270002036	Excavators	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.72E+02	6.68E+02	7.69E+02	1.28E-02	8.17E-02	6.21E-02	8.35E+00	1.08E-04	2.68E-03	0.00E+00	1.16E-03
2020	Annual	Mon-Sun	2270002036	Excavators	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.68E+02	1.82E+03	6.10E+03	5.28E-02	4.51E-01	3.37E-01	6.68E+01	7.83E-04	1.86E-02	0.00E+00	4.77E-03
2020	Annual	Mon-Sun	2270002036	Excavators	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	9.03E+02	3.50E+03	1.79E+04	1.23E-01	1.16E+00	6.76E-01	1.96E+02	2.21E-03	3.41E-02	0.00E+00	1.11E-02
2020	Annual	Mon-Sun	2270002036	Excavators	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	3.67E+02	1.42E+03	1.02E+04	5.88E-02	2.33E-01	3.19E-01	1.13E+02	1.27E-03	1.09E-02	0.00E+00	5.31E-03
2020	Annual	Mon-Sun	2270002036	Excavators	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.65E+02	1.03E+03	1.09E+04	6.14E-02	2.36E-01	3.09E-01	1.20E+02	1.18E-03	1.12E-02	0.00E+00	5.54E-03
2020	Annual	Mon-Sun	2270002036	Excavators	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.42E+00	5.51E+00	9.65E+01	5.47E-04	2.09E-03	2.79E-03	1.07E+00	1.07E-05	1.01E-04	0.00E+00	4.93E-05
2020	Annual	Mon-Sun	2270002039	Concrete/Industrial Saws	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.95E-01	8.03E-01	6.02E-01	7.98E-06	2.72E-05	5.04E-05	6.61E-03	8.39E-08	1.88E-06	0.00E+00	7.20E-07
2020	Annual	Mon-Sun	2270002039	Concrete/Industrial Saws	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	4.33E+00	6.89E+00	9.53E+00	1.46E-04	8.33E-04	7.67E-04	1.04E-01	1.34E-06	3.88E-05	0.00E+00	1.32E-05
2020	Annual	Mon-Sun	2270002039	Concrete/Industrial Saws	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	7.55E+00	1.20E+01	4.05E+01	3.15E-04	2.77E-03	2.47E-03	4.45E-01	5.21E-06	1.50E-04	0.00E+00	2.84E-05
2020	Annual	Mon-Sun	2270002039	Concrete/Industrial Saws	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.47E-01	3.93E-01	2.87E+00	1.70E-05	1.70E-04	1.29E-04	3.15E-02	3.54E-07	6.35E-06	0.00E+00	1.54E-06
2020	Annual	Mon-Sun	2270002042	Cement and Mortar Mixers	D	15	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.32E+01	5.20E+01	1.50E+01	1.91E-04	1.00E-03	1.20E-03	1.64E-01	2.55E-06	4.67E-05	0.00E+00	1.72E-05
2020	Annual	Mon-Sun	2270002042	Cement and Mortar Mixers	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.69E+00	4.68E+00	3.74E+00	5.22E-05	1.73E-04	3.21E-04	4.11E-02	5.21E-07	1.36E-05	0.00E+00	4.71E-06
2020	Annual	Mon-Sun	2270002045	Cranes	D	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	4.21E+00	1.48E+01	1.58E+01	3.93E-04	1.79E-03	1.40E-03	1.71E-01	2.21E-06	8.92E-05	0.00E+00	3.55E-05
2020	Annual	Mon-Sun	2270002045	Cranes	D	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	4.61E+01	1.62E+02	3.71E+02	4.39E-03	2.79E-02	2.68E-02	4.05E+00	4.76E-05	1.94E-03	0.00E+00	3.96E-04
2020	Annual	Mon-Sun	2270002045	Cranes	D	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	4.61E+01	1.62E+02	5.92E+02	5.25E-03	3.84E-02	3.30E-02	6.50E+00	7.31E-05	1.81E-03	0.00E+00	4.73E-04
2020	Annual	Mon-Sun	2270002045	Cranes	D	250	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	8.94E+01	3.14E+02	1.59E+03	1.10E-02	3.82E-02	7.77E-02	1.76E+01	1.98E-04	2.67E-03	0.00E+00	9.96E-04
2020	Annual	Mon-Sun	2270002045	Cranes	D	500	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	3.28E+01	1.15E+02	9.37E+02	6.24E-03	2.20E-02	4.05E-02	1.03E+01	1.02E-04	1.48E-03	0.00E+00	5.63E-04
2020	Annual	Mon-Sun	2270002045	Cranes	D	750	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	5.89E+00	2.07E+01	2.83E+02	1.90E-03	6.66E-03	1.26E-02	3.13E+00	3.14E-05	4.53E-04	0.00E+00	1.71E-04
2020	Annual	Mon-Sun	2270002045	Cranes	D	9999	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	7.40E+00	2.59E+01	1.14E+03	8.68E-03	2.84E-02	9.12E-02	1.26E+01	1.26E-04	2.33E-03	0.00E+00	7.84E-04
2020	Annual	Mon-Sun	2270002048	Graders	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.73E+00	4.49E+00	5.70E+00	1.27E-04	6.20E-04	4.84E-04	6.18E-02	7.99E-07	2.79E-05	0.00E+00	1.14E-05
2020	Annual	Mon-Sun	2270002048	Graders	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.16E+01	3.00E+02	1.03E+03	1.11E-02	7.62E-02	6.85E-02	1.12E+01	1.32E-04	4.67E-03	0.00E+00	1.00E-03
2020	Annual	Mon-Sun	2270002048	Graders	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.95E+02	1.02E+03	5.78E+03	4.71E-02	3.73E-01	2.89E-01	6.34E+01	7.13E-04	1.56E-02	0.00E+00	4.25E-03
2020	Annual	Mon-Sun	2270002048	Graders	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.45E+02	6.36E+02	4.95E+03	3.17E-02	1.17E-01	2.13E-01	5.46E+01	6.15E-04	7.31E-03	0.00E+00	2.86E-03
2020	Annual	Mon-Sun	2270002048	Graders	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	6.93E+00	1.80E+01	1.87E+02	1.15E-03	4.46E-03	7.18E-03	2.06E+00	2.02E-05	2.59E-04	0.00E+00	1.04E-04
2020	Annual	Mon-Sun	2270002048	Graders	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	9.06E-02	2.35E-01	5.17E+00	3.21E-05	1.23E-04	2.04E-04	5.71E-02	5.74E-07	7.28E-06	0.00E+00	2.89E-06
2020	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.04E+00	4.37E+01	2.49E+02	1.83E-03	1.64E-02	9.95E-03	2.73E+00	3.07E-05	5.10E-04	0.00E+00	1.65E-04
2020	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	5.94E+01	3.22E+02	2.43E+03	1.49E-02	5.66E-02	8.12E-02	2.68E+01	3.02E-04	2.78E-03	0.00E+00	1.35E-03
2020	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	8.36E+01	4.54E+02	5.59E+03	3.37E-02	1.23E-01	1.70E-01	6.18E+01	6.06E-04	6.19E-03	0.00E+00	3.04E-03
2020	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.90E+01	1.03E+02	2.06E+03	1.25E-02	4.55E-02	6.36E-02	2.28E+01	2.29E-04	2.30E-03	0.00E+00	1.12E-03
2020	Annual	Mon-Sun	2270002051	Off-Highway Trucks	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	8.91E+00	4.83E+01	1.37E+03	8.73E-03	3.12E-02	9.40E-02	1.51E+01	1.52E-04	2.18E-03	0.00E+00	7.88E-04
2020	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	50	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	1.98E+01	5.18E+01	1.05E+02	1.90E-03	1.05E-02	8.72E-03	1.14E+00	1.47E-05	4.68E-04	0.00E+00	1.72E-04
2020	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	120	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	5.58E+01	1.46E+02	5.54E+02	5.05E-03	3.97E-02	3.47E-02	6.07E+00	7.12E-05	2.21E-03	0.00E+00	4.56E-04
2020	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	175	Construction and Mining Equipment	U	P	NHH	P	Total	Total	Total	2.36E+01	6.19E+01	1.71E+02	1.35E-03	9.94E-03	2.18E-02	5.17E+00	5.82E-05	1.14E-03	0.00E+00	3.92E-04
2020	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	250	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	2.35E+00	6.15E+00	6.81E+01	3.83E-04	1.49E-03	2.67E-03	7.52E-01	8.46E-06	8.66E-05	0.00E+00	3.45E-05
2020	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	500	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	1.32E+01	3.47E+01	5.86E+02	3.21E-03	1.23E-02	2.05E-02	6.47E+00	6.35E-05	7.20E-04	0.00E+00	2.89E-04
2020	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	750	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	1.51E-01	3.96E-01	1.05E+01	5.75E-05	2.21E-04	3.76E-04	1.16E-01	1.17E-06	1.30E-05	0.00E+00	5.19E-06
2020	Annual	Mon-Sun	2270002054	Crushing/Proc. Equipment	D	9999	Construction and Mining Equipment	U	N	NHH	P	Total	Total	Total	1.51E-01	3.96E-01	2.34E+01	1.50E-04	5.24E-04	1.68E-03	2.58E-01	2.60E-06	4.05E-05	0.00E+00	1.35E-05
2020	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.37E+01	4.26E+01	6.62E+01	1.11E-03	6.74E-03	5.43E-03	7.20E-01	9.30E-06	2.60E-04	0.00E+00	9.99E-05
2020	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	6.58E+02	2.04E+03	5.80E+03	5.04E-02	4.22E-01	3.39E-01	6.36E+01	7.46E-04	2.00E-02	0.00E+00	4.55E-03
2020	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	8.42E+01	2.61E+02	1.48E+03	1.03E-02	9.43E-02	6.14E-02	1.63E+01	1.83E-04	3.20E-03	0.00E+00	9.27E-04
2020	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	4.70E+00	1.46E+01	1.13E+02	6.40E-04	2.50E-03	3.91E-03	1.24E+00	1.40E-05	1.33E-04	0.00E+00	5.78E-05
2020	Annual	Mon-Sun	2270002057	Rough Terrain Forklifts	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	3.09E+00	9.58E+00	1.11E+02	6.20E-04	2.36E-03	3.49E-03	1.23E+00	1.21E-05	1.27E-04	0.00E+00	5.60E-05
2020	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.73E+00	4.54E+00	3.50E+00	4.64E-05	1.58E-04	2.93E-04	3.84E-02	4.88E-07	1.09E-05	0.00E+00	4.18E-06
2020	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.36E+00	8.96E+00	1.29E+01	2.76E-04	1.38E-03	1.09E-02	1.39E+00	1.80E-05	6.14E-04	0.00E+00	2.40E-04
2020	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	9.15E+02	2.44E+03	6.55E+03	6.86E-02	4.84E-01	4.30E-01	7.17E+01	8.41E-04	2.89E-02	0.00E+00	6.19E-03
2020	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	5.16E+02	1.37E+03	6.65E+03	5.27E-02	4.26E-01	3.24E-01	7.29E+01	8.20E-04	1.74E-02	0.00E+00	4.75E-03
2020	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	5.13E+02	1.37E+03	9.20E+03	5.79E-02	2.15E-01	3.87E-01	1.02E+02	1.14E-03	1.33E-02	0.00E+00	5.22E-03
2020	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.13E+02	5.68E+02	6.09E+03	3.70E-02	1.42E-01	2.28E-01	6.73E+01	6.60E-04	8.27E-03	0.00E+00	3.34E-03
2020	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	3.66E+00	9.73E+00	2.14E+02	1.30E-03	4.99E-03	8.23E-03	2.36E+00	2.37E-05	2.94E-04	0.00E+00	1.18E-04
2020	Annual	Mon-Sun	2270002060	Rubber Tired Loaders	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	3.93E-01	1.04E+00	2.81E+01	1.82E-04	6.87E-04	2.09E-03	3.10E-01	3.12E-06	5.13E-05	0.00E+00	1.64E-05
2020	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.24E+00	5.49E+00	3.24E+01	4.15E-04	2.23E-03	2.74E-03	3.55E-01	3.99E-06	1.54E-04	0.00E+00	3.74E-05
2020	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	3.03E+01	1.34E+02	1.12E+03	1.14E-02	3.54E-02	8.68E-02	1.23E+01	1.39E-04	3.46E-03	0.00E+00	1.03E-03
2020	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	4.66E+01	2.07E+02	2.49E+03	2.37E-02	9.57E-02	1.74E-01	2.74E+01	2.69E-04	6.95E-03	0.00E+00	2.14E-03
2020	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	4.02E+00	1.78E+01	3.23E+02	3.08E-03	1.24E-02	2.31E-02	3.55E+00	3.57E-05	9.11E-04	0.00E+00	2.78E-04
2020	Annual	Mon-Sun	2270002063	Rubber Tired Dozers	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.72E-01	1.20E+00	3.24E+01	3.27E-04	1.36E-03	3.33E-03	3.56E-01	3.58E-06	1.01E-04	0.00E+00	2.95E-05
2020	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.49E+01	9.01E+01	6.50E+01	8.61E-04	2.94E-03	5.44E-03	7.14E-01	9.06E-06	2.05E-04	0.00E+00	7.77E-05
2020	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.08E+02	5.49E+02	7.64E+02	1.12E-02	7.56E-02	5.97E-02	8.32E+00	1.08E-04	2.39E-03	0.00E+00	1.01E-03
2020	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.79E+03	7.34E+03	1.73E+04	1.34E-01	1.25E+00	9.04E-01	1.90E+02	2.22E-03	4.72E-02	0.00E+00	1.21E-02
2020	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.08E+02	5.48E+02	2.53E+03	1.56E-02	1.60E-01	8.80E-02	2.77E+01	3.12E-04	4.34E-03	0.00E+00	1.41E-03
2020	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	6.73E+01	1.77E+02	1.38E+03	7.18E-03	3.05E-02	3.92E-02	1.52E+01	1.71E-04	1.33E-03	0.00E+00	6.48E-04
2020	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.09E+02	2.86E+02	4.46E+03	2.29E-02	9.48E-02	1.16E-01	4.92E+01	5.54E-04	4.19E-03	0.00E+00	2.07E-03
2020	Annual	Mon-Sun	2270002066	Tractors/Loaders/Backhoes	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.83E+01	4.81E+01	1.12E+03	5.79E-03	2.39E-02	2.98E-02	1.24E+01	1.40E-04	1.06E-03	0.00E+00	5.23E-04
2020	Annual	Mon-Sun	2270002069	Crawler Tractors	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.73E+00	4.93E+00	5.68E+00	1.73E-04	6.83E-04	5.19E-04	6.12E-02	7.92E-07	3.71E-05	0.00E+00	1.56E-05
2020	Annual	Mon-Sun	2270002069	Crawler Tractors	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	9.83E+02	2.80E+03	8.41E+03	1.16E-01	6.46E-01	6.85E-01	9.19E+01	1.08E-03	5.21E-02	0.00E+00	1.05E-02
2020	Annual	Mon-Sun	2270002069	Crawler Tractors	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	3.33E+02	9.46E+02	5.23E+03	5.32E-02	3.45E-01	3.39E-01	5.73E+01	6.44E-04	1.89E-02	0.00E+00	4.80E-03
2020	Annual	Mon-Sun	2270002069	Crawler Tractors	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.86E+02	8.13E+02	6.12E+03	4.83E-02	1.61E-01	3.54E-01	6.75E+01	7.59E-04	1.28E-02	0.00E+00	4.36E-03
2020	Annual	Mon-Sun	2270002069	Crawler Tractors	D	500	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.96E+02	5.57E+02	6.54E+03	4.90E-02	1.85E-01	3.39E-01	7.21E+01	7.08E-04	1.27E-02	0.00E+00	4.42E-03
2020	Annual	Mon-Sun	2270002069	Crawler Tractors	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.42E+00	6.87E+00	1.45E+02	1.09E-03	4.10E-03	7.69E-03	1.60E+00	1.60E-05	2.84E-04	0.00E+00	9.81E-05
2020	Annual	Mon-Sun	2270002069	Crawler Tractors	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	2.42E+00	6.87E+00	2.05E+02	1.66E-03	6.34E-03	1.79E-02	2.26E+00	2.27E-05	4.89E-04	0.00E+00	1.50E-04
2020	Annual	Mon-Sun	2270002072	Skid Steer Loaders	D	25	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.38E+02	5.43E+02	3.41E+02	4.64E-03	1.56E-02	2.90E-02	3.74E+00	4.75E-05	1.18E-03	0.00E+00	4.19E-04
2020	Annual	Mon-Sun	2270002072	Skid Steer Loaders	D	50	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	2.15E+03	5.02E+03	5.85E+03	5.77E-02	5.03E-01	4.15E-01	6.40E+01	8.27E-04	1.08E-02	0.00E+00	5.21E-03
2020	Annual	Mon-Sun	2270002072	Skid Steer Loaders	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.13E+03	2.63E+03	5.12E+03	2.86E-02	3.51E-01	2.16E-01	5.62E+01	6.59E-04	8.43E-03	0.00E+00	2.58E-03
2020	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	120	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.24E-01	3.76E-01	1.62E+00	2.74E-05	1.28E-04	1.59E-04	1.76E-02	2.07E-07	1.27E-05	0.00E+00	2.47E-06
2020	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	175	Construction and Mining Equipment	U	P	NHH	NP	Total	Total	Total	1.51E+02	4.60E+02	2.74E+03	3.35E-02	1.84E-01	2.24E-01	3.00E+01	3.37E-04	1.26E-02	0.00E+00	3.02E-03
2020	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	250	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.43E+02	4.35E+02	2.57E+03	2.49E-02	7.85E-02	1.93E-01	2.83E+01	3.19E-04	7.57E-03	0.00E+00	2.25E-03
2020	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	750	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.52E+01	4.61E+01	1.19E+03	1.08E-02	4.34E-02	8.20E-02	1.31E+01	1.32E-04	3.20E-03	0.00E+00	9.73E-04
2020	Annual	Mon-Sun	2270002075	Off-Highway Tractors	D	1000	Construction and Mining Equipment	U	N	NHH	NP	Total	Total	Total	1.60E+00	4.86E+00	1.80E+02	1.73E-03	7.16E-03	1.80E-02	1.98E+00	1.99E-05

2020	Annual	Mon-Sun	2270003010	Aerial Lifts	D	750	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.65E+00	1.74E+00	3.02E+01	1.20E-04	5.96E-04	1.13E-03	3.34E-01	3.36E-06	3.51E-05	0.00E+00	1.08E-05
2020	Annual	Mon-Sun	2270003020	Forklifts	D	50	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	5.48E+01	2.70E+02	1.82E+02	2.59E-03	1.90E-02	1.47E-02	1.98E+00	2.56E-05	5.33E-04	0.00E+00	2.33E-04
2020	Annual	Mon-Sun	2270003020	Forklifts	D	120	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	8.59E+01	4.24E+02	6.04E+02	4.80E-03	4.46E-02	3.07E-02	6.61E+00	7.76E-05	1.57E-03	0.00E+00	4.33E-04
2020	Annual	Mon-Sun	2270003020	Forklifts	D	175	Industrial Equipment	U	P	NHH	NP	Total	Total	Total	8.63E+01	4.26E+02	1.09E+03	7.19E-03	7.07E-02	3.81E-02	1.19E+01	1.34E-04	1.87E-03	0.00E+00	6.49E-04
2020	Annual	Mon-Sun	2270003020	Forklifts	D	250	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	8.57E+01	4.23E+02	1.48E+03	8.19E-03	3.29E-02	4.02E-02	1.63E+01	1.83E-04	1.34E-03	0.00E+00	7.39E-04
2020	Annual	Mon-Sun	2270003020	Forklifts	D	500	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	3.67E+01	1.81E+02	9.08E+02	4.99E-03	1.92E-02	2.31E-02	1.00E+01	9.85E-05	8.07E-04	0.00E+00	4.50E-04
2020	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	15	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	4.02E+00	7.16E+00	3.90E+00	4.43E-05	2.61E-04	3.11E-04	4.27E-02	6.65E-07	1.22E-05	0.00E+00	4.00E-06
2020	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	25	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	4.02E+00	7.16E+00	6.39E+00	8.47E-05	2.89E-04	5.35E-04	7.02E-02	8.91E-07	2.00E-05	0.00E+00	7.64E-06
2020	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	7.83E+01	2.62E+02	3.79E+02	5.63E-03	3.80E-02	3.10E-02	4.13E+00	5.34E-05	1.29E-03	0.00E+00	5.08E-04
2020	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.30E+02	4.33E+02	1.48E+03	1.21E-02	1.07E-01	8.03E-02	1.62E+01	1.91E-04	4.58E-03	0.00E+00	1.09E-03
2020	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	5.96E+01	2.00E+02	1.26E+03	8.46E-03	8.03E-02	4.88E-02	1.39E+01	1.56E-04	2.54E-03	0.00E+00	7.63E-04
2020	Annual	Mon-Sun	2270003030	Sweepers/Scrubbers	D	250	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	9.55E+00	3.19E+01	2.34E+02	1.29E-03	5.11E-03	7.29E-03	2.58E+00	2.91E-05	2.46E-04	0.00E+00	1.16E-04
2020	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	15	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.06E+01	4.12E+01	1.20E+01	1.37E-04	8.04E-04	9.60E-04	1.32E-01	2.05E-06	3.75E-05	0.00E+00	1.23E-05
2020	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	25	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.41E+01	5.53E+01	3.86E+01	5.11E-04	1.74E-03	3.23E-03	4.24E-01	5.38E-06	1.21E-04	0.00E+00	4.61E-05
2020	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.75E+01	6.84E+01	6.86E+01	1.47E-03	7.58E-03	6.00E-03	7.43E-01	9.61E-06	3.51E-04	0.00E+00	1.33E-04
2020	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	7.01E+01	2.74E+02	7.75E+02	8.27E-03	5.80E-02	5.25E-02	8.48E+00	9.95E-05	3.55E-03	0.00E+00	7.46E-04
2020	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	7.03E+01	2.75E+02	1.20E+03	9.95E-03	7.79E-02	6.15E-02	1.32E+01	1.48E-04	3.30E-03	0.00E+00	8.97E-04
2020	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	250	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	7.00E+01	2.73E+02	1.68E+03	1.09E-02	3.83E-02	7.37E-02	1.85E+01	2.08E-04	2.41E-03	0.00E+00	9.87E-04
2020	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	500	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	6.98E+01	2.73E+02	3.28E+03	2.08E-02	7.11E-02	1.28E-01	3.62E+01	3.55E-04	4.54E-03	0.00E+00	1.88E-03
2020	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	750	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.74E+01	6.82E+01	1.35E+03	8.58E-03	2.93E-02	5.40E-02	1.49E+01	1.50E-04	1.89E-03	0.00E+00	7.75E-04
2020	Annual	Mon-Sun	2270003040	Other General Industrial Equipr	D	1000	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.06E+01	4.15E+01	1.05E+03	7.25E-03	2.44E-02	8.07E-02	1.16E+01	1.17E-04	2.04E-03	0.00E+00	6.54E-04
2020	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	50	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	5.02E-01	1.82E+00	2.54E+00	5.38E-05	2.77E-04	2.22E-04	2.75E-02	3.56E-07	1.30E-05	0.00E+00	4.86E-06
2020	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	120	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	3.01E+00	1.09E+01	3.02E+01	3.18E-04	2.24E-03	2.04E-03	3.30E-01	3.87E-06	1.38E-04	0.00E+00	2.87E-05
2020	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	175	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	3.23E+00	1.17E+01	6.49E+01	5.32E-04	4.19E-03	3.32E-03	7.12E-01	8.01E-06	1.78E-04	0.00E+00	4.80E-05
2020	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	250	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	7.68E+00	2.78E+01	1.82E+02	1.17E-03	4.14E-03	7.99E-03	2.01E+00	2.26E-05	2.62E-04	0.00E+00	1.06E-04
2020	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	500	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	1.44E+00	5.19E+00	4.50E+01	2.82E-04	9.72E-04	1.75E-03	4.97E-01	4.87E-06	6.22E-05	0.00E+00	2.54E-05
2020	Annual	Mon-Sun	2270003050	Other Material Handling Equipr	D	9999	Industrial Equipment	U	N	NHH	NP	Total	Total	Total	4.31E-01	1.56E+00	5.22E+01	3.85E-04	1.21E-03	4.00E-03	5.76E-01	5.66E-06	1.01E-04	0.00E+00	3.47E-05
2020	Annual	Mon-Sun	2270006005	Generator Sets	D	15	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	4.64E+02	4.29E+02	2.00E+02	2.49E-03	1.37E-02	1.74E-02	2.19E+00	3.41E-05	8.26E-04	0.00E+00	2.25E-04
2020	Annual	Mon-Sun	2270006005	Generator Sets	D	25	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	3.39E+02	3.14E+02	2.52E+02	3.51E-03	1.20E-02	2.21E-02	2.77E+00	3.51E-05	1.01E-03	0.00E+00	3.17E-04
2020	Annual	Mon-Sun	2270006005	Generator Sets	D	50	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	4.15E+02	3.83E+02	5.37E+02	7.25E-03	4.15E-02	4.24E-02	5.87E+00	7.58E-05	2.07E-03	0.00E+00	6.54E-04
2020	Annual	Mon-Sun	2270006005	Generator Sets	D	120	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	6.30E+02	5.83E+02	2.07E+03	1.48E-02	1.35E-01	1.29E-01	2.27E+01	2.66E-04	7.38E-03	0.00E+00	1.33E-03
2020	Annual	Mon-Sun	2270006005	Generator Sets	D	175	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	3.72E+01	3.44E+01	2.22E+02	1.17E-03	1.26E-02	1.04E-02	2.44E+00	2.75E-05	4.65E-04	0.00E+00	1.05E-04
2020	Annual	Mon-Sun	2270006005	Generator Sets	D	250	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	2.08E+01	1.92E+01	1.85E+02	7.25E-04	3.69E-03	7.45E-03	2.04E+00	2.30E-05	2.14E-04	0.00E+00	6.54E-05
2020	Annual	Mon-Sun	2270006005	Generator Sets	D	500	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	4.63E+01	4.28E+01	6.51E+02	2.43E-03	1.27E-02	2.36E-02	7.20E+00	7.07E-05	7.28E-04	0.00E+00	2.19E-04
2020	Annual	Mon-Sun	2270006005	Generator Sets	D	750	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	2.87E+01	2.66E+01	6.53E+02	2.47E-03	1.28E-02	2.42E-02	7.22E+00	7.26E-05	7.39E-04	0.00E+00	2.23E-04
2020	Annual	Mon-Sun	2270006005	Generator Sets	D	9999	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	7.48E+00	6.92E+00	3.28E+02	1.57E-03	6.90E-03	2.33E-02	3.63E+00	3.64E-05	5.17E-04	0.00E+00	1.42E-04
2020	Annual	Mon-Sun	2270006010	Pumps	D	15	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	3.49E+02	3.84E+02	1.30E+02	1.83E-03	8.89E-03	1.14E-02	1.43E+00	2.22E-05	5.74E-04	0.00E+00	1.66E-04
2020	Annual	Mon-Sun	2270006010	Pumps	D	25	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.04E+02	1.15E+02	1.02E+02	1.51E-03	4.86E-03	8.93E-03	1.12E+00	1.42E-05	4.20E-04	0.00E+00	1.36E-04
2020	Annual	Mon-Sun	2270006010	Pumps	D	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.81E+02	2.00E+02	3.14E+02	4.64E-03	2.55E-02	2.52E-02	3.43E+00	4.44E-05	1.28E-03	0.00E+00	4.19E-04
2020	Annual	Mon-Sun	2270006010	Pumps	D	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	3.56E+02	3.92E+02	1.39E+03	1.06E-02	9.25E-02	8.80E-02	1.53E+01	1.79E-04	5.23E-03	0.00E+00	9.54E-04
2020	Annual	Mon-Sun	2270006010	Pumps	D	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	3.85E+01	4.25E+01	2.70E+02	1.52E-03	1.56E-02	1.29E-02	2.97E+00	3.34E-05	5.97E-04	0.00E+00	1.37E-04
2020	Annual	Mon-Sun	2270006010	Pumps	D	250	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	2.77E+01	3.06E+01	2.78E+02	1.17E-03	5.65E-03	1.14E-02	3.08E+00	3.46E-05	3.36E-04	0.00E+00	1.06E-04
2020	Annual	Mon-Sun	2270006010	Pumps	D	500	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	5.47E-01	6.04E-01	9.42E+00	3.78E-05	1.87E-04	3.46E-04	1.04E-01	1.02E-06	1.10E-05	0.00E+00	3.41E-06
2020	Annual	Mon-Sun	2270006010	Pumps	D	750	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	9.12E-02	1.01E-01	2.59E+00	1.05E-05	5.14E-05	9.76E-05	2.87E-02	2.88E-07	3.05E-06	0.00E+00	9.51E-07
2020	Annual	Mon-Sun	2270006010	Pumps	D	9999	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	2.01E+00	2.21E+00	1.36E+02	6.84E-04	2.89E-03	9.76E-03	1.50E+00	1.51E-05	2.20E-04	0.00E+00	6.17E-05
2020	Annual	Mon-Sun	2270006015	Air Compressors	D	15	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	4.74E+00	1.06E+01	3.49E+00	4.91E-05	2.38E-04	3.05E-04	3.82E-02	5.94E-07	1.54E-05	0.00E+00	4.43E-06
2020	Annual	Mon-Sun	2270006015	Air Compressors	D	25	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	9.40E+00	2.10E+01	1.38E+01	2.04E-04	6.58E-04	1.21E-03	1.51E-01	1.92E-06	5.68E-05	0.00E+00	1.85E-05
2020	Annual	Mon-Sun	2270006015	Air Compressors	D	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	8.54E+01	1.90E+02	1.95E+02	3.80E-03	1.94E-02	1.66E-02	2.12E+00	2.74E-05	9.63E-04	0.00E+00	3.43E-04
2020	Annual	Mon-Sun	2270006015	Air Compressors	D	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	5.69E+02	1.27E+03	2.72E+03	2.61E-02	1.94E-01	1.81E-01	2.98E+01	3.49E-04	1.21E-02	0.00E+00	2.36E-03
2020	Annual	Mon-Sun	2270006015	Air Compressors	D	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	2.15E+01	4.80E+01	1.93E+02	1.42E-03	1.20E-02	9.76E-03	2.12E+00	2.39E-05	5.14E-04	0.00E+00	1.29E-04
2020	Annual	Mon-Sun	2270006015	Air Compressors	D	250	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	3.03E+01	6.76E+01	4.01E+02	2.30E-03	8.76E-03	1.74E-02	4.43E+00	4.98E-05	5.62E-04	0.00E+00	2.07E-04
2020	Annual	Mon-Sun	2270006015	Air Compressors	D	500	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	3.95E+01	8.81E+01	9.23E+02	5.13E-03	1.94E-02	3.56E-02	1.02E+01	1.00E-04	1.25E-03	0.00E+00	4.63E-04
2020	Annual	Mon-Sun	2270006015	Air Compressors	D	750	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	1.48E+01	3.30E+01	5.34E+02	2.97E-03	1.12E-02	2.11E-02	5.90E+00	5.93E-05	7.30E-04	0.00E+00	2.68E-04
2020	Annual	Mon-Sun	2270006015	Air Compressors	D	1000	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	3.65E-01	8.14E-01	1.79E+01	1.09E-04	4.04E-04	1.35E-03	1.98E-01	1.99E-06	3.33E-05	0.00E+00	9.82E-06
2020	Annual	Mon-Sun	2270006025	Welders	D	15	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.58E+02	2.77E+02	7.86E+01	1.11E-03	5.36E-03	6.88E-03	8.60E-01	1.34E-05	3.46E-04	0.00E+00	9.99E-05
2020	Annual	Mon-Sun	2270006025	Welders	D	25	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.39E+02	2.44E+02	1.25E+02	1.86E-03	5.98E-03	1.10E-02	1.38E+00	1.75E-05	5.17E-04	0.00E+00	1.68E-04
2020	Annual	Mon-Sun	2270006025	Welders	D	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	4.27E+02	7.51E+02	8.95E+02	1.64E-02	8.36E-02	7.44E-02	9.74E+00	1.26E-04	4.22E-03	0.00E+00	1.48E-03
2020	Annual	Mon-Sun	2270006025	Welders	D	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	3.32E+02	5.83E+02	1.05E+03	9.41E-03	7.32E-02	6.90E-02	1.15E+01	1.35E-04	4.52E-03	0.00E+00	8.49E-04
2020	Annual	Mon-Sun	2270006025	Welders	D	175	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	1.64E+00	2.89E+00	1.29E+01	8.75E-05	7.81E-04	6.43E-04	1.42E-01	1.59E-06	3.27E-05	0.00E+00	7.89E-06
2020	Annual	Mon-Sun	2270006025	Welders	D	250	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	3.65E-01	6.42E-01	3.46E+00	1.79E-05	7.36E-05	1.48E-04	3.82E-02	4.30E-07	4.65E-06	0.00E+00	1.62E-06
2020	Annual	Mon-Sun	2270006025	Welders	D	500	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	9.12E-01	1.61E+00	1.22E+01	6.09E-05	2.50E-04	4.63E-04	1.34E-01	1.32E-06	1.57E-05	0.00E+00	5.49E-06
2020	Annual	Mon-Sun	2270006030	Pressure Washers	D	15	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	2.15E+01	8.54E+00	1.91E+00	2.37E-05	1.30E-04	1.66E-04	2.09E-02	3.25E-07	7.88E-06	0.00E+00	2.14E-06
2020	Annual	Mon-Sun	2270006030	Pressure Washers	D	25	Light Commercial Equipment	U	N	NHH	P	Total	Total	Total	5.02E+00	1.99E+00	6.48E-01	9.02E-06	3.09E-05	5.68E-05	7.11E-03	9.02E-08	2.59E-06	0.00E+00	8.14E-07
2020	Annual	Mon-Sun	2270006030	Pressure Washers	D	50	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	9.95E+00	3.95E+00	2.57E+00	2.52E-05	1.69E-04	1.96E-04	2.82E-02	3.64E-07	8.22E-06	0.00E+00	2.27E-06
2020	Annual	Mon-Sun	2270006030	Pressure Washers	D	120	Light Commercial Equipment	U	P	NHH	P	Total	Total	Total	4.11E+00	1.63E+00	1.78E+00	1.05E-05	1.11E-04	1.06E-04	1.96E-02	2.30E-07	5.36E-06	0.00E+00	9.44E-07

Appendix 11-1 Agency Coordination

Appendices

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NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

February 8, 2018

Jasmine Osman
PlaceWorks

Sent by E-mail: josman@placeworks.com

RE: Proposed Cardiff School Reconstruction and Modernization Project, City of Encinitas, Community of Cardiff-by-the-Sea; Encinitas USGS Quadrangle, San Diego County, California

Dear Ms. Osman:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

Attached is a list of tribes culturally affiliated to the project area. I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst
(916) 373-3714

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Native American Heritage Commission
Native American Contact List
San Diego County
2/8/2018

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Fax: (619) 443-0681
cloyd@barona-nsn.gov

Campo Band of Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Kumeyaay
Campo, CA, 91906
Phone: (619) 478 - 9046
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rgoff@campo-nsn.gov

Ewiiaapaayp Tribal Office
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4054 Willows Road — Kumeyaay
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
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Ewiiaapaayp Tribal Office
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Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
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Santa Ysabel, CA, 92070
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Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
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Phone: (760) 803 - 5694
cjlinton73@aol.com

Inaja Band of Mission Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd. — Kumeyaay
Escondido, CA, 92025
Phone: (760) 737 - 7628
Fax: (760) 747-8568

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612 — Kumeyaay
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas,
P.O. Box 775 — Kumeyaay
Pine Valley, CA, 91962
Phone: (619) 709 - 4207

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Kumeyaay
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

La Posta Band of Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road — Kumeyaay
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 — Kumeyaay
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Cardiff School Reconstruction and Modernization Project, San Diego County.

Native American Heritage Commission
Native American Contact List
San Diego County
2/8/2018

Mesa Grande Band of Mission Indians
Mario Morales, Cultural Resources Representative
PMB 366 35008 Pala Temecula Rd.
Pala, CA, 92059
Phone: (760) 622 - 1336
Kumeyaay

Mesa Grande Band of Mission Indians
Virgil Oyos, Chairperson
P.O Box 270
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com
Kumeyaay

Pauma Band of Luiseno Indians - Pauma & Yuima Reservation
Temet Aguilar, Chairperson
P.O. Box 369
Pauma Valley, CA, 92061
Phone: (760) 742 - 1289
Fax: (760) 742-3422
Luiseno

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
P.O. Box 365
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
allenl@sanpasqualtribe.org
Kumeyaay

San Pasqual Band of Mission Indians
John Flores, Environmental Coordinator
P. O. Box 365
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
johnf@sanpasqualtribe.org
Kumeyaay

Sycuan Band of the Kumeyaay Nation
Lisa Haws, Cultural Resources Manager
1 Kwaaypaay Court
El Cajon, CA, 92019
Phone: (619) 312 - 1935
lhaws@sycuan-nsn.gov
Kumeyaay

Sycuan Band of the Kumeyaay Nation
Cody J. Martinez, Chairperson
1 Kwaaypaay Court
El Cajon, CA, 92019
Phone: (619) 445 - 2613
Fax: (619) 445-1927
ssilva@sycuan-nsn.gov
Kumeyaay

Viejas Band of Kumeyaay Indians
Julie Hagen,
1 Viejas Grade Road
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov
Kumeyaay

Viejas Band of Kumeyaay Indians
Robert Welch, Chairperson
1 Viejas Grade Road
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov
Kumeyaay

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Michael Paul

Subject: FW: Inquiry Regarding Native American Tribal Resources on or near project site in Encinitas

From: cjlinton73@aol.com <cjlinton73@aol.com>
Sent: Sunday, April 1, 2018 7:38 PM
To: Jasmine Osman <josman@placeworks.com>
Subject: Re: Inquiry Regarding Native American Tribal Resources on or near project site in Encinitas

Hi Jasmine,

I have reviewed the project and I am familiar with the area. Please require a Kumeyaay NAM for all ground disturbing activities related to this project.

Thank you,

Clint

-----Original Message-----
From: Jasmine Osman <josman@placeworks.com>
To: cjlinton73 <cjlinton73@aol.com>
Sent: Mon, Mar 26, 2018 10:20 am
Subject: RE: Inquiry Regarding Native American Tribal Resources on or near project site in Encinitas

Good morning,

The file that I initially sent was a PDF, so I believe you would need to have Adobe Reader in order to view it. I am attaching the PDF version again, as well as JPEG files of the document.

Please let me know if you are still facing issues with viewing the document.

Thank you,

JASMINE OSMAN

PLACEWORKS

750 B Street, Suite 1620 | San Diego, California 92101
619.299.2700 | josman@placeworks.com | placeworks.com

From: cjlinton73@aol.com <cjlinton73@aol.com>
Sent: Thursday, March 22, 2018 7:41 AM
To: Jasmine Osman <josman@placeworks.com>
Subject: Re: Inquiry Regarding Native American Tribal Resources on or near project site in Encinitas

Good morning Jasmine,

The attachment comes through as code and cant see it at all. Please resend with map and I will respond asap.

Thanks,

Clint

-----Original Message-----
From: Jasmine Osman <josman@placeworks.com>
To: cjlinton73 <cjlinton73@aol.com>
Sent: Fri, Feb 9, 2018 11:38 am
Subject: Inquiry Regarding Native American Tribal Resources on or near project site in Encinitas

Good morning,

I have attached a letter inquiring as to any information or concerns you may have regarding cultural resources in or near our project site. Please let me know if you have any questions.

Thank you,

JASMINE OSMAN

PLACEWORKS

750 B Street, Suite 1620 | San Diego, California 92101
619.299.2700 | josman@placeworks.com | placeworks.com

Michael Paul

Subject: FW: Inquiry Regarding Native American Tribal Resources on or near project site in Encinitas

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From: Cultural Pauma <cultural@pauma-nsn.gov>
Sent: Tuesday, February 13, 2018 10:04 AM
To: Jasmine Osman <josman@placeworks.com>
Cc: pdixon@palomar.edu; Jeremy Zagarella <jeremyzagarella@hotmail.com>
Subject: RE: Inquiry Regarding Native American Tribal Resources on or near project site in Encinitas

Ms. Osman,

Thank you for the email notice for the Cardiff Elementary School Project. Since portions of the school were built during the 1950's and 1960's, the possibility of any cultural surveys being completed is not likely. The project area may have been occupied by both the Luiseno and Kumeyaay during different time periods. Our recommendation would be to have an archaeologist and a Native monitor on site during the demolition phase. It is possible that sites may have been disturbed and cultural resources are still buried. If there are any questions, please contact us.

Thank you,

Mr. Chris Devers
Cultural Liaison
Pauma Band of Luiseno Indians

From: Jasmine Osman [mailto:josman@placeworks.com]
Sent: Monday, February 12, 2018 10:48 AM
To: Cultural Pauma <cultural@pauma-nsn.gov>
Subject: Inquiry Regarding Native American Tribal Resources on or near project site in Encinitas

Good morning,

I have attached a letter inquiring as to ant information or concerns you may have regarding cultural resources in or near our project site. Please let me know if you have any questions.

Thank you,

JASMINE OSMAN

750 B Street, Suite 1620 | San Diego, California 92101
619.299.2700 | josman@placeworks.com | placeworks.com

PLACEWORKS

Proposed Cardiff School Reconstruction and Modernization
Police Questionnaire

1. Please indicate which police station would serve the proposed project, the station's location, distance to the project site, and staffing.

North Coastal Sheriff Station located at 175 N. El Camino Real, Encinitas Ca. Distance to the school, from the station, is approximately 3.3 miles. Staffing at the station is approximate 100 people, including command staffing

2. What is the response time to the project site? What is the department's standard for desired response time for emergency and non-emergency calls?

Response time to the school depends on the location deputies are responding from. If we're looking at response time from the station, we're looking at no more than about six to seven minutes. Again it depends on where deputies are responding from, before we can have an accurate response time.

3. Please indicate the type of service calls or service demands anticipated by the proposed use.

Types of anticipated calls to this proposed location would be trespass calls, suspicious person's calls, and traffic issues.

4. Given the existing level of staffing and equipment, will the police department be able to provide police services to the proposed project? If not, please indicate what will be required to serve the project.

The North Coastal Sheriff Station would be the Law Enforcement agency providing services to this location. Additionally, the North Coastal Sheriff Station contracts county services out to the Del Mar, Solana Beach, Encinitas, and Rancho Santa Fe communities.

5. What impact will the proposed project, in combination with all the other projects planned in the area, have on the ability of the police department to provide police services in the area?

You would have to elaborate on what other projects you're referring too. If the Sheriff station received a call of a potential problem at the specified location, law enforcement personnel would definitely respond in a timely manner.

6. What mitigation measures, if any, would you recommend for the proposed project?

I think working at the North Coastal Sheriff's Station, Crime Prevention Unit; I can make a recommendation that a complete CPTED (Crime Prevention through Environmental Design) be completed. That crime prevention measure would look at the security flaws at the school, and give ideas or recommendation on how to improve them.

7. Please add any comments you may wish to make regarding this matter.

No additional comments or recommendation at this time. As this project moves forward, recommendation and opinions will be made at that time.

Response Prepared By:

Gary Rivers	North Coastal Sheriff Station/ Crime Prevention Unit
Name	**Title**
North Coastal Sheriff Station	02/21/2018
Agency	**Date**

Proposed Cardiff School Reconstruction and Modernization
Solid Waste Services Questionnaire

1. Which County owned or operated landfill(s), material recovery facilities or other solid waste disposal facilities would serve the proposed project?

Sycamore Landfill
Escondido Transfer Station (not a landfill)

2. What are the maximum capacity and the total remaining capacity of the landfill(s) that serve the project area? What is (are) the anticipated life span of these landfill(s)?

Please contact the landfill directly, as we do not own a landfill.

3. What is the daily maximum treatment capacity of the landfill(s) and what is the daily disposal average?

Please contact the landfill directly for this information.

4. What is the solid waste generation factor for a school facility? Based on the project description included in the cover letter, are the County's existing solid waste disposal facilities adequate to handle the amount of refuse that would be generated by the proposed project?

1. We are able to haul solid waste, construction debris & recyclables. We do not haul hazardous waste and/or liquid waste
2. Yes

Proposed Cardiff School Reconstruction and Modernization
Solid Waste Services Questionnaire

5. What mitigation measures are recommended or required to reduce project-level and cumulative impacts on the County's solid waste disposal system?

Recycle material that is recyclable.

Divert C&D (const & debris) material from the landfill

6. What recycling efforts would apply to the proposed project? Please indicate recommended techniques for the recreational use.

- Have C&D roll-offs for the project along with trash 40yds so that any acceptable const debris material can be diverted.
- Have any commingled recyclable material recycled

7. Please add any other comments you may wish to make regarding this project.

We deliver & Service the containers in this area as follows: 40yds — Monday through Saturday
Bins — Monday through Friday

* appropriate short notice, at this time: 3-4 days notice (subject to change)

Response Prepared By:

Margo Cabrian — Account Manager
Name **Title**

EDCO Waste & Recycling Services — 4/5/18
Agency **Date**

PLACEWORKS

March 26, 2018

Margo Cobian
EDCO Disposal
224 South Las Posas Road
San Marcos, CA 92078

Transmitted Via Electronic Mail: mcobian@edcodisposal.com

Subject: Preparation of an Initial Study for Proposed Cardiff School Reconstruction and Modernization Project

To Ms. Cobian:

On behalf of our client, Cardiff School District (District), PlaceWorks is requesting an evaluation of the existing solid waste services for a roughly triangular site that is approximately 7.5-acres, at 1888 Montgomery Avenue in the community of Cardiff-by-the-Sea, City of Encinitas, San Diego County. The site includes Assessor's Parcel Numbers [APNs] 260-3400-100 and 260-3400-200.

PlaceWorks has been retained by the Cardiff School District (District) to prepare an Initial Study for the proposed reconstruction and modernization of Cardiff School, which is in a residential community and approximately 500 feet east of the Pacific Ocean. The proposed project would result in the removal of all portable classroom structures and reconstruction of remaining permanent structures built in 1950 and 1960. The administration, library, and art/science buildings, constructed in 2002, would remain. The proposed improvements would expand the school's capacity by two classrooms and ancillary program spaces. Construction would commence summer 2019. Enclosed are maps of the project site and a conceptual plan of the proposed project.

PlaceWorks would like to assess the adequacy of existing solid waste services near the project site and potential impacts to future provision of services as a result of the proposed project. We are requesting input from your agency to evaluate the existing and planned solid waste services capacity for the proposed project. Furthermore, a brief questionnaire for you to fill out and return to us has been is also enclosed. Any other responses or comments you have are also welcome. All responses will become part of the public record. Please mail your response to the questionnaire to the address provided on the footer of this letter or via email to josman@placeworks.com as soon as possible.

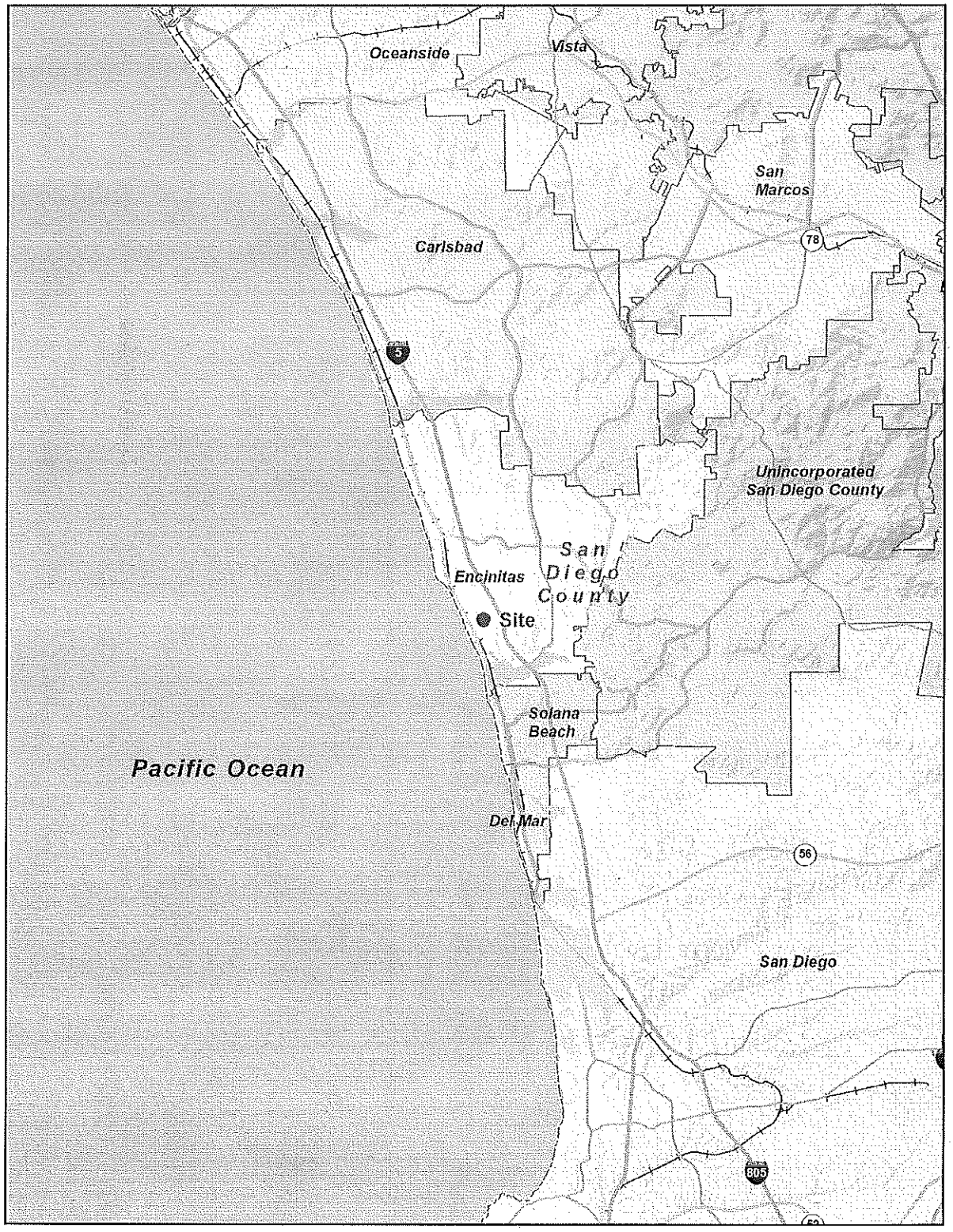
If you have any questions or require further information, please feel free to contact me at (619) 299-2700. Thank you for your assistance.

Sincerely,

PLACEWORKS

Jasmine Osman
Assistant Planner
Enclosures

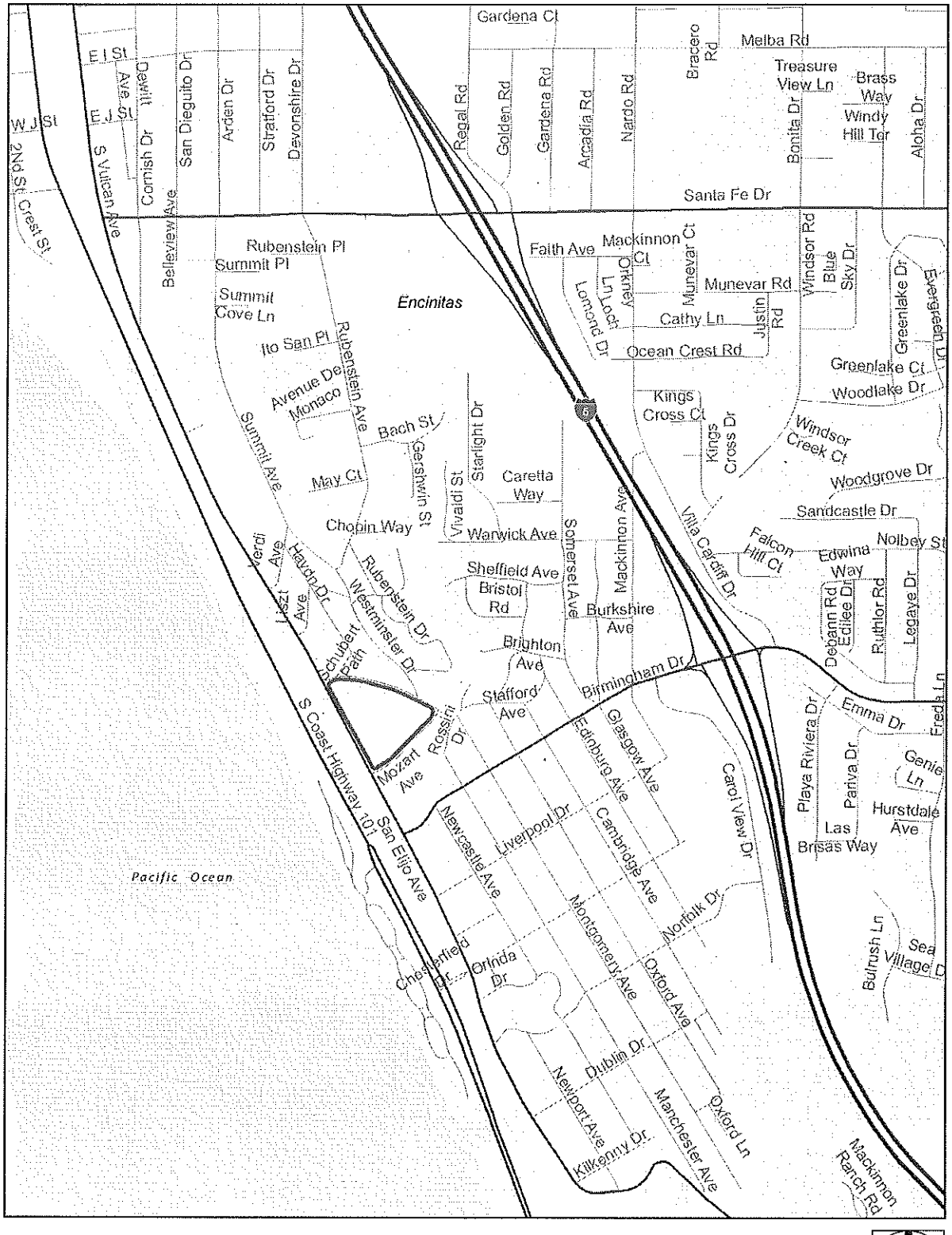
Figure 1 - Regional Location



Source: ESRI, 2017

PlaceWorks

Figure 2 - Local Vicinity



Source: ESRI, 2017

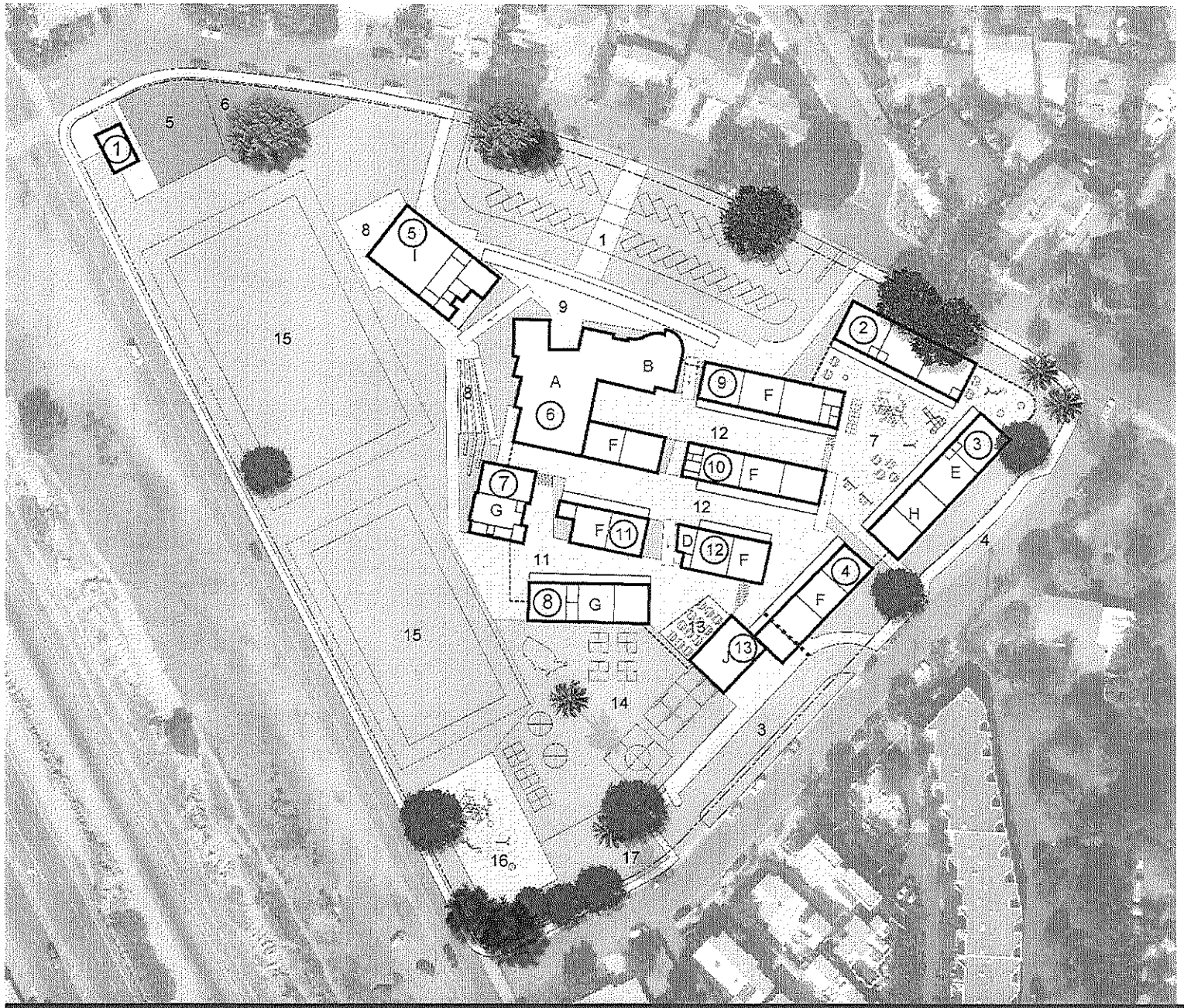
PlaceWorks

Figure 3 - Aerial Photograph



Source: Google Earth, 2017

PlaceWorks



BUILDING LEGEND

A. Admin. & District Office (existing)
B. Library (existing)
C. (not used)
D. Conference Room
E. Kindergarten Classrooms
F. General Classrooms
G. Specialty Classrooms
H. Extended Day
I. Multi-Purpose & Music Room
J. Food Service w/ Covered Eating
K. Brick Building (Existing)

OPEN SPACE LEGEND

1. Parking and Drop Off, 31 + 9 spaces
2. (not used)
3. Drop Off (existing, extended), 6 spaces
4. Drop Off (Existing)
5. Garden (Existing)
6. Dog Park (Existing)
7. Kindergarten Court
8. Terrace / Amphitheatre
9. Entry Plaza
10. (not used)
11. Exploration / Outdoor Projects
12. Classroom Court
13. Covered Dining
14. Hardcourts
15. Soccer Fields
16. Play Apparatus
17. Pollinator Garden (Existing)

PROPOSED SITE PLAN 12/14/17

11-1-16

Proposed Cardiff School Reconstruction and Modernization
Water Services Questionnaire

1. Please describe the existing and planned water facilities in the project area, especially near the project site. Please provide maps and plans for reference, if available.

   There is an existing 8-inch ACP water main in San Elijo Ave.
   There is an existing 8-inch ACP water main in Montgomery Ave.
   There is an existing 6-inch ACP water main in Mozart Ave.

   There are no planned water infrastructure additions surrounding the project area.

2. What are the water consumption factors applicable to an educational facility? Please state the estimated water demand for the proposed project and the adequacy of the current water supply.

   The District does not estimate water consumption. Water demand will need to be calculated and provided to you by your architect/engineer.

   With the site being an existing school, the District is confident in being able to supply any future water demand proposed by the reconstruction and modernization of the facility.

3. What are your sources of water? What are the future sources of water?

   The District utilizes local water and imported water.

4. What impact will the proposed project, in combination with all the other development projects in the area, have on your ability to provide water service?

   The District does not anticipate any large development projects in the area. This project and any future development projects will not affect the District's ability to provide water.

Proposed Cardiff School Reconstruction and Modernization
Water Services Questionnaire

5. What water conservation measures do you recommend for the proposed project?

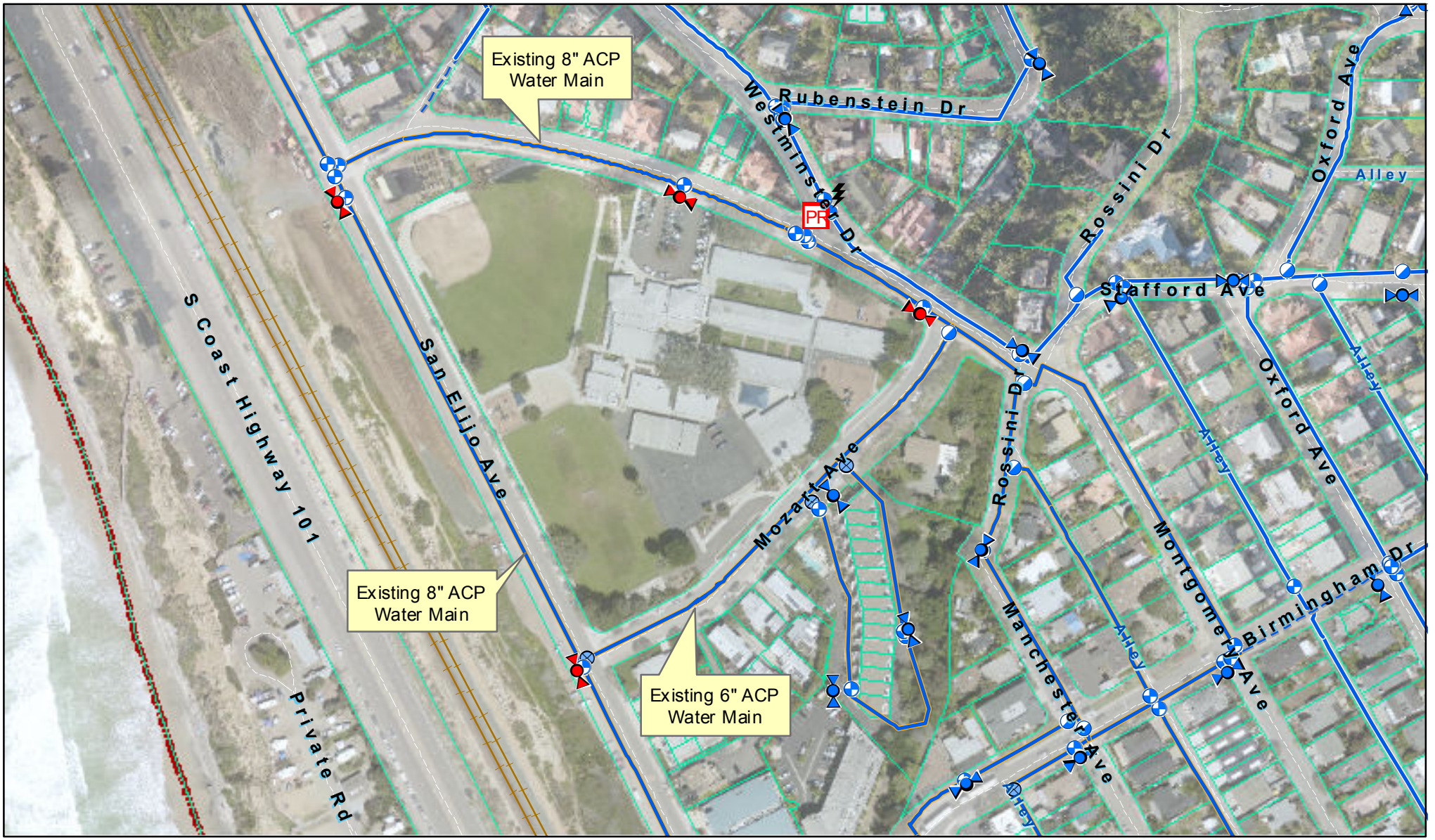
All landscaping irrigation should be installed to recycled water standards for possible future conversion.

6. Please add any other comments you may wish to make regarding this project.

None.

Response Prepared By:

Christina Olson	Assistant Engineer
Name	**Title**
San Dieguito Water District	2/8/2018
Agency	**Date**



Encinitas Map

1888 Montgomery Ave
Existing Water Main Exhibit

DISCLAIMER:

This map should not be used for Engineering, Survey, or Site-Specific Analysis.

Every reasonable effort has been made to assure the accuracy of the data provided; nevertheless, some information may not be accurate. The City of Encinitas assumes no liability or responsibility arising from the use of or reliance upon this information.

- Map Coordinates: State plane NAD83 Feet, CA Zone 6
- Parcel lines are not survey accurate, and some parcels can be positionally off up to +/- 40 feet
- Photo flight dates: July 2009. 4 inch pixel resolution. Digital true color.
- Orthophoto and Topo positional accuracy meet the precision adequate to support National Map Accuracy Standards for 1" = 100' mapping.

N

0 200 Feet

1 inch = 200 feet