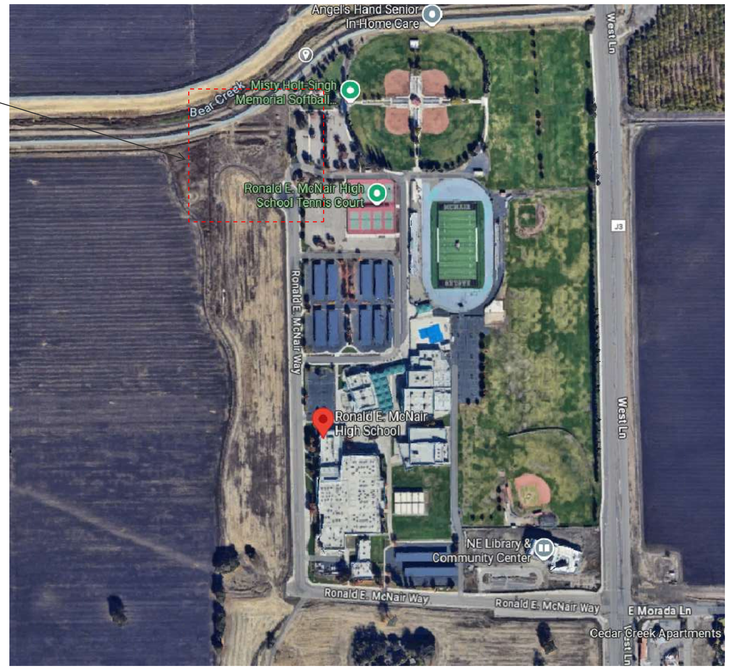
McNAIR HIGH SCHOOL STORMWATER PUMP STATION

9550 RONALD E. McNAIR WAY

STOCKTON, CA 95210

LODI UNIFIED SCHOOL DISTRICT

PROJECT LOCATION



SITE LOCATION

N

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McNAIR HIGH SCHOOL STORMWATER PUMP STATION
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LODI UNIFIED SCHOOL DISTRICT

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 10/28/2025
DRAWN BY: CAL CHKED BY: G.L.
CITY SUBMITTAL

#	DESCRIPTION	DATE

INDEX AND PROJECT INFORMATION

This document is for plan review only

G0.0

INSPECTOR SIGNOFF

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

Exceptions:

1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
2. [HCD] For purposes of CALGreen, live/work units, complying with Section 419 of the California Building Code, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 4
NONRESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS

4.102.1 DEFINITIONS

The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT

4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.

Exceptions:

1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   - 1.1 Where there is no commercial power supply.
   - 1.2 Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than $400.00 per dwelling unit.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the California Electrical Code.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE"

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4.106.4.2 New multifamily dwellings. If residential parking is available, ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

Notes:

1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.
3. A parking space served by electric vehicle supply equipment or designated as a future EV charging space shall count as at least one standard automobile parking space for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least one EV space shall be located in the common use parking area and shall be available for use by all residents.

4.106.4.2.1.1 Electric Vehicle Charging Stations (EVCS) When EV chargers are installed, EV spaces required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:

1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from accessible parking space.
2. The EV space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3.

Note: Electric Vehicle charging stations serving public housing are required to comply with the California Building Code, Chapter 11B.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).
2. The minimum width of each EV space shall be 9 feet (2743 mm).
3. One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).
   a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.3 Single EV space required. Install a listed raceway capable of accommodating a 208/240- volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger, at the time of original construction in accordance with the California Electrical Code.

4.106.4.2.4 Multiple EV spaces required. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger, at the time of original construction in accordance with the California Electrical Code.

4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

4.106.4.3 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of the EV spaces.

Notes:

1. Construction documents are intended to demonstrate the project's capability and capacity or facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.
3. A parking space served by electrical vehicle supple equipment or designed as a future EV charging space shall count as at least one standard automobile parking space for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

4.106.4.3.1 Number of required EV spaces. The number of required EV spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table 4.106.4.3.1. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

TABLE 4.106.4.3.1

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0 - 9	0
10 - 25	1
26 - 50	2
51 - 75	4
76-100	5
101 - 150	7
151 - 200	10
201 AND OVER	AT LEAST 6% OF TOTAL

4.106.4.3.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486mm).
2. The minimum width of each EV space shall be 9 feet (2743mm)

4.106.4.3.3 Single EV space required. When a single EV space is required, the EV space shall be designed in accordance with Section 4.106.4.2.3.

4.106.4.3.4 Multiple EV spaces required. When multiple EV spaces are required, the EV spaces shall be designed in accordance with Section 4.106.4.2.4.

4.106.4.3.5 Identification. The service panels or sub-panels shall be identified in accordance with Section 4.106.4.2.5.

4.106.4.3.6 Accessible EV spaces. In addition to the requirements in Section 4.106.4.3, EV spaces for hotels/motels and all EVSE, when installed, shall comply with the accessibility provisions for the EV charging stations in the California Building Code, Chapter 11B.

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DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush.The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the California Code of Regulations, Title 20 (Appliance Efficiency Regulations),Section 1605.1 (h) (4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf) [113 grams-force(gf)]

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.
Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the California Plumbing Code.

4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code.

NOTE:
THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

4.304 OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

NOTES:

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code Regulations, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4.

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
   a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
   b. Roof and yard drainage, including gutters and downspouts.
   c. Space conditioning systems, including condensers and air filters.
   d. Landscape irrigation systems.
   e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this code.
11. Information from CAL Fire on maintenance of defensible space around residential structures.

4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS

5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 (and are included here for reference)

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.
MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O³/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

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LODI UNIFIED SCHOOL DISTRICT
McNAIR HIGH SCHOOL
9550 Ronald E. McNair Way
Stockton, CA 95210

LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 10/28/2025
DRAWN BY: CAL CHKED BY: G.L.

CITY SUBMITTAL

#	DESCRIPTION	DATE

CAL GREEN CHECKLIST

This document is for plan review only

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VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0,1 millimeters of mercury at room temperature, These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves,pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL

4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4,504,1 or 4,504,2, as applicable. Such products also shall comply with the Rule 1168 p prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4,504.3, unless more stringent local limit apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4,504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f) (1) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification,
2. Field verification of on-site product containers.

TABLE 4.504.1 - ADHESIVE VOC LIMIT
(Less Water and Less Exempt Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT SPECIFICALLY LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1, IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT
Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420

SEALANT PRIMERS	CURRENT VOC LIMIT
ARCHITECTURAL	
NONPOROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

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TABLE 4,504,3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NONFLAT COATINGS	100
NONFLAT HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH-TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS:	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TRAFFIC MARKING COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB, 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.2 - SEALANT VOC LIMIT

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

hhttps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

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4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

hhttps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.),.
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4,505 INTERIOR MOISTURE CONTROL

4.505.1 General. Buildings shall meet or exceed the provisions of the California Building Standards Code.

4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101,6 mm) thick base of 1/2 inch (12,7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding,shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101,8 of this code.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing. Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure

4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
   a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.
   b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the California Energy Code.

4.507 ENVIRONMENTAL COMFORT

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment Selection), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.

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CHAPTER 5
NONRESIDENTIAL MANDATORY MEASURES

SECTION 5.102 DEFINITIONS
5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2,5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV). Existing law defines "low-speed vehicle" for purposes of the Vehicle Code as a motor vehicle with 4 wheels that is capable of a minimum speed of 20 miles per hour and a maximum speed of 25 miles per hour on a paved level surface and that has a gross vehicle weight rating of less than 3,000 pounds. Existing law imposes certain restrictions on the use of low-speed vehicles on public streets and highways, and generally requires an operator of a low-speed vehicle to have a driver's license. A low-speed vehicle is also known as a neighborhood electric vehicle (NEV).

TENANT OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

VANPOOL VEHICLE. A "vanpool vehicle" is any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purposes of ridesharing.

ZEV. The Zero-Emission Vehicle (ZEV) program is part of CARB's Advanced Clean Cars package of coordinated standards that controls smog-causing pollutants and greenhouse gas emissions of passenger vehicles in California.

5.106.1 STORM WATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB LESS THAN ONE ACRE OF LAND. Newly constructed projects and additions which disturb less than one acre of land, and are not part of a larger common plan of development or sale, shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:

5.106.1.1 Local ordinance. Comply with a lawfully enacted storm water management and/or erosion control ordinance.
5.106.1.2 Best Management Practices (BMPs). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMPs.

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1. Soil loss BMPs that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
a. Scheduling construction activity during dry weather, when possible.
b. Preservation of natural features, vegetation, soil, and buffers around surface waters.
c. Drainage swales or lined ditches to control stormwater flow.
d. Mulching or hydroseeding to stabilize disturbed soils.
e. Erosion control to protect slopes.
f. Protection of storm drain inlets (gravel bags or catch basin inserts).
g. Perimeter sediment control (perimeter silt fence, fiber rolls).
h. Sediment trap or sediment basin to retain sediment on site.
i. Stabilized construction exits.
j. Wind erosion control.
k. Other soil loss BMPs acceptable to the enforcing agency.

2. Good housekeeping BMPs to manage construction equipment, materials, non-stormwater discharges and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
a. Dewatering activities.
b. Material handling and waste management.
c. Building materials stockpile management.
d. Management of washout areas (concrete, paints, stucco, etc.).
e. Control of vehicle/equipment fueling to contractor's staging area.
f. Vehicle and equipment cleaning performed off site.
g Spill prevention and control.
h. Other housekeeping BMPs acceptable to the enforcing agency.

5.106.2 STORMWATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB ONE OR MORE ACRES OF LAND. Comply with all lawfully enacted stormwater discharge regulations for projects that(1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of a larger common plan of development sale.
Note: Projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of the larger common plan of development or sale must comply with the post-construction requirements detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board or the Lahontan Regional Water Quality Control Board (for projects in the Lake Tahoe Hydrologic Unit).

The NPDES permits require postconstruction runoff (post-project hydrology) to match the preconstruction runoff (pre-project hydrology) with the installation of postconstruction stormwater management measures. The NPDES permits emphasize runoff reduction through on-site stormwater use, interception, evapotranspiration, and infiltration through nonstructural controls, such as Low Impact Development (LID) practices, and conversation design measures. Stormwater volume that cannot be addressed using nonstructural practices is required to be captured in structural practices and be approved by the enforcing agency.

Refer to the current applicable permits on the State Water Resources Control Board website at: www.waterboards.ca.gov/constructionstormwater. Consideration to the stormwater runoff management measures should be given during the initial design process for appropriate integration into site development.

5.106.4 BICYCLE PARKING. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5,106,4,1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5,106,4,2

5.106.4.1 Bicycle parking. [BSC-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

5.106.4.1.1 Short-term bicycle parking. If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.

5.106.4.1.2 Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.3 For additions or alterations that add 10 or more tenant-occupant vehicular parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicular parking spaces being added, with a minimum of one bicycle parking facility.

5.106.4.1.4 For new shell buildings in phased projects provide secure bicycle parking for 5 percent of the anticipated tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.5 Acceptable bicycle parking facility for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall be convenient from the street and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2

5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.
5.106.4.2.2 Staff bicycle parking. Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

5.106.5.3 Electric vehicle (EV) charging. [N] Construction to provide electric vehicle infrastructure and facilitate electric vehicle charging shall comply with Section 5.106.5.3.1 and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.

Exceptions:
1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
a. Where there is no local utility power supply
b. Where the local utility is unable to supply adequate power.
c. Where there is evidence suitable to the local enforcement agency substantiating the local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
2. Parking spaces accessible only by automated mechanical car parking systems are not required to comply with this code section

5.106.5.3.1 EV capable spaces.
[N]EV capable spaces shall be provided in accordance with Table 5.106.5.3.1 and the following requirements:

1. Raceways complying with the California Electrical Code and no less that 1-inch (25 mm) diameter shall be provided and shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the EV capable and into a suitable listed cabinet, box,enclosure or equivalent. A common raceway may be used to serve multiple EV charging spaces.
2. A service panel or subpanel (s) shall be provided with panel space and electrical load capacity for a dedicated 208/240 volt, 40-ampere minimum branch circuit for each EV capable space, with delivery of 30-ampere minimum to an installed EVSE at each EVCS.
3. The electrical system and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at each EV capable space.
4. The service panel or subpanel circuit directory shall identify the reserved overcurrent protective devices space(s) as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

Note: A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by an enforcement agency. See vehicle Code Section 22511.2 for further details.

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TABLE 5.106.5.3.1		
TOTAL NUMBER OF ACTUAL PARKING SPACES	**NUMBER OF REQUIRED EV CAPABLE SPACES**	NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE)[1][2]
0-9	0	0
10-25	2	0
26-50	8	2
51-75	13	3
76-100	17	4
101-150	25	6
151-200	35	9
201 AND OVER	20% of total[1]	25% of EV capable spaces[1]

1. Where there is insufficient electrical supply.
2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count towards the total number of requirec EV capable spaces shown in column 2.

5.106.5.3.2 Electric vehicle charging stations (EVCS)

EV capable spaces shall be provided with EVSE to create EVCS in the number indicated in Table 5.106.5.3.1. The EVCS required by Table 5.106.5.3.1 may be provided with EVSE in any combination of Level 2 and Direct Current Fast Charging (DCFC), except that at least one Level 2 EVSE shall be provided.

One EV charger with multiple connectors capable of charging multiple EVs simultaneously shall be permitted if the electrical load capacity required by Section 5.106.5.3.1 for each EV capable space is accumulatively supplied to the EV charger.

The installation of each DCFC EVSE shall be permitted to reduce the minimum number of required EV capable spaces without EVSE by five and reduce proportionally the required electrical load capacity to the service panel or subpanel.

5.106.5.3.3 Use of automatic load management systems (ALMS).
ALMS shall be permitted for EVCS. When ALMS is installed, the required electrical load capacity specified in Section
5.106.5.3.1 for each EVCS may be reduced when serviced by an EVSE controlled by an ALMS. Each EVSE controlled by an ALMS shall deliver a minimum 30 amperes to an EV when charging one vehicle and shall deliver a minimum 3.3 kW while simultaneously charging multiple EVs.

5.106.5.3.4 Accessible EVCS.
When EVSE is installed, accessible EVSC shall be provided in accordance with the California Building Code, Chapter 11B, Section 11B-228.3.
Note: For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

5.106.5.4 Electric Vehicle (EV) charging: medium-duty and heavy-duty. [N]
Construction shall comply with section 5.106.5.4.1 to facilitate future installation of electric vehicle supply equipment (EVSE). Construction for warehouses, grocery stores and retail stores with planned off-street loading spaces shall also comply with Section 5.106.5.4.1 for future installation of medium- and heavy-duty EVSE.
Exceptions:
1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
a.Where there is no local utility power supply.
b. Where the local utility is unable to supply adequate power.
c. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
When EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Electrical Code and as follows:

5.106.5.4.1 Electric vehicle charging readiness requirements for warehouse, grocery stores and retail stores with planned off-street loading spaces.
[N] In order to avoid future demolition when adding EV charging supply and distribution equipment, spare raceways(s) or busway(s) and adequate capacity for transformers(s), service panels(s) or subpanel(s) shall be installed at the time of construction in accordance with the California Electrical Code. Construction plans and specifications shall include but are not limited to, the following:
1. The transformer, main service equipment and subpanel shall meet the minimum power requirement in Table 5.106.5.4.1 to accommodate the dedicated branch circuits for the future installation of EVSE.
2. The construction documents shall indicate on or more location(s) convenient to the planned offstreet loading space(s) reserved for medium-and heavy-duty ZEV charging cabinets and charging dispensers, and a pathway reserved for routing of conduit from the termination of the raceway(s) or busway(s) to the charging cabinet(s) and dispenser(s) as shown in Table 5.106.5.4.1
3. Raceway(s) or busway(s) originating at a main service panel or a subpanel(s) serving the area where potential future medium-and heavy-duty EVSE will be located and shall terminate in close proximity to the potential future location of the charging equipments for medium- and heavy-duty vehicles.
4, The raceway(s) or busway(s) shall be sufficient size to carry the minimum additional system load to the future location of the charging for medium- and heavy-duty ZEVs as shown in Table 5.106.5.4.1.

TABLE 5.106.5.4.1 RACEWAY CONDUIT AND PANEL POWER REQUIREMENTS FOR MEDIUM- AND HEAVY-DUTY EVSE [N]			
BUILDING TYPE	BUILDING SIZE (SQ. FT.)	**NUMBER OF OFF-STREET LOADING SPACES**	ADDITIONAL CAPACITY REQUIRED (KVA) FOR RACEWAY & BUSWAY AND TRANSFORMER & PANEL
Grocery	10,000 to 90,000	1 or 2	200
		3 or Greater	400
	Greater than 90,000	1 or Greater	400
Retail	10,000 to 135,000	1 or 2	200
		3 or Greater	400
	Greater than 135,000	1 or Greater	400
Warehouse	20,000 to 256,000	1 or 2	200
		3 or Greater	400
	Greater than 256,000	1 or Greater	400

5.106.8 LIGHT POLLUTION REDUCTION. [N]. I Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the California Administrative Code; and
2, Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);
3, Uplight and Glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8) and
4, Allowable BUG ratings not exceeding those shown in Table 5.106.8. [N] or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]
1. Luminaires that qualify as exceptions in Sections 130.2 (b) and 140.7 of the California Energy Code,
2. Emergency lighting.
3. Building facade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6.
4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.
5. Luminaires with less than 6,200 initial luminaire lumens.

MAXIMUM ALLOWABLE GLARE RATING [1] (G)					
MAXIMUM ALLOWABLE GLARE RATING [1] (G)	N/A	G1	G2	G3	G4
MAXIMUM ALLOWABLE GLARE RATING [1] (G)	N/A	G0	G1	G1	G2
MAXIMUM ALLOWABLE GLARE RATING [1] (G)	N/A	G0	G0	G1	G1
MAXIMUM ALLOWABLE GLARE RATING [1] (G)	N/A	G0	G0	G0	G1

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TABLE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS [1,2]					
ALLOWABLE RATING	**LIGHTING ZONE LZ0**	**LIGHTING ZONE LZ1**	**LIGHTING ZONE LZ2**	**LIGHTING ZONE LZ3**	**LIGHTING ZONE LZ4**
MAXIMUM ALLOWABLE BACKLIGHT RATING					
Luminaire greater than 2 mounting heights (MH) from property line	N/A	No Limit	No Limit	No Limit	No Limit
Luminaire back hemisphere is 1-2 MH from property line	N/A	B2	B3	B4	B4
Luminaire back hemisphere is 0.5-1 MH from property line	N/A	B1	B2	B3	B3
Luminaire back hemisphere is less than 0.5 MH from property line	N/A	B0	B0	B1	B2
MAXIMUM ALLOWABLE UPLIGHT RATING (U)					
For area lighting [3]	N/A	U0	U0	U0	U0
For all other outdoor lighting,including decorative luminaires	N/A	U1	U2	U3	UR

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the California Energy Code and Chapter 10 of the California Administrative Code.
2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.
3.General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaries located in these areas shall meet U-value limits for "all other outdoor lighting"

5.106.8.1 Facing- Backlight
Luminaries within 2MH of a property line shall be oriented so that the nearest property line is behind the fixture, and shall comply with the backlight rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point of that property line.
Exception: Corners. If two property lines (or two segments of the same property line) have equidistant point to the luminaire, then the luminaire may be oriented so that the intersection of the two lines (the corner) is directly behind the luminaire. The luminaire shall still use the distance to the nearest point(s) on the property lines to determine the required backlight rating.

5.106.8.2 Facing-Glare. For luminaires covered by 5.106.8.1, if a property line also exists within or extends into the front hemisphere within 2MH of the luminaire then the luminaire shall comply with the more stringent glare rating specified in Table 5,106.8 based on the lighting zone and distance to the nearest point on the nearest property line within the front hemisphere,
Note: [N]
1.See also California Building Code, Chapter 12, Section 1205,6 for college campus lighting requirements for parking facilities and walkways.
2.Refer to Chapter 8 (Compliance Forms, Worksheets and Reference Material) for IES TM-15-11 Table A-1, California Energy Code Tables 130.2-A and 130,2-B,
3. Refer to the California Building Code for requirements for additions and alterations.

5.106.10 GRADING AND PAVING. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:
1. Swales.
2. Water collection and disposal systems.
3, French drains.
4, Water retention gardens.
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.
Exception: Additions and alterations not altering the drainage path.

5.106.12 SHADE TREES [DSA-SS]. Shade Trees shall be planted to comply with Sections 5.106.12.1, 5,106.12,2, and 5,106.12,3. Percentages shown shall be measured at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section

5.304.6. 5.106.12.1 Surface parking areas. Shade tree plantings, minimum #10 container size or equal, shall be installed to provide shade over 50 percent of the parking area within 15 years.
Exceptions: Surface parking area covered by solar photovoltaic shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting.

5.106.12.2 Landscape areas. Shade tress plantings, minimum #10 container size or equal shall be installed to provide shade of 20% of the landscape area within 15 years.

Exceptions: Playfields for organized sport activity are not included in the total area calculation.

5.106.12.3. Hardscape areas. Shade tree plantings, minimum #10 container size or equal shall be installed to provide shade over 20 percent of the hardscape area within 15 years.

Exceptions:
1. Walks, hardscape areas covered by solar photovoltaic shade structures or shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting.
2. Designated and marked play areas of organized sport activity are not included in the total area calculation.

DIVISION 5.2 ENERGY EFFICIENCY
SECTION 5.201 GENERAL
5.201,1 Scope [BSC-CG], California Energy Code [DSA-SS]. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION
SECTION 5.301 GENERAL
5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS
5.302.1 Definitions. The following terms are defined in Chapter 2 (and are included here for reference)

EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS]. An adjustment factor when applied to reference evapotranspiration that adjusts for plant factors and irrigation efficiency, which ae two major influences on the amount of water that needs to be applied to the landscape.

FOOTPRINT AREA [DSA-SS]. The total area of the furthest exterior wall of the structure projected to natural grade, not including exterior areas such as stairs, covered walkways, patios and decks,

METERING FAUCET. A self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable.

GRAYWATER. Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters,

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD] The California model ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7), regulating landscape design, installation and maintenance practices, Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

POTABLE WATER. [HCD] Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.

RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

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SUBMETER. [HCD 1] A secondary device beyond a meter that measures water consumption of an individual rental unit within a multiunit residential structure or mixed-use residential and commercial structure. (See Civic Code Section 1954.202 (g) and Water code Section 517 for additional details.)

WATER BUDGET. Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO)

SECTION 5.303 INDOOR WATER USE
5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 503,1.1 and 503,1.2.

5.303.1.1 Buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows:
1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
b, Makeup water for evaporative coolers greater than 6 gpm (0,04 L/s),
c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW),

5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

5.303.3.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type toilets.
Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

5.303.3.2 Urinals.
5.303.3.2.1 Wall-mounted Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush.
5.303.3.2.2 Floor-mounted Urinals. The effective flush volume of floor-mounted or other urinals shall not exceed 0,5 gallons per flush.

5.303.3.3 Showerheads. [BSC-CG]
5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.
Note: A hand-held shower shall be considered a showerhead.

5.303.3.4 Faucets and fountains.
5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than1.8 gallons per minute/20 [rim space (inches) at 60 psi].

5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.

5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 [rim space (inches) at 60 psi].
Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

5.303.3.4.6 Pre-rinse spray value
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7), and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2	
STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019	
PRODUCT CLASS [spray force in ounce force (ozf)]	**MAXIMUM FLOW RATE (gpm)**
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

5.303.4 COMMERCIAL KITCHEN EQUIPMENT.

5.303.4.1 Food Waste Disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no-load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water.
Note: This code section does not affect local jurisdiction authority to prohibit or require disposer installation.

5.303.5 AREAS OF ADDITION OR ALTERATION. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alteration to the building.

5.303.6 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code* and in Chapter 6 of this code.

SECTION 5.304 OUTDOOR WATER USE
5.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.
Notes:
1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.
2, MWELO and supporting documents, including a water budget calculator, are available at: https://www.water.ca.gov/.
5.304.6 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. For public schools and community colleges, landscape projects as described in Sections 5.304.6.1 and 5.304.6.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) commencing with Section 490 of Chapter 2,7, Division 2, Title 23, *California Code of Regulations*, except that the evapotranspiration adjustment factor (ETAF) shall be 0.65 with an additional water allowance for special landscape areas (SLA) of 0.35.
Exception: Any project with an aggregate landscape area of 2,500 square feet or less may comply with the prescriptive measures contained in Appendix D of the MWELO,
5.304.6.1 Newly constructed landscapes. New construction projects with an aggregate landscape area equal to or greater than 500 square feet.
5.304.6.2 Rehabilitated landscapes. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,200 square feet.

DIVISION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY
SECTION 5.401 GENERAL
5.401.1 SCOPE. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

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SECTION 5.402 DEFINITIONS

5.402.1 DEFINITIONS. The following terms are defined in Chapter 2 *(and are included here for reference)*
ADJUST. To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper,
BALANCE. To proportion flows within the distribution system, including sub-mains, branches and terminals, according to design quantities.
BUILDING COMMISSIONING. A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.
ORGANIC WASTE. Food waste, green waste, landscape and pruning wste, nonhazardous wood waste, and food soiled paper waste that is mixed in with food waste.
TEST. A procedure to determine quantitative performance of a system or equipment

SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT
5,407.1 WEATHER PROTECTION. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1402.2 (Weather Protection), manufacturer's installation instructions or local
ordinance, whichever is more stringent.
5.407.2 MOISTURE CONTROL. Employ moisture control measures by the following methods.
5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.
5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows:

5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:
1, An installed awning at least 4 feet in depth,
2. The door is protected by a roof overhang at least 4 feet in depth.
3. The door is recessed at least 4 feet.
4. Other methods which provide equivalent protection.

5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.

SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with Section 5,408.1.1, 5,408.1.2 or 5,408.1.3, or
meet a local construction and demolition waste management ordinance, whichever is more stringent.

5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan that:
1. Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies diversion facilities where construction and demolition waste material collected will be taken.
4, Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

5.408.1.2 Waste Management Company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.
Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

Exceptions to Sections 5.408.1.1 and 5.408.1.2:
1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.

5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency.
5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5,408,1,1, through 5,408,1,3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.
Notes:
1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission- Resources-List Folder/CALGreen may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.2 UNIVERSAL WASTE. [A] Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents.
Note: Refer to the Universal Waste Rule link at: http://www.dtsc.ca.gov/universalwaste/

5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS. 100 percent of trees, stumps, rocks and associated
vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.
Exception: Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation.
Notes:
1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material.
2. For a map of how pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdfa.ca.gov)

SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS
5.410.1 RECYCLING BY OCCUPANTS. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.
Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code 42649.82 (a)(2) (A) et seq. shall also be exempt from the organic waste portion of this section

5.410.1.1 Additions. All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site,
Exception: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area.
5.410.1.2 Sample ordinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code*. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act),
Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

5.410.2 COMMISSIONING. [N] New buildings 10,000 square feet and over. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. For I-occupancies that are not regulated by OSHPD or for I-occupancies and L-occupancies that are not regulated y the California Energy Code Section 100.0 Scope, all requirements in Sections 5,410.2 through 5,410.2.8 shall apply.
Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating,
ventilation, air conditioning (HVAC) systems and controls, indoor lighting systems and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements
Commissioning requirements shall include:
1. Owner's or Owner representative's project requirements.
2. Basis of design.
3, Commissioning measures shown in the construction documents,
4. Commissioning plan.
5. Functional performance testing.
6. Documentation and training.
7, Commissioning report.
Exceptions:
1, Unconditioned warehouses of any size.
2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses.
3. Tenant improvements less than 10,000 square feet as described in Section 303.1.1.
4. Open parking garages of any size, or open parking garage areas, of any size, within a structure.

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McNAIR HIGH SCHOOL STORMWATER PUMP STATION
LODI UNIFIED SCHOOL DISTRICT
McNAIR HIGH SCHOOL
9550 Ronald E. McNair Way
Stockton, CA 95210

LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: N PLAN N TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 10/28/2025
DRAWN BY: CAL CHKED BY: G.L.

CITY SUBMITTAL

#	DESCRIPTION	DATE

CAL GREEN CHECKLIST

This document is for plan review only

G0.3

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Note: For the purposes of this section, unconditioned shall mean a building, area, or room which does not provide heating and or air conditioning.
Informational Notes:
1. IAS AC 476 is an accreditation criteria for organizations providing training and/or certification of commissioning personnel. AC 476 is available to the Authority Having Jurisdiction as a reference for qualifications of commissioning personnel. AC 476 des not certify individuals to conduct functional performance tests or to adjust and balance systems.
2. Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the *California Energy Code*.

5.410.2.1 Owner's or Owner Representative's Project Requirements (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:
1. Environmental and sustainability goals.
2. Building sustainable goals.
3. Indoor environmental quality requirements.
4. Project program, including facility functions and hours of operation, and need for after hours operation.
5. Equipment and systems expectations.
6. Building occupant and operation and maintenance (O&M) personnel expectations.

5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:
1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse system.

5.410.2.3 Commissioning plan. [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:
1. General project information.
2. Commissioning goals.
3. Systems to be commissioned. Plans to test systems and components shall include:
a. An explanation of the original design intent.
b. Equipment and systems to be tested, including the extent of tests.
c. Functions to be tested.
d. Conditions under which the test shall be performed.
e. Measurable criteria for acceptable performance.
4. Commissioning team information.
5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

5.410.2.4 Functional performance testing. [N] Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

5.410.2.5 Documentation and training. [N] A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in *California Code of Regulations* (CCR), Title 8, Section 5142, and other related regulations.

5.410.2.5.1 Systems manual. [N] Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:
1. Site information, including facility description, history and current requirements,
2. Site contact information.
3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log.
4. Major systems.
5. Site equipment inventory and maintenance notes.
6. A copy of verifications required by the enforcing agency or this code.
7. Other resources and documentation, if applicable

5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report and shall include the following;
1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces).
2. Review and demonstration of servicing/preventive maintenance.
3. Review of the information in the Systems Manual.
4. Review of the record drawings on the system/equipment.

5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.

5.410.4 TESTING AND ADJUSTING. New buildings less than 10,000 square feet. Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.

5.410.4.2 (Reserved)
Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting system and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(b)3 for additional testing requirements of specific systems.

5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:
1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse systems.

5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the enforcing agency.

5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

5.410.4.5 Operation and maintenance (O & M) manual. Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.

DIVISION 5.5 ENVIRONMENTAL QUALITY
SECTION 5.501 GENERAL
5.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

SECTION 5.502 DEFINITIONS
5.502.1 DEFINITIONS. The following terms are defined in Chapter 2 *(and are included here for reference)*

ARTERIAL HIGHWAY. A general term denoting a highway primarily for through traffic usually on a continuous route.

A-WEIGHTED SOUND LEVEL (dBA). The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectrail data to which A weighting adjustments have been made.

1 BTU/HOUR. British thermal units per hour, also referred to as Btu. The amount of heat required to raise one pound of water one degree Fahrenheit per hour, a common measure of heat transfer rate. A ton of refrigeration is 12,000 Btu, the amount of heat required to melt a ton (2,000 pounds) of ice at 320 Fahrenheit.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

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COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard, "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.1(a).
Note: See CCR, Title 17, Section 93120.1.

DAY-NIGHT AVERAGE SOUND LEVEL (Ldn). The A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10p.m. to 7 a.m.).

DECIBEL (db). A measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the *California Electrical Code*, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included.

ELECTRIC VEHICLE CHARGING STATION(S) (EVCS). One or more spaces intended for charging electric vehicles.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

ENERGY EQUIVALENT (NOISE) LEVEL (Leq). The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time of period of interest.

EXPRESSWAY. An arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections.

FREEWAY. A divided arterial highway with full control of access and with grade separations at intersections.

GLOBAL WARMING POTENTIAL (GWP). The radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time. Carbon dioxide is the reference compound with a GWP of one.

GLOBAL WARMING POTENTIAL VALUE (GWP VALUE). A 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995); or its Fourth Assessment A-3 Report (AR4) (IPCC, 2007). The SAR GWP values are found in column "SAR (100-yr)" of Table 2.14., the AR4 GWP values are found in column "100 yr" of Table 2.14.

HIGH-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that is: (a) a chlorofluorocarbon, a hdrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds, with a GWP value equal to or greater than 150, or (B) any ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

LONG RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.5 times the pipe diameter.

LOW-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that: (A) has a GWP value less than 150, and (B) is not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2–1999.

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base REactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundreths of a gram (g O3/g ROC).

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article, The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
PSIG. Pounds per square inch, guage.

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

SCHRADER ACCESS VALVES. Access fittings with a valve core installed.

SHORT RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.0 times the pipe diameter.

SUPERMARKET. For the purposes of Section 5.508.2, a supermarket is any retail food facility with 8,000 square feet or more conditioned area, and that utilizes either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units.

VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a)
Note: Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

SECTION 5.503 FIREPLACES
5.503.1 FIREPLACES. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances

5.503.1.1 Woodstoves. Woodstoves and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits.

SECTION 5.504 POLLUTANT CONTROL
5.504.1 TEMPORARY VENTILATION. The permanent HVAC system shall only be used during construction if necessary to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992.Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilation equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

5.504.4 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.6.

5.504.4.1 Adhesives, sealants and caulks. Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:
1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

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TABLE 5.504.4.1 - ADHESIVE VOC LIMIT[1,2]

Less Water and Less Exempt Compounds in Grams per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT SPECIFICALLY LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168, www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF

TABLE 5.504.4.2 - SEALANT VOC LIMIT

Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NONPOROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

NOTE: FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THESE TABLES, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

5.504.4.3.1 Aerosol Paints and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

TABLE 5.504.4.3 - CONT.

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	CURRENT VOC LIMIT
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH-TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS:	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:
1. Manufacturer's product specification
2. Field verification of on-site product containers

5.504.4.4 Carpet Systems.
All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." Version 1.2, January 2017 (Emission testing method for California Specifications 01350). See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health,"Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,"Version 1.2, January 2017 (Emission testing method for California Specifications 01350).
See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.

5.504.4.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120 et seq.). Those materials not exempted under the ATCM must meet the specified emission limits, as shown in Table 5.504.4.5.

5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:
1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards.
5. Other methods acceptable to the enforcing agency.

TABLE 5.504.4.5 - FORMALDEHYDE LIMITS[1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD. AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCHES (8 MM).

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LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 10/28/2025
DRAWN BY: CAL CHKED BY: G.L.

CITY SUBMITTAL

#	DESCRIPTION	DATE

CAL GREEN CHECKLIST

This document is for plan review only

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	5.504.4.6 Resilient flooring systems. Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health,"Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specifications 01350) See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material **5.504.4.6.1 Verification of compliance.** Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits. **5.504.4.7 Thermal insulation** Comply with the requirements of the California Department of Public Health, "Standard Method of the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, "Version 1.2, January 2017 (Emission testing method for California Specification 01350). See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material 5.**504.4.7.1 Verification of compliance.** Documentation shall be provided verifying that thermal insulation materials meet the pollutant emission limits. **5.504.4.8 Acoustical ceiling and wall panels.** Comply with the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, " Version 1.2, January 2017 (Emission testing method for California Specification 01350). See California Department of Public Health's website for certification programs and testing labs. **5.504.4.8.1 Verification of compliance.** Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits. **5.504.5.3 Filters.** In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual. **Exceptions:** Existing mechanical equipment. **5.504.5.3.1 Labeling.** Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating. **5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL.** Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions. **SECTION 5.505 INDOOR MOISTURE CONTROL** **5.505.1 INDOOR MOISTURE CONTROL.** Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures, see Section 5.407.2 of this code. **SECTION 5.506 INDOOR AIR QUALITY** **5.506.1 OUTSIDE AIR DELIVERY.** For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements For Ventilation) of the California Energy Code, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8. **5.506.2 CARBON DIOXIDE (CO2) MONITORING.** For buildings or additions equipped with demand control ventilation, CO2 sensors and ventilation controls shall be specified and installed in accordance with the requirements of the California Energy Code, Section 120(c)(4). **5.506.3 Carbon dioxide (CO2) monitoring in classrooms.** **(DSA-SS)** Each public K-12 school classroom, as listed in Table 120.1-A of the California Energy Code, shall be equipped with a carbon dioxide monitor or sensor that meets the following requirements: 1. The monitor or sensor shall be permanently affixed in a tamper-proof manner in each classroom between 3 and 6 feet (914 mm and 1829 mm) above the floor and at least 5 feet (1524 mm) away from door and operable windows. 2. When the monitor or sensor is not integral to an Energy Management Control System (EMCS), the monitor or sensor shall display the carbon dioxide readings on the device. When the sensor is integral to an EMCS, the carbon dioxide readings shall be available to and regularly monitored by facility personnel. 3. A monitor shall provide notification though a visual indicator on the monitor when the carbon dioxide levels in the classroom have exceeded 1,100ppm. A sensor integral to an EMCS shall provide notification to facility personnel through a visual and/or audible indicator when the carbon dioxide levels in the classroom have exceeded 1,100ppm. 4. The monitor or sensor shall measure carbon dioxide levels at minimum 15- minute intervals and shall maintain a record of previous carbon dioxide measurements of not less than 30 days duration. 5. The monitor or sensor used to measure carbon dioxide levels shall have the capacity to measure carbon dioxide levels with a range of 400ppm to 2000ppm or greater. 6. The monitor or sensor shall be certified by the manufacturer to be accurate within 75ppm at 1,000ppm carbon dioxide concentration and shall be certified by the manufacturer to require calibration no more frequently than once every 5 years. **SECTION 5.507 ENVIRONMENTAL COMFORT** **5.507.4 ACOUSTICAL CONTROL.** Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2. **Exception:** Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings. **Exception: [DSA-SS]** For public schools and community colleges, the requirements of this section and all subsections apply only to new construction. **5.507.4.1 Exterior noise transmission, prescriptive method.** Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations: 1. Within the 65 CNEL noise contour of an airport. **Exceptions:** 1. Ldn or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan. 2. Ldn or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element. 2. Within the 65 CNEL or Ldn noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan. **5.507.4.1.1. Noise exposure where noise contours are not readily available.** Buildings exposed to a noise level of 65 dB Leq - 1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30). **5.507.4.2 Performance Method.** For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1Hr) of 50 dBA in occupied areas during any hour of operation. **5.507.4.2.1 Site Features.** Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior. **5.507.4.2.2 Documentation of Compliance.** An acoustical analysis documenting complying interior soundlevels shall be prepared by personnel approved by the architect or engineer of record. **5.507.4.3 Interior sound transmission.** Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40. **Note:** Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: www.toolbase.org/PDF/CaseStudies/stc_icc_ratings.pdf.		**SECTION 5.508 OUTDOOR AIR QUALITY** **5.508.1 Ozone depletion and greenhouse gas reductions.** Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2. **5.508.1.1 Chlorofluorocarbons (CFCs).** Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs. **5.508.1.2 Halons.** Install HVAC, refrigeration and fire suppression equipment that do not contain Halons. **5.508.2 Supermarket refrigerant leak reduction.** New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 square feet or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the replacement of existing refrigeration systems in existing facilities. **Exception:** Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO2), and potentially other refrigerants. **5.508.2.1 Refrigerant piping.** Piping compliant with the California Mechanical Code shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below. **5.508.2.1.1 Threaded pipe.** Threaded connections are permitted at the compressor rack. **5.508.2.1.2 Copper pipe.** Copper tubing with an OD less than 1/4 inch may be used in systems with a refrigerant charge of 5 pounds or less. **5.508.2.1.2.1 Anchorage.** One-fouth-inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils. **5.508.2.1.3 Flared tubing connections.** Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil. **Exception:** Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations. **5.508.2.1.4 Elbows.** Short radius elbows are only permitted where space limitations prohibit use of long radius elbows. **5.508.2.2 Valves.** Valves Valves and fittings shall comply with the California Mechanical Code and as follows. **5.508.2.2.1 Pressure relief valves.** For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valve. **5.508.2.2.1.1 Pressure detection.** A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve. **5.508.2.2.2 Access valves.** Only Schrader access valves with a brass or steel body are permitted for use. **5.508.2.2.2.1 Valve caps.** For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic. **5.508.2.2.2.2 Seal caps.** If designed for it, the cap shall have a neoprene O-ring in place. **5.508.2.2.2.2.1 Chain tethers.** Chain tethers to fit ovr the stem are required for valves designed to have seal caps. **Exception:** Valves with seal caps that are not removed from the valve during stem operation. **5.508.2.3 Refrigerated service cases.** Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances. **5.508.2.3.1 Coil coating.** Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency. **5.508.2.4 Refrigerant receivers.** Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device tha indicates the level of refrigerant in the receiver. **5.508.2.5 Pressure testing.** The system shall be pressure tested during installation prior to evacuation and charging. **5.508.2.5.1 Minimum pressure.** The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum. **5.508.2.5.2 Leaks.** Check the system for leaks, repair any leaks, and retest for pressure using the same gauge. **5.508.2.5.3 Allowable pressure change.** The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge. **5.508.2.6 Evacuation.** The system shall be evacuated after pressure testing and prior to charging. **5.508.2.6.1 First vacuum.** Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes. **5.508.2.6.2 Second vacuum.** Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes. **5.508.2.6.3 Third vacuum.** Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period. **CHAPTER 7** **INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS** **702 QUALIFICATIONS** **702.1 INSTALLER TRAINING.** HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following: 1. State certified apprenticeship programs. 2. Public utility training programs. 3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations. 4. Programs sponsored by manufacturing organizations. 5. Other programs acceptable to the enforcing agency. **702.2 SPECIAL INSPECTION [HCD].** When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector: 1. Certification by a national or regional green building program or standard publisher. 2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors. 3. Successful completion of a third party apprentice training program in the appropriate trade. 4. Other programs acceptable to the enforcing agency. **Notes:** 1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code. 2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS). **[BSC-CG]** When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency. **Note:** Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.		**703 VERIFICATIONS** **703.1 DOCUMENTATION.** Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.		

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LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
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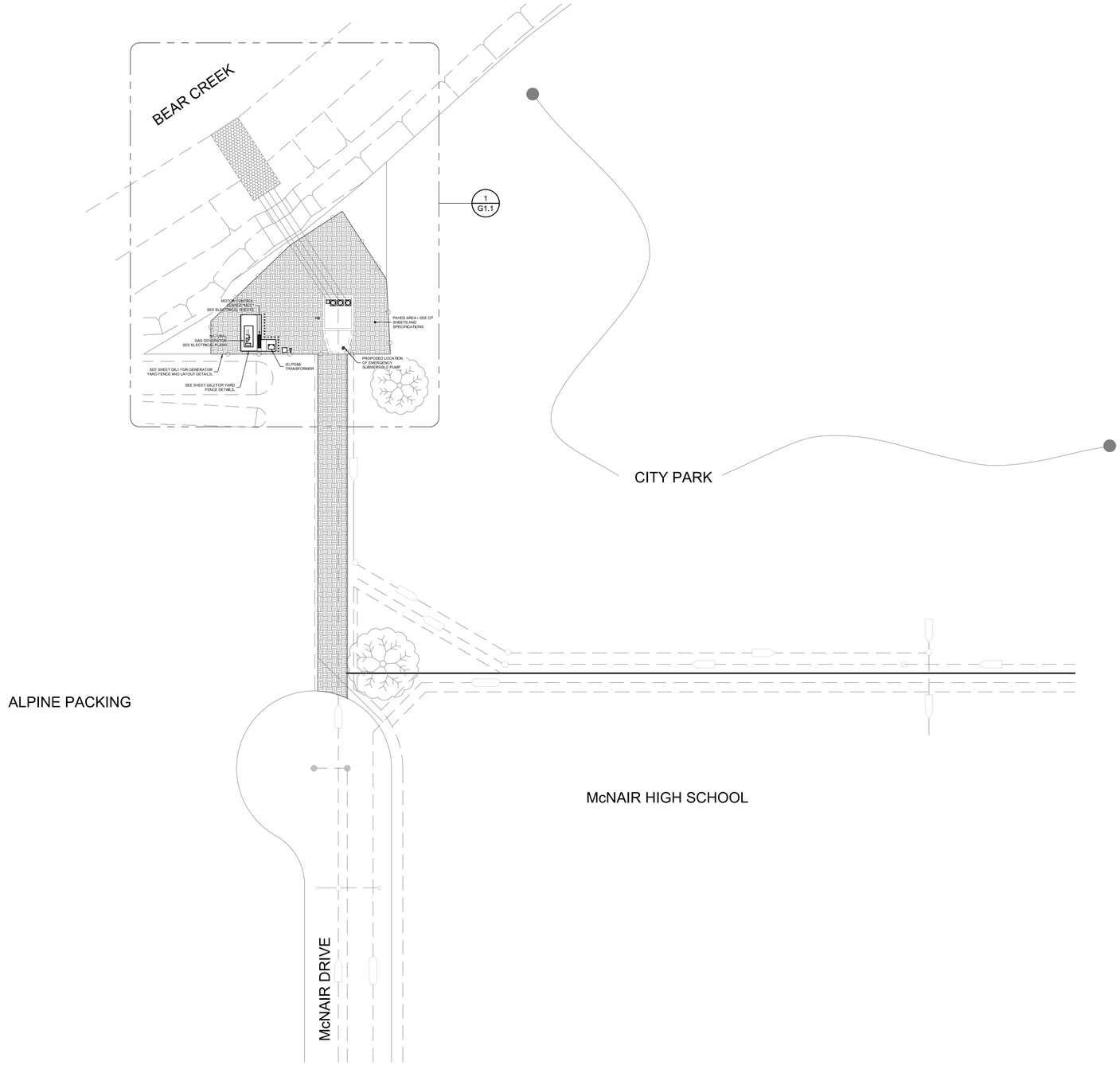
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CAL GREEN CHECKLIST

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G0.5

G3.1 CAL GREEN CHECKLIST



1 SITE PLAN
SCALE: 1" = 50'-0"

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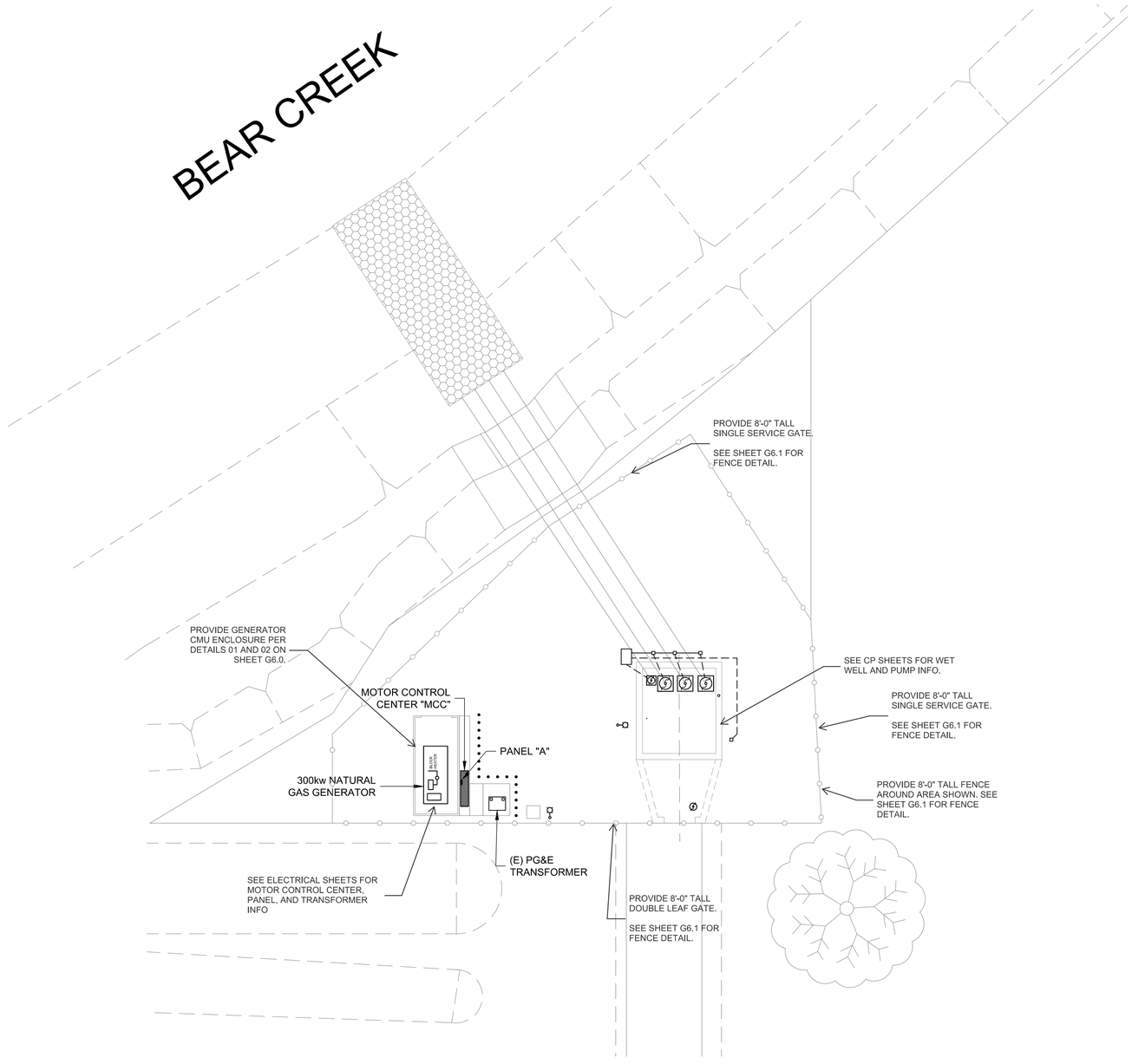
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SITE PLAN

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G1.0

G3.1 CAL GREEN CHECKLIST



1 ENLARGED SITE PLAN
SCALE: 1" = 20'-0"

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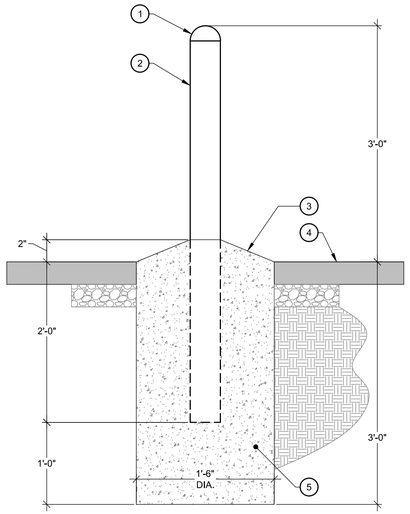
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ENLARGED SITE PLAN

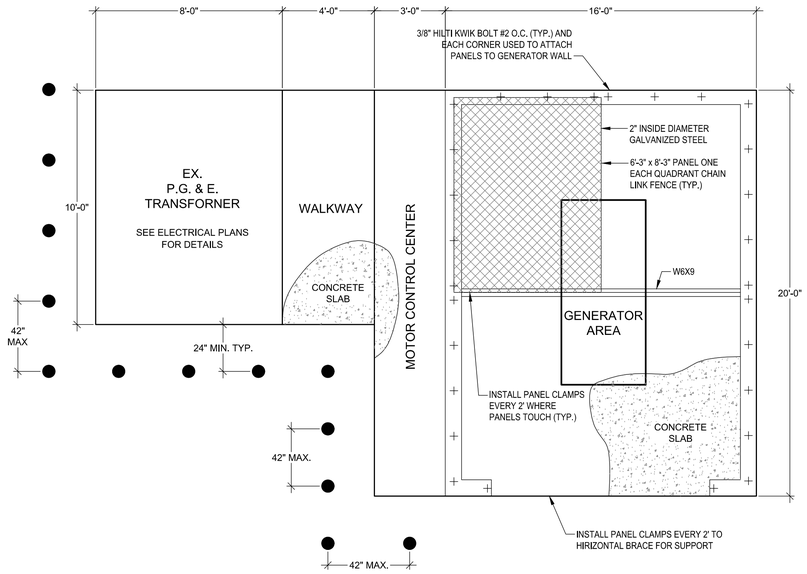
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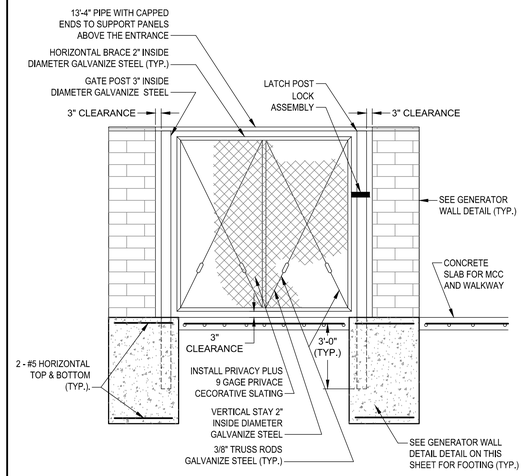


1. CONCRETE CAP.
2. 6" Ø STD. GALV. STEEL PIPE FILLED W/CONC. (APPLY TWO COATS YELLOW PAINT) MIN 0.188" WALL THK.
3. SLOPE CON. BASE.
4. GRAVEL OR PAVING.
5. CONCRETE FOOTING.

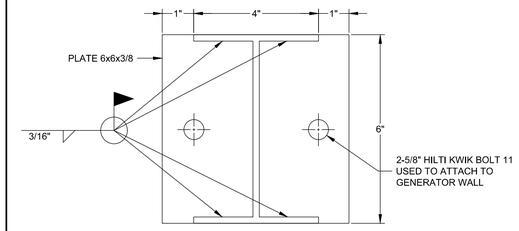
PIPE BOLLARD N.T.S 05



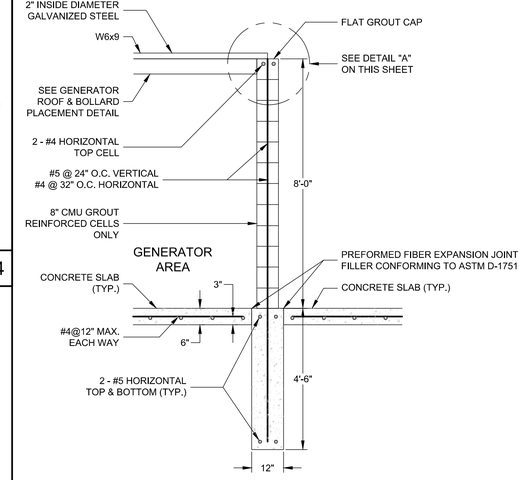
GENERATOR ROOF & BOLLARD PLACEMENT DETAIL N.T.S 03



GENERATOR GATE DETAIL N.T.S 01



DETAIL "A" N.T.S 04



GENERATOR WALL DETAIL N.T.S 02

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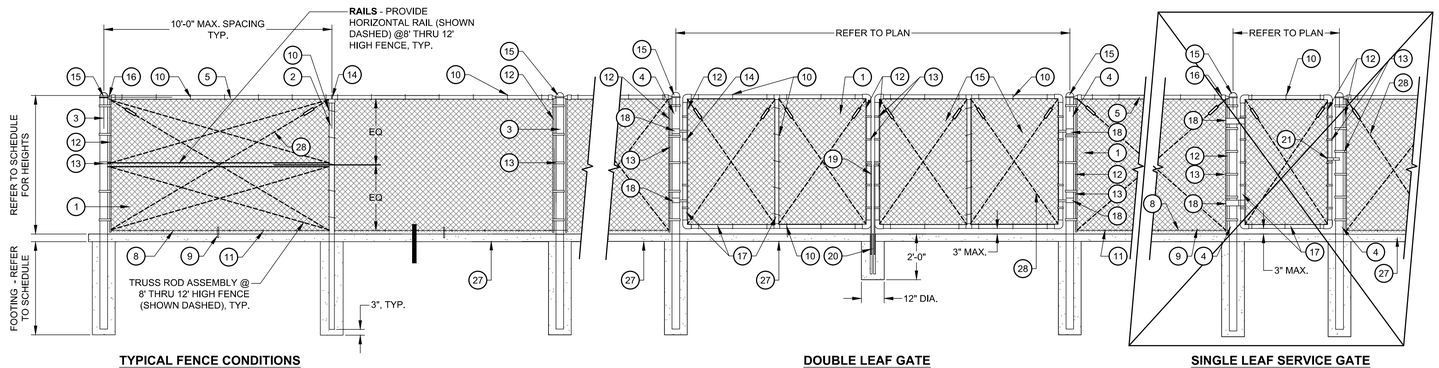
G6.0

CHAIN LINK POST AND FOOTING SCHEDULE				
MAX. FENCE HEIGHT	LINE POSTS		TERMINAL/CORNER POSTS	
	POST	FOOTING	POST	FOOTING
6'-0" TYP. UNLESS OTHERWISE NOTED	3/8" O.D.	10" DIA. x 3'-0" D.	2-7/8" O.D.	12" DIA. x 3'-6" D.
8'-0"	2-7/8" O.D.	14" DIA. x 3'-0" D.	3-1/2" O.D.	14" DIA. x 3'-6" D.

POST & FOOTING SIZES ARE MINIMAL UNLESS SPECIFICALLY DETAILED & NOTED OTHERWISE.

CHAIN LINK POST AND FOOTING SCHEDULE		
MAX. GATE LEAF WIDTH	GATE POST	POST FOOTINGS
3'-8" THRU 8'-0"	2-7/8" O.D.	12" DIA. x 3'-0" D.
8'-0" THRU 13'-0"	4" O.D.	18" DIA. x 4'-0" D.

GATE POSTS & FOOTING SIZES ARE MINIMUM UNLESS SPECIFICALLY DETAILED & NOTED OTHERWISE.
NOTE: WHEN TEMINAL POSTS ARE GREATER THAN GATE POSTS, USE TERMINAL POST & FOOTING SIZES FOR GATE POSTS.



TYPICAL FENCE CONDITIONS | **DOUBLE LEAF GATE** | **SINGLE LEAF SERVICE GATE**

NOTE: CONDITIONS SHOWN ARE CONSIDERED TYPICAL FOR CHAIN LINK FENCES UNLESS NOTED OTHERWISE.

LEGEND

1. **FABRIC -** 2" WIRE MESH, 9 GAUGE, KNUCKED SELVEDGE TOP & BOTTOM.
2. **POST -** LINE.
3. **POST -** TEMINAL / CORNER .
4. **POST -** GATE.
5. **RAILS -** TOP.
6. **RAILS -** HORIZONTAL.
7. **RAILS -** BRACES.
8. **TENSION WIRE -** 7 GAUGE, STEEL COLD DRAWN: ASTM A-82.
9. **HOOK BOLTS -** 60" ON CENTER.
10. **TIE WIRES:**
    A. TO LINE POSTS AT 16" ON CENTER.
    B. TO TOP RAIL, BRACE RAILS, & BOTTOM TENSION WIRE AT 18" ON CENTER.
11. **HOG RINGS -** TO BOTTOM TENSION WIRE AT 18" ON CENTER.
12. **TENSION BAR -** 3/16" x 3/4", MILD STEEL.
13. **TENSION BANDS -** AT 15" ON CENTER MAX.
14. **FITTINGS -** POST CAP, LINE.
15. **FITTINGS -** POST CAP, TERMINAL.
16. **FITTINGS -** TOP RAIL SLEEVES.
17. **GATES -** FRAME.
18. **GATES -** HARDWARE, HINGES, MALLEABLE IRON, DOUBLE CLAMPING, NON-LIFT-OFF, OFFSET TYP FOR 180E SWING.
19. **GATES -** HARDWARE, DOUBLE LEAF LATCH, CNETER DROP ROD OR PLUNGER BAR; WITH INTEGRAL PADLOCK EYES.
20. **GATES -** HARDWARE, STOP, FLUSH STEEL PIPE, WITH ANCHORS.
21. **SERVICE GATES -** HARDWARE, LEAF LATCH.
22. **GATES -** PIPE TRACK & BRACKET.
23. **GATES -** ROLLER ASSEMBLY.
24. **GATES -** WHEEL ASSEMBLY.
25. **GATES -** STEEL ANGLE TRACK (N/A).
26. **GATES -** GUIDE POST (N/A).
27. **MOW STRIP -** 20" WIDE BY 5-1/2" DEEP, CENTERED WITH FENCE.
28. **TRUSS ROD ASSEMBLY.**

FENCE DETAIL

N.T.S | 01

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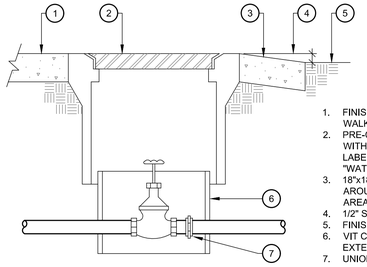
DETAILS

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PLUMBING FIXTURE SCHEDULE

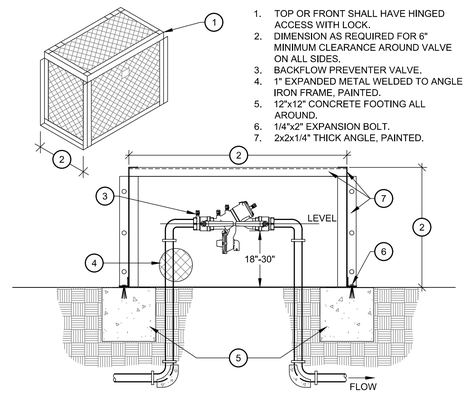
MARK	FIXTURE	S or W	V	CW	HW	DESCRIPTION
HB 1	HOSE BIBB (STANDPIPE)	--	--	3/4"	--	BRASS FAUCET, SHIELDED LOOSE KEY HANDLE, NON REMOVABLE VACUUM BREAKER, & ROUGH CHROME FINISH FOR OUTDOORS. WOODFORD Y24 AT STAND PIPES.
BP 1	BACKFLOW PREVENTER	--	--	--	2"	ZURN 975XL3, BRONZE REDUCED PRESSURE TYPE BACKFLOW PREVENTER.



1. FINISHED FLOOR OR SIDE WALK.
2. PRE-CAST CONCRETE BOX WITH CAST IRON COVER. LABEL THE COVER "WATER".
3. 18"x18" CAST CONC. AROUND IN UNPAVED AREA.
4. 1/2" SLOPE.
5. FINISHED GRADE.
6. VIT CLAY OR PVC EXTENSION SLEEVE
7. UNION

WATER SHUTOFF VALVE

N.T.S | 01



1. TOP OR FRONT SHALL HAVE HINGED ACCESS WITH LOCK.
2. DIMENSION AS REQUIRED FOR 6" MINIMUM CLEARANCE AROUND VALVE ON ALL SIDES.
3. BACKFLOW PREVENTER VALVE.
4. 1" EXPANDED METAL WELDED TO ANGLE IRON FRAME, PAINTED.
5. 12"x12" CONCRETE FOOTING ALL AROUND.
6. 1/4"x2" EXPANSION BOLT.
7. 2x2x1/4" THICK ANGLE, PAINTED.

CAGE FOR BACKFLOW PREVENTER

N.T.S | 02

GENERAL NOTES

1. SUPPORT AND BRACING OF ALL PIPING SHALL BE IN ACCORDANCE WITH 2022 C.B.C.
2. DRAINAGE PIPING SMALLER THAN 4" SHALL SLOPE 1/4" PER FOOT.
3. FOR PLUMBING FIXTURE MOUNTING HEIGHTS AND LOCATIONS, REFER TO ARCHITECTURAL DRAWINGS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PIPE ROUTING WITH WORK OF OTHER TRADES AND MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH DUCTWORK, LIGHT FIXTURES, SKYLIGHTS, ETC.
5. PLUMBING CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL GAS AND CONDENSATE DRAIN CONNECTIONS TO MECHANICAL EQUIPMENT.
6. ALL PIPE, PIPE OR PLUMBING FITTING OR FIXTURE, SOLDER, OR FLUX SHALL BE LEAD FREE THAT PROVIDES WATER FOR HUMAN CONSUMPTION PER CALIFORNIA ASSEMBLY BILL 1953.
7. GALVANIZED MALLEABLE IRON, GALVANIZED WROUGHT IRON, OR GALVANIZED STEEL ARE PROHIBITED MATERIALS FOR WATER SUPPLY AND BUILDING WATER PIPING BOTH UNDERGROUND AND IN BUILDINGS.

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRIC, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY THE CITY.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY THE CITY. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTION 13.6.5, 13.6.6, 13.6.7, AND 13.6.8; AND 2022 CBC, SECTION 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHOD IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP☐MD☐PP☒E☐ OPTION 1: PROJECT-SPECIFIC DESIGN.
MP☐MD☐PP☐E☐ OPTION 2: DESIGN BASED ON OSHPD OPM, WITHIN PROJECT SUBMITTAL.
MP☐MD☐PP☐E☐ OPTION 3: DESIGN BASED ON OSHPD OPM, DEFERRED APPROVAL.

SHEET INDEX

P0.1	PLUMBING SHEET INDEX, LEGEND, NOTES, SCHEDULE & DETAILS
P1.1	PLUMBING SITE PLAN

PLUMBING LEGEND

SYMBOL	ITEM	ABBR.
S 1	FIXTURE DESIGNATION UNIT ABBREVIATION NUMBER	
01 P-1	DETAIL DESIGNATION DETAIL NUMBER SHEET NO. WHERE SHOWN	
	DOMESTIC COLD WATER	CW
	DOMESTIC HOT WATER	HW
	DOMESTIC HW RETURN	HWR
	EXISTING PIPING	
	POINT OF CONNECTION	POC
C	CONDENSATE DRAIN	VCD
	SHUT-OFF VALVE IN BOX	SOV
	PIPING RISE	OBD
	PIPING DROP	BDD
S W	SOIL OR WASTE	S OR W
V	VENT	V
	VENT THRU ROOF	VTR
GW	GREASE WASTE	GW
AW	ACID WASTE	AW
AV	ACID VENT	AV
	ACID VENT THRU ROOF	AVTR
	FLOOR CLEANOUT	FCO
	CLEANOUT TO GRADE	COTG
	WALL CLEANOUT	WCO
	HOSE BIBB	HB
RD	ROOF DRAIN	RD
OD	OVERFLOW DRAIN	OD
	DOWN SPOUT	DS
	UNDERGROUND	UG
TP	TRAP PRIMER	TP
SD	STORM DRAIN	SD
(E)	EXISTING	EXIST.
(N)	NEW	NEW
	UNDERFLOOR	UF
	OVERHEAD	OH
R	RELIEF	
D	DRAIN	
	CONDENSATE DRAIN CLEANOUT	CO
SD	SECONDARY CONDENSATE DRAIN	
FC	FURNACE CONDENSATE	
	GAS SHUT OFF VALVE	GSOV
	SAFETY RELIEF VALVE	
	GATE VALVE	GV
	PLUG VALVE	
	BALL VALVE	
P	PRESSURE GAUGE	PG
	FIRE WALL PENETRATION	
	CONDENSATE DRAIN TRAP	CDT
LPG	LIQUIFIED PETROLEUM GAS	LPG
G	NATURAL GAS	G
	FIRE SPRINKLER RISER	FSR
FSL	FIRE SPRINKLER LINE	FSL
	FIRE DEPARTMENT CONNECTION	FDC
	FINISHED FLOOR	FF
	ABOVE FINISHED FLOOR	AFF
	ABOVE FINISHED GRADE	AFG
	CEILING	CLG
	CONTINUATION	CONT.
	DRAWING	DWG
	EACH	EA
	FEET	FT
	HORSEPOWER	HP
	INVERT ELEVATION	IVT
	KILOWATTS	KW
	MECHANICAL	MECH
	SQUARE FEET	SF
	TYPICAL	TYP
	WATER HAMMER ARRESTER	WHA
TF	TRANSFORMER WITH ACCESS PANEL	TF

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LODI UNIFIED SCHOOL DISTRICT
McNAIR HIGH SCHOOL
9550 Ronald E. McNair Way
Stockton, CA 95210

LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 10/28/2025
DRAWN BY: CAL CHKED BY: G.L.

REVISIONS

#	DESCRIPTION	DATE

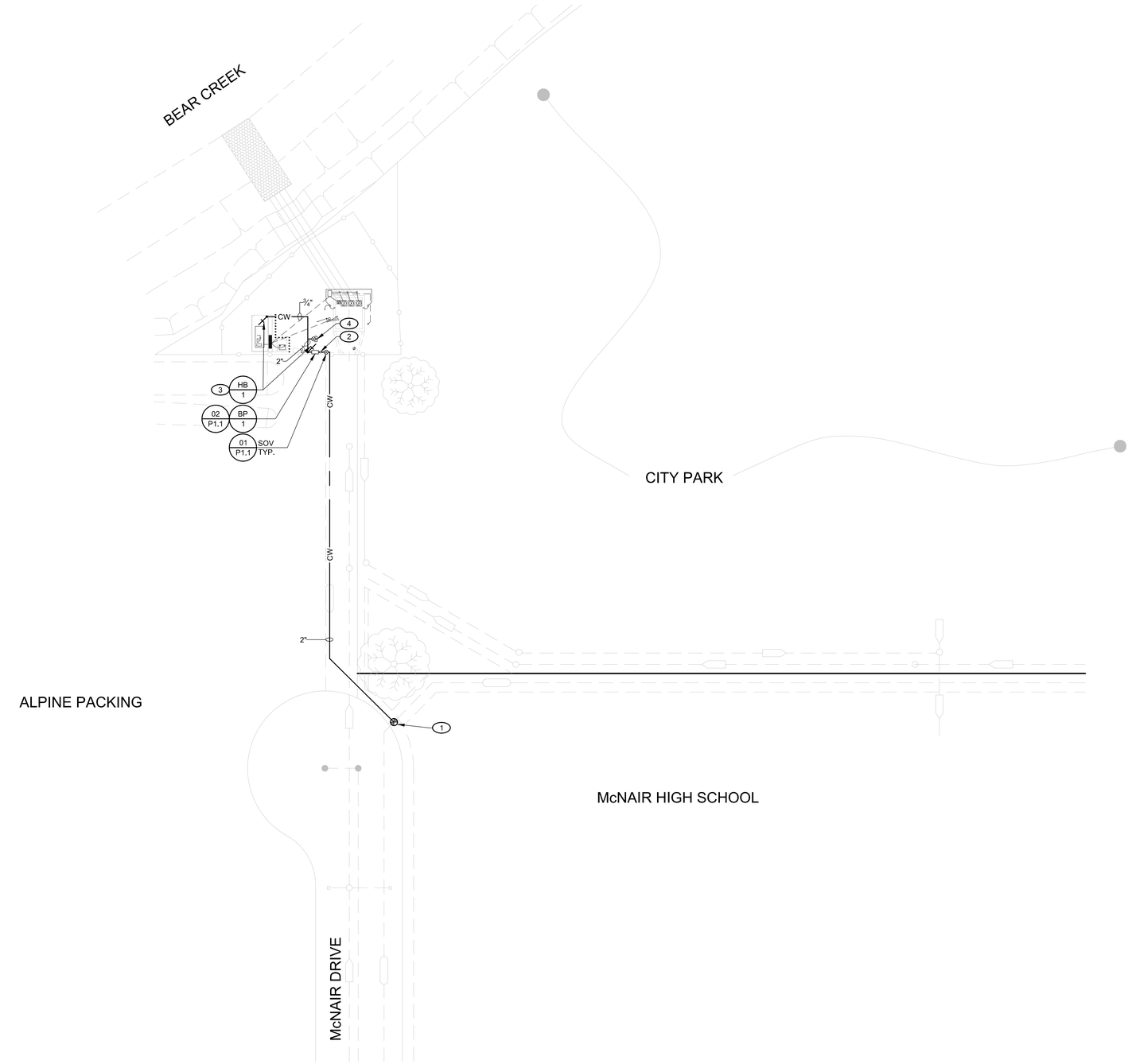
CITY SUBMITTAL

PLUMBING SHEET INDEX, LEGEND, NOTES, SCHEDULE & DETAILS

P0.1

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P1.1 PLUMBING SITE PLAN



1 PLUMBING SITE PLAN
SCALE: 1" = 50'-0"

KEYNOTES

1. POC (N) 2" CW TO (E) CW IN STREET. CONNECT TO CITY MAIN PER CITY OF STOCKTON REQUIREMENTS.
2. 2" WATER METER PER CITY OF STOCKTON STANDARDS.
3. ROUTE 3/4" CW UP TO HOSE BIBB. MOUNT HOSE BIBB A MINIMUM OF 18" ABOVE FINISHED GRADE.
4. STUB AND CAP 2" CW WITH SOV BELOW GRADE FOR FUTURE CONNECTION.

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ELECTRICAL NOTES

MEP COMPONENT ANCHORAGE NOTES

1. ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30:

   A. ALL PERMANENT EQUIPMENT AND COMPONENTS.

   B. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRIC, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.

   C. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

2. THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

   A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

   B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

3. THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

UL LISTINGS NOTE

ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITER'S LABORATIES (UL) AND BEAR THEIR LABEL OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY.

ALL EQUIPMENT/DEVICES INSTALLED RECESSED IN FIRE RATED CEILINGS OR WALLS SHALL BE ENCLOSED WITH AN APPROVED UL LISTED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING OR WALL.

DEVICE LOCATION NOTE

THE LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TOINSTALLATIONS. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED INWALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN, UNLESS OTHERWISE NOTED. ELECTRICAL DEVICES SHALL BE MOUNTED PER "ACCESSIBLE DEVICE MOUNTING HEIGHT" DETAIL.

COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT SUPPLY POWER AND MAKE CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM, ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES. REVIEW THE DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT. DISCONNECT SWITCHES, STARTERS, WIRING, CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS SHALL BE PROVIDED THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT.

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK, AND SHALL COMPLY WITH ALL AUTHORITIES HAVING JURISDICTION, CEC, ALL STATE AND LOCAL CODES AND AMENDMENT.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS AND ADDENDA (DRAWINGS AND SPECIFICATIONS.) HE SHALL CHECK THE CONTRACT DOCUMENTS OF THE OTHER TRADES AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM COMPLETING ALL RESPONSIBLE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.
4. ALL ELECTRICAL WORK REFERENCED HEREIN SHALL BE COORDINATED WITH OTHER TRADES AND SITE CONDITIONS. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE CONTRACT DOCUMENTS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
5. AND COMMUNICATIONS SYSTEMS BEING DISCONNECTED TO MAINTAIN SYSTEMS IN OPERATION.
6. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER, WHEN AN INTERRUPTION THE OUTAGE, AND OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID. WORK IN EXISTING SWITCHBOARDS OR PANEL BOARDS SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVING ACCESS PANELS OR DOORS.
7. AFTER ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNERS WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.
8. FURNISH A ONE-YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF PUNCH LIST COMPLETION.
9. ALL FINAL CONNECTIONS TO OWNER-FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.
10. THE EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE OR MASONRY WALLS, GRADE BEAMS, FLOORS, OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAW CUTTING, PATCHING, AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR, OR CEILING. THE EXACT METHOD AND LOCATION OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL APPROVED.
11. FINAL CONNECTIONS TO VIBRATING EQUIPMENT AND AT SEISMIC SEPARATIONS SHALL BE FLEXIBLE STEEL CONDUIT IN DRY INTERIOR LOCATIONS, AND LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN AREAS EXPOSED TO WEATHER, DAMP LOCATIONS, CONNECTIONS TO TRANSFORMER ENCLOSURES, AND FINAL CONNECTIONS TO MOTORS.
12. EQUIPMENT OUTLETS, LIGHTING FIXTURES, CONDUIT, WIRE, AND CONNECTION METHODS IN HVAC AIR PLENUMS SHALL BE APPROVED FOR USE IN PLENUMS AND SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE.
13. TO WALLS AND ADJACENT PIPING. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.
14. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE, CONCEALED WALLS, OR 24" MINIMUM BELOW SLAB ON GRADE UNLESS NOTED OTHERWISE.
15. LOCATE ELECTRICAL EQUIPMENT AND BOXES IN ACCESSIBLE CEILING SPACE OR PROVIDE AN ACCESS PANEL FOR INACCESSIBLE CEILING SYSTEMS. ACCESS DOORS SHALL BE A MINIMUM DIMENSION OF 24" X 24". ACCESS DOOR LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.
16. COORDINATE REQUIRED ACCESS DOORS IN NON-ACCESSIBLE CEILINGS TO SUIT FIELD CONDITIONS. THE EXACT SHALL BE PROVIDED IN OTHER SECTIONS OF THE SPECIFICATIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.
17. WHENEVER A DISCREPANCY OF ANY SYSTEM AND/OR EQUIPMENT ARISES ON THE CONTRACT DOCUMENTS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT/ENGINEER.
18. STRAIGHT FEEDER BRANCH CIRCUIT AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS.
19. PANEL SCHEDULES SHALL BE REVISED TO REFLECT FINAL ROOM NAMES AND NUMBERS USING THE OWNER ROOM NAMES AND NUMBERS DESIGNATIONS. CONTRACTOR TO PROVIDE FINAL PANEL SCHEDULE TO EEOR AT COMPLETION OF PROJECT.
20. WHERE OUTLETS OCCUR AT TACKABLE WALL PANELS OR OTHER WALL FINISHES, PROVIDE EXTENSION RINGS AS REQUIRED SO THAT NO SPACE WILL EXIST BETWEEN DEVICE PLATE AND BACKBOX PER CALIFORNIA ELECTRICAL CODE 314.20. SEE ARCHITECTURAL ELEVATIONS FOR WALL FINISHES AND LOCATIONS.
21. COORDINATE LOCATIONS OF ALL SEISMIC SEPARATIONS.
22. ALL 120V POWER REQUIRED FOR THE FUNCTIONALITY OF ALL LOW VOLTAGE / TECHNOLOGY SYSTEMS SHALL BE A DEDICATED CIRCUIT AND ON EMERGENCY POWER WHEN AVAILABLE. CABLING CONTRACTOR SHALL COORDINATE ALL 120V POWER REQUIREMENTS AND LOCATIONS WITH ELECTRICAL CONTRACTOR FOR ALL EQUIPMENT.
23. ALL AC POWER CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM TECHNOLOGY LOW VOLTAGE CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
24. THROUGH RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.
25. CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
26. ALL CONDUCTORS SHALL BE UL LISTED, COPPER #12 MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY, UNLESS NOTED OTHERWISE.
27. ALL CABLING SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH MAXIMUM 40% CABLE FILL. MINIMUM CONDUIT SIZE SHALL BE 3/4" INTERIOR & 1" EXTERIOR.
28. ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE ACCEPTED.
29. COORDINATE MOUNTING HEIGHTS AND DETAILS OF ALL OUTLETS (POWER, SIGNAL, ETC.) WITH ARCHITECTURAL CASEWORK DRAWINGS PRIOR TO DIVISION 26 ROUGH-IN. PROVIDE COORDINATION DRAWINGS IN ACCORDANCE WITH DIVISION 26 SPECIFICATIONS WHERE CONFLICTS EXIST. OBTAIN APPROVAL FROM ARCHITECT BEFORE ELECTRICAL ROUGH-IN WHEN CONFLICTS ARISE.
30. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF ALL HVAC AND PLUMBING EQUIPMENT.
31. CIRCUITING:
   A. BRANCH CIRCUITING IS SCHEMATIC IN NATURE AND IS INTENDED TO INDICATE CIRCUIT LOADING AND CONTROL, NOT METHODS OF INSTALLATION. REFER TO SPECIFICATIONS FOR METHODS OF INSTALLATION AND MATERIALS, INCLUDING WHETHER OR NOT BX IS ALLOWED AND WHETHER "THROUGH-FIXTURE" OR"OCTOPUS (EMT WITH FLEXIBLE WHIPS)" TYPE LIGHTING BRANCH CIRCUITING IS REQUIRED.
   B. WHERE WIRE SIZE AND CONDUIT SIZE IS NOT INDICATED ON THE DRAWINGS AND/OR PANEL SCHEDULES, REFER TO SPECIFICATIONS FOR MINIMUM SIZE REQUIRED.
   C. BRANCH CIRCUITS ON THE DRAWINGS ARE GENERALLY NOT SHOWN GROUPED IN SINGLE RACEWAYS. HOWEVER, GROUPING IS ALLOWED UNDER CERTAIN CONDITIONS. REFER TO DIVISION 26 SPECIFICATIONS UNDER SECTION ENTITLED "ELECTRICAL WIRING" FOR REQUIREMENTS.
   D. THE DRAWINGS GENERALLY INDICATE QUANTITY OF CONDUCTORS ON BRANCH CIRCUIT HOME RUNS ONLY. ELSEWHERE WITHIN CIRCUITS, PROVIDE QUANTITY OF CONDUCTORS AS NEEDED TO ACCOMPLISH CIRCUITING AND SWITCHING REQUIREMENTS SHOWN.
32. WHEN REMOVING EXISTING ELECTRICAL WORK WHERE OTHER ITEMS REMAIN ON THE SAME CIRCUIT, THE CONTRACTOR SHALL TAKE WHATEVER STEPS ARE NECESSARY TO MAINTAIN CIRCUIT CONTINUITY.
33. ALL ITEMS NOTED TO BE REMOVED ARE TO REMAIN THE PROPERTY OF THE OWNER; HOWEVER, CONTRACTOR. SHALL REMOVE FROM JOB SITE ALL MATERIAL NOT RETAINED BY OWNER.
34. FIELD VERIFY CONDITION OF, AND MODIFICATIONS AND ADDITIONS TO, ALL EXISTING ELECTRICAL FIXTURES, PANELS, WIRING, ETC.
35. CONTRACTOR SHALL FIELD VERIFY EXISTING BRANCH CIRCUIT LOADING WHEN MAKING MODIFICATIONS AND/OR ADDITIONS TO THAT CIRCUIT. IF NEW WORK WOULD OVERLOAD EXISTING CIRCUIT, CONTRACTOR SHALL LOCATE ANOTHER EXISTING CIRCUIT (THE CLOSEST), WHICH WOULD NOT BE OVERLOADED UPON ADDING NEW LOAD, AND SHALL TIE NEW LOAD INTO THAT CIRCUIT.
36. CONTRACTOR TO REFER TO ARCHITECTURAL PHASING PLANS AND HAVE A GOOD UNDERSTANDING OF SCOPE OF PROJECT PRIOR TO COMMENCEMENT OF WORK.
37. LUMINAIRE SUPPORT IN SUSPENDED CEILINGS:
   A. PROVIDE MEANS OF SUPPORT FOR LUMINAIRES PER NEC 410-16. T BAR CLIPS SHALL BE INSTALLED ON A. THE LUMINAIRE AND SHALL BE FIELD SECURED TO THE INVERTED CEILING TEES SO THAT THE LUMINAIRE IS SECURELY FASTENED TO THE CEILING SYSTEM FRAMING MEMBERS.
   B. CEILING TILES SHALL NOT BEAR THE WEIGHT OF LUMINAIRES. SURFACE MOUNT LUMINAIRES, RECESSED DOWNLIGHTS, LIGHT TRACK, EXIT SIGN, ETC. SHALL BE SUPPORTED BY PROPER FRAMES OR OTHER ATTACHMENT TO MAIN CEILING SYSTEM GRID OR BUILDING STRUCTURE ABOVE CEILING.
   C. LUMINAIRES SHALL BE CENTERED IN CEILING TILE.
   D. LUMINAIRE SHALL HAVE FLANGE OR TRIM RING FOR CLOSURE OF CEILING CUTOUT OR OPENING.
   E. FIRE -RATED CEILING ASSEMBLY: FOR LUMINAIRES TO BE FLUSH-MOUNTED INTO A FIRE-RATED CEILING OR SURFACE MOUNTED TO A FIRE-RATED CEILING, INSTALL WITH INDEPENDENT, SECURE SUPPORT. RACEWAY, CABLE ASSEMBLIES, BOXES AND FITTINGS LOCATED ABOVE A FIRE-RATED FLOOR/CEILING OR ROOF CEILING ASSEMBLY SHALL NOT BE SECURED TO, OR SUPPORTED BY, THE CEILING ASSEMBLY INCLUDING THE CEILING SUPPORT WIRES. PROVIDE AN INDEPENDENT MEANS OF SECURE SUPPORT. INDEPENDENT SUPPORT WIRES SHALL BE DISTINGUISHABLE BY COLOR, TAGGING, OR OTHER EFFECTIVE MEANS FROM THOSE THAT ARE PART OF THE FIRE-RATED DESIGN.
38. CONTRACTOR SHALL FIELD VERIFY ANY EXISTING UNDERGROUND PIPING, WIRING OR OTHER FACILITIES PRIOR TO TRENCHING, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY INSTALLATION OF NEW WORK.

ELECTRICAL SHEET INDEX

E0.1	ELECTRICAL SHEET INDEX & NOTES
E0.2	ELECTRICAL LEGENDS
E1.1	ELECTRICAL SITE PLAN
E1.2	ELECTRICAL ENLARGED SITE PLAN
E5.1	ELECTRICAL SINGLE LINE DIAGRAM
E6.1	ELECTRICAL DETAILS

LIST OF APPLICABLE CODES

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 1

2022 CALIFORNIA BUILDING CODE (CBC)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2, VOLUME 1 & 2

2022 CALIFORNIA ELECTRICAL CODE (CEC)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 3

2022 CALIFORNIA ENERGY CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 6

2022 CALIFORNIA FIRE CODE (CFC)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 9

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSC)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11

2022 NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE
WITH CA AMENDMENTS

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MP ☐MD ☐PP ☐E ☐ OPTION 3: DESIGN BASED ON OSHPD OPM, DEFERRED SUBMITTAL.

UTILITY PENETRATION NOTE

UTILITY PENETRATIONS OF ANY KIND IN FIRE AND SMOKE PARTITIONS AND CEILING ASSEMBLIESSHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED UL LISTED SYSTEM OR MATERIAL. STEEL ELECTRICAL OUTLET BOXES WHICH DO NOT EXCEED 16 SQUARE INCHES IN AREA, NEED NOT BE PROTECTED IN ONE HOUR OR TWO HOUR FIRE RATED WALLS, PARTITIONS, CEILING, OR AREASEPARATION UNLESS THEY:

1. OCCUR ON OPPOSITE SIDES OF THE WALL WITHIN 24 INCH HORIZONTAL DISTANCE OF ONE ANOTHER IN THIS CASE , ONLY ONE OUTLET BOX NEEDS TO BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL OR DETAIL TO CORRECT THIS CONDITION.
2. OCCUR IN COMBINATION WITH OUTLET BOXES OF ANY SIZE SUCH THAT THE AGGREGATE AREA OF UNPROTECTED OUTLET BOXES EXCEEDS 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA IN THIS CASE, ONLY A SUFFICIENT NUMBER OF OUTLET BOXES NEED TO BE PROTECTED BY AN APPROVED MATERIAL OR DETAIL TO DECREASE THE AGGREGATE AREA OF UNPROTECTED UTILITY BOXES TO LESS THAN 100 SQUARE FEET OF WALL.

STEEL ELECTRICAL OUTLET BOXES WHICH EXCEED 16 SQUARE INCHES IN AREA, AND ALL OTHER STEEL UTILITY OUTLET BOXES REGARDLESS OF SIZE, SHALL BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL AS LISTED OR EQUAL.
FIRESTOPPING MATERIAL: MPP-1 MOLDABLE PUTTY PADS
3M CONTRACTOR PRODUCTS
MINNEAPOLIS, MN
3M TEST REPORT NO. 1167
DATED AUGUST 21, 1987

FLAMESAFE FSP 1077 FIRESTOP PADS
INTERNATIONAL PROTECTIVE COATINGS
OAKHURST, NJ

FSP FIRESTOP PUTTY PADS
HEVI-DUTY NELSON PRODUCTS
TULSA, OK

STEEL UTILITY BOXES WHICH EXCEED 100 SQUARE INCHES IN AREA SHALL BE PROTECTED BY ENCASEMENT.

UTILITY AND ELECTRICAL OUTLETS OR BOXES SHALL BE SECURELY FASTENED TO THE STUD FRAMING OF THE WALL, PARTITION OR CEILING ASSEMBLY, THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT SO THAT THE CLEARANCE BETWEEN THE BOX AND THE GYPSUM BOARD DOES NOT EXCEED 1/8 INCH IN SMOKE WALLS OR PARTITIONS, THE 1/8 INCH CLEARANCE SHALL BE FILLED WITH AN APPROVED FIRE-RATED SEALANT.

DIAGRAMMATIC NOTE

DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE DETAILED CONDUIT ROUTING OR LENGTHS REQUIRED FOR COMPLETE INSTALLATION. ROUTING OF RACEWAYSSHALL BE AT THE OPTION OF THE CONTRACTOR BUT SHALL BE IN STRICT COMPLIANCE WITH STRUCTURAL REQUIREMENTS, CONTRACT DOCUMENTS AND SPECS UNLESS OTHERWISE NOTED. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS ANY ELECTRICAL ARCHITECTURAL, STRUCTURAL AND/OR MECHANICAL ITEMS OR FEATURES, REFER ARCHITECTURAL AND STRUCTURAL CONTRACT DOCUMENTS TO FEATURES, REFERTO ARCHITECTURAL AND STRUCTURAL FOR DOCUMENTS FOR DIMENSIONS. CONTRACT

STRUCTURAL NOTE

UNLESS SPECIFICALLY SHOWN ON THESE PLANS. STRUCTURAL MEMBERS SHALL NOT BE CUT. DRILLED, OR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT.

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LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 10/28/2025
DRAWN BY: KG CHKED BY: SM

REVISIONS

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ELECTRICAL SHEET INDEX & NOTES

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E0.1

ELECTRICAL SYMBOL LEGENDS

SYMBOLS SHOWN ON LEGENDS MAY NOT APPEAR ON DRAWINGS

ELECTRICAL ABBREVIATIONS

A OR AMP	AMPERES	LTG	LIGHTING
ABV	ABOVE	LV	LOW VOLTAGE
AFF	OBOVE FINISHED FLOOR	MAX	MAXIMUM
AFG	OBOVE FINISH GRADE	MCA	MINIMUM CIRCUIT AMPS
AIC	AMPERE INTERRUPTING CAPACITY	MCC	MOTOR CONTROL CENTER
AL	ALUMINUM	MFR	MANUFACTURER
AS	DISCONNECT SWITCH SIZE RATING	MH	MANHOLE
ATS	AUTOMATIC TRANSFER SWITCH	MOCP	MAXIMUM OVERCURRENT PROTECTION
AUX	AUXILIARY	MTD	MOUNTED
AWG	AMERICAN WIRE GAUGE	MTG	MOUNTING
B.S.	BARE STRANDED	MV	MEDIUM VOLTAGE
BKBD	BACKBOARD	NAC	NOTIFICATION APPLIANCE CIRCUIT
BDR	BREAKER	NC	NORMALLY CLOSED
BLDG	BUILDING	NEC	NATIONAL ELECTRICAL CODE
C	CONDUIT	NF	NON-FUSED
C.O.	CONDUIT ONLY WITH PULL WIRE	NIC	NOT IN CONTRACT
CB	CIRCUIT BREAKER	NO.	NUMBER
CKT	CIRCUIT	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMETER
CLG.	CEILING	PB	PULL BOX
COL	COLUMN	PC	PHOTOCELL
CU	COPPER	PH OR Ø	PHASE
DIS	DISCONNECT	PIV	POST INDICATING VALVE
DP	DISTRIBUTION PANEL	PNL	PANEL
DWG	DRAWING	POC	POINT OF CONNCETION
EA	EACH	PRI.	PRIMARY
ELEC.	ELECTRICAL	PVC	POLY-VINYL CHLORIDE
EMH	ELECTRICAL MANHOLE	PWR	POWER
EMT	ELECTRICAL METALLIC TUBING	REC/ RECEPT	RECEPTACLE
EPO	EMERGENCY POWER OFF	REQ'D	REQUIRED
EQ	EQUIPMENT	RGS	RIGID GALVANIZED STEEL
FA	FIRE ALARM	RPBP	REDUCED PRESSURE BACK FLOW PREVENTER
FACP	FIRE ALARM CONTROL PANEL	SF	SQUARE FEET
FATC	FIRE ALARM TERMINAL CABINET	SP	SPARE
FF	FINISHED FLOOR	SPECS	SPECIFICATIONS
FLA	FULL LOAD AMPS	STD	STANDARD
FO	FIBER OPTIC	SW	SWITCH
FT	FEET	SWBD	SWITCHBOARD
GFI	GROUND FAULT INTERRUPTER	TB	TERMINAL BLOCK
GFR	GROUND FAULT RELAY	TEL./TELE	TELEPHONE
GND	GROUND	TPS	TWISTED SHIELDED PAIR
HP	HORSEPOWER	TRANSF/ XFMR	TRANSFORMER
HTR	HEATER	TS	TAMPER SWITCH
HV	HIGH VOLTAGE	TYP	TYPICAL
ISC	SHORT CIRCUIT CURRENT	UG	UNDERGROUND
KCMIL	THOUSAND CIRCULAR MILS	UNO	UNLESS NOTED OTHERWISE
KV	KILOVOLT	V	VOLTS
KVA	KILOVOLT-AMPERES	VA	VOLT-AMPERES
KW	KILOWATT	VFD	VARIABLE FREQUENCY DRIVE
LF	LINEAR FEET	W	WATTS
LIS	LOAD INTERRUPTER SWITCH	WP	WEATHERPROOF
LOC.	LOCATION	Z	INPEDANCE

SHEET OR DETAIL REFERENCE
-NUMBER ON TOP INDICATES DETAIL NUMBER
-NUMBER ON BOTTOM INDICATES SHEET NUMBER

MECHANICAL EQUIPMENT CALLOUT
SEE MECHANICAL PLANS FOR EXACT LOCATION AND REQUIREMENTS.

KEY NOTE

CIRCUITING

ARROW INDICATES HOME RUN, LONGER TICK(S) INDICATE NEUTRAL WIRE(S), SHORTER STRAIGHT TICK(S) INDICATE PHASE WIRE(S), SLANTED SHORTER TICK(S) INDICATE SWITCH LEG(S), DOT(S) INDICATE GROUNDING CONDUCTOR(S), DASHED WIRING (LONG-SHORT-LONG DASHES) INDICATES WIRING BELOW SLAB OR GRADE, DASHED WIRING (SERIES OF SHORT DASHES) INDICATES EXISTING WIRING, SLASH THROUGH ARROWINDICATES PARTIAL CIRCUIT, "D" ON HOMERUN ARROW INDICATES DEDICATED CIRCUIT:

PROVIDE A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR FOR ENTIRE LENGTH OF CIRCUIT FROM PANEL TO OUTLET; COUNT EACH NEUTRAL AS CURRENT-CARRYING AND GROUP A MAXIMUM OF SIX THHN/THWN CONDUCTORS IN A SINGLE RACEWAY; GROUNDING CONDUCTOR IS NOT COUNTED.

LC1-X — LIGHTING CIRCUIT DESIGNATION FOR SPACE, U.N.O.

LC1-X — CIRCUIT DESIGNATION NEXT TO RECEPTACLE DEVICES INDICATES BRANCH CIRCUIT NUMBER. SEE PANEL SCHEDULES FOR INFORMATION.

+42" — A NOTATION INDICATING THE MOUNTING HEIGHT OF A DEVICE AS MEASURED FROM FINISHED FLOOR OR GRADE TO CENTER LINE OF DEVICE

ELECTRICAL DEVICES & EQUIPMENT

- JUNCION BOX
- 20A MOTOR-RATED TOGGLE SWITCH
- 20A-125V DUPLEX RECEPTACLE
- 20A-125V GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
- 20A-125V DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP
- 20A-125V CONTROLLED PLUG-LOAD DUPLEX RECEPTACLE
- 20A-125V ISOLATED GROUND TYPE DUPLEX RECEPTACLE
- 20A-125V DUPLEX TAMPER RESISTANT RECEPTACLE WITH (2) USB CHARGING PORTS
- 20A-125V FOURPLEX RECEPTACLE (SAME SYMBOLOGY TYPES AS DUPLEX RECEPTACLE)
- SPECIAL PURPOSE SINGLE POWER RECEPTACLE. RATED AS INDICATED (IF NO RATING INDICATED, RECEPTACLE RATING SHALL MATCH BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE AND SHALL MEET REQUIREMENTS OF EQUIPMENT BEING CONNECTED)
- 20A-125V FLUSH FLOOR DUPLEX RECEPTACLE
- 20A-125V CEILING MOUNTED DUPLEX RECEPTACLE
- BELL
- EMERGENCY POWER OFF (EPO)
- PUSHBUTTON
- DISCONNECT SWITCH. DISCONNECT SWITCHES SHALL BE 30/NF/3 UON. NF = NON-FUSIBLE, NEMA 1 ENCLOSURE. PROVIDE FUSED BUSWAY PLUG WHEN SWITCH IS INDICATED ON BUSWAY.
- TRANSFORMER
- PANELBOARD
- SWITCHBOARD OR DISTRIBUTION PANELBOARD
- PHOTOVOLTAIC SOLAR PANEL

LIGHTING FIXTURES

EMERGENCY	NORMAL	
		LED 2'x2' FIXTURE
		LED 2'x4' FIXTURE
		LED LINEAR FIXTURE (SURFACE/RECESSED/SUSPENDED)
		LED STRIP FIXTURE
		LED DOWNLIGHT (ROUND)
		LED DOWNLIGHT (SQUARE)
		LED INDOOR WALL SCONCE FIXTURE
		LED WALL MOUNTED FIXTURE
		LED OUTDOOR PEDESTRIAN STYLE POST-TOP AREA FIXTURE
		LED OUTDOOR ARM MOUNT AREA FIXTURE
		SPORTS LIGHTING FIXTURE
		LED ACCENT SPOT LIGHT
		EMERGENCY EXIT LIGHT SIGN. REFER TO LIGHTING PLAN FOR NUMBER OF FACES AND DIRECTIONAL ARROWS

FIXTURE TYPE DESIGNATION → A
PANEL AND CIRCUIT NUMBER → LC1-X
SWITCHLEG CONTROL IDENTIFICATION → a

REFER TO LIGHT FIXTURE SCHEDULE FOR MANUFACTURER ORDER NUMBERS

SINGLE LINE DIAGRAM

- L1A — PANELBOARD
- AUTOMATIC TRANSFER SWITCH
- CIRCUIT BREAKER (FUSED TYPE)
- CIRCUIT BREAKER
- GF — GROUND FAULT CIRCUIT BREAKER
- M — METER
- TRANSFORMER
- ECM — ELECTRIC CIRCUIT MONITOR
- COMBINATION MOTOR-STARTER
- DISCONNECT SWITCH W/COMBINATION MOTOR-STARTER
- F — DISCONNECT SWITCH - FUSED
- DISCONNECT SWITCH
- ECM — ELECTRIC CIRCUIT MONITOR
- SPD — SURGE PROTECTIVE DEVICE
- MOTOR
- TAP
- POINT OF CONNECTION
- CONTINUATION LINE
- G — GENERATOR
- GROUND

RENOVATION WORK

EXISTING WORK SHALL BE SHOWN LIGHT - NEW WORK SHALL BE SHOWN DARK

- (E) (E) — EXISTING TO REMAIN
- (R) (R) — EXISTING SHALL BE DEMOLISHED AND REMOVED.
- (ER) (ER) — EQUIPMENT WITH "ER" ADJACENT IS RELOCATED EQUIPMENT SHOWN IN NEW LOCATION.
- (RR) (RR) — EXISTING EQUIPMENT WITH "RR" ADJACENT IS TO BE DISCONNECTED, REMOVED AND RELOCATED TO NEW LOCATION AND RECONNECTED AS REQUIRED.
- NO TAG INDICATES NEW EQUIPMENT.

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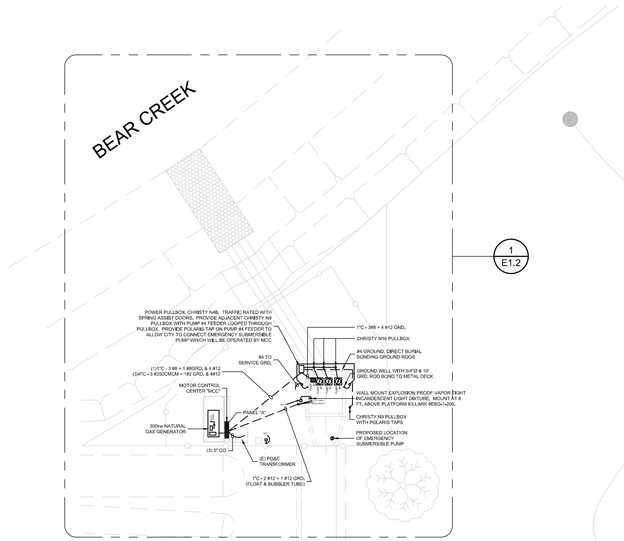
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ELECTRICAL LEGENDS

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E0.2



1 ELECTRICALSITE PLAN
SCALE: 1" = 50'-0"

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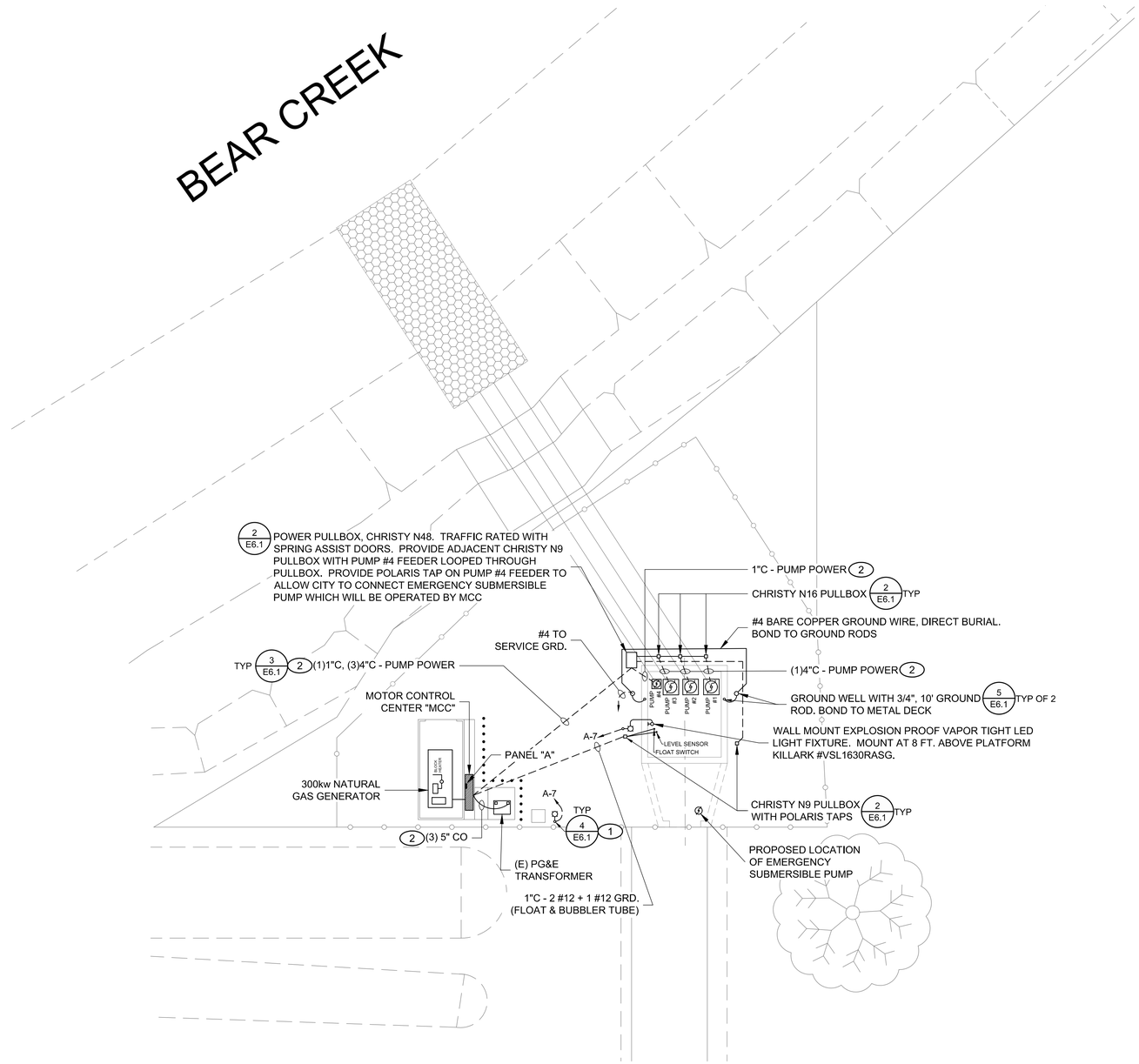
ELECTRICAL SITE PLAN

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E1.1

KEYNOTES

1. PROVIDE POLE MOUNTED FLOOD LIGHT FIXTURE, 'LITHONIA' MODEL #: DSX F2 P2 40K 70CRI WFL MVOLT IS PE DDBXD. FIXTURE MOUNTING HEIGHT TO BE 10' AFG.
2. SEE SINLGE LINE FOR FEEDER SIZES AND QUANTITIES.



1 ELECTRICAL ENLARGED SITE PLAN
SCALE: 1" = 20'-0"

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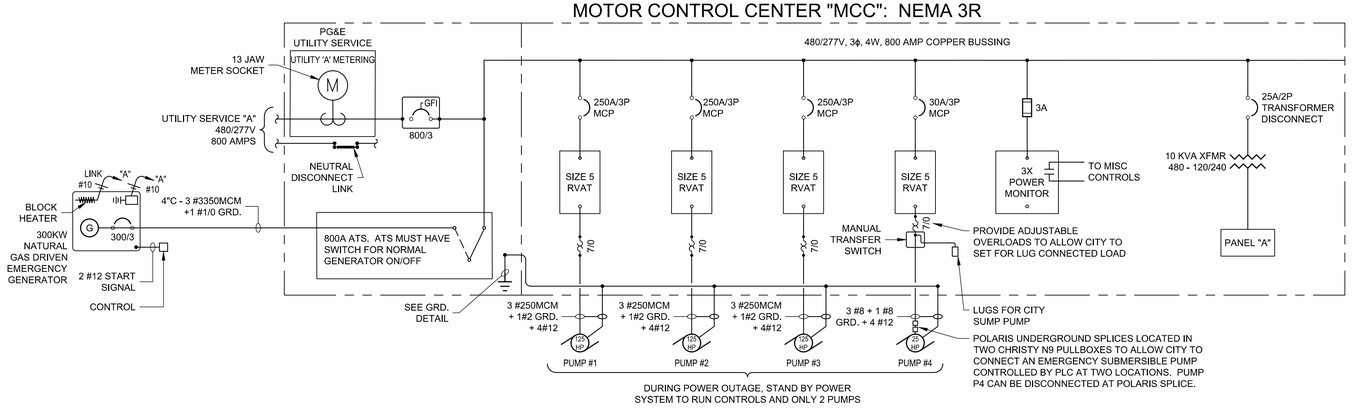
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ELECTRICAL ENLARGED SITE PLAN

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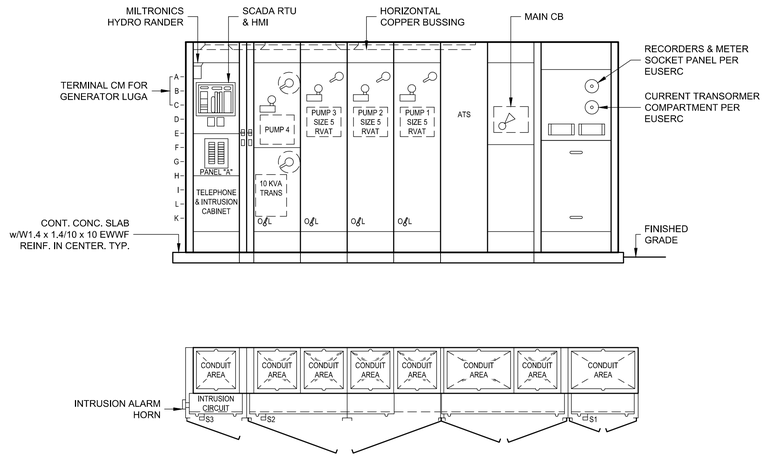
MOTOR CONTROL CENTER "MCC": NEMA 3R



NEW PANEL: A — ENCLOSURE: NEMA 3 — OPTIONS: HINGED COVER
VOLTAGE: 208Y/120V 3PH 4W — MOUNTING: IN 'MCC' — MAIN: 50A MCB

LOAD	VA	BKR	CIR	CIR	BKR	VA	LOAD
MCC LIGHTS	--	20/1	1	2	20/1	--	SCAD
MCC RECEPTACLES	--	20/1	3	4	20/1	--	INTRUSION ALARM
MCC HEATERS	--	20/1	5	6	20/1	--	LEVEL TRANSDUCER
SITE LIGHTS	--	20/1	7	8	20/1	--	SPARE
SITE LIGHTS	--	20/1	9	10	20/1	--	SITE LIGHTS
BATTERY CHARGER	--	20/1	11	12	20/1	--	SUMP LIGHTS
SPARE	--	20/1	13	14	20/1	--	SPARE
SPARE	--	20/1	15	16	20/1	--	SPARE
BLOCK HEATER	--	20/1	17	18	20/1	--	SPARE
SPACE	--	--	19	20	--	--	SPACE
SPACE	--	--	21	22	--	--	SPACE
SPACE	--	--	23	24	--	--	SPACE
SPACE	--	--	25	26	--	--	SPACE
SPACE	--	--	27	28	--	--	SPACE
SPACE	--	--	29	30	--	--	SPACE
SPACE	--	--	31	32	--	--	SPACE
SPACE	--	--	33	34	--	--	SPACE
SPACE	--	--	35	36	--	--	SPACE
SPACE	--	--	37	38	--	--	SPACE
SPACE	--	--	39	40	--	--	SPACE
SPACE	--	--	41	42	--	--	SPACE
KVA FOR PHASE A	0.0					5	AMPERES
KVA FOR PHASE B	0.0					5	AMPERES
KVA FOR PHASE C	0.0					5	AMPERES
TOTAL KVA	5.3						

* PROVIDE RED HANDLE REAKER AND LOCK-ON CLIP.



NOTES: MOTOR CONTROL CENTER

1. ALL DIMENSIONS ARE NOMINAL.
2. THE COMPLETE SWITCHBOARD SHALL HAVE A SYMMETRICAL SHORT CIRCUIT RATING EQUAL TO OR GREATER THAN THAT AVAILABLE FROM THE UTILITY COMPANY.
3. MINIMUM INTEGRAL A.I.C. RATING OF SWITCHBOARD AND FEEDER CIRCUIT BREAKERS TO BE 42,000 AMPS.
4. BOLT SECTIONS OF THE SWITCHBOARD TOGETHER WITH 1/2" BOLT AND NUTS AT 4 PLACES PER SECTION.
5. BOLT EACH SECTION OF SWOTCHBOARD TO FLOOR WITH (4)1/2" x 3" HILTI KWIK BOLT & WEDGE ANCHORS FAB. & INSTALLED BY ICBO REPORT NO. 4627.

ENCLOSURE CONSTRUCTION NOTES

1. EXTERIOR 12 GA. H.D. GALV. STEEL AND INTERIOR 14 GA. COLD ROLLED STEEL ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
2. CONSTRUCTION WILL BE NEMA 3R AND 12, RAINTIGHT AND DUSTTIGHT.
3. ALL NUTS, BOLTS, SCREWS AND HINGES WILL BE STAILESS STEEL.
4. NUTS, BOLTS AND SCREWS WILL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
5. PHENOLIC NAMEPLATES WILL BE PROVIDED AS REQUIRED.
6. CONTROL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
7. A PLASTIC COVERED WIRING DIAGRAM WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
8. ENCLOSURE WILL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
9. COLOR TO BE ANSI 61 GRAY.

1 ELECTRICAL SINGLE LINE
SCALE: NONE

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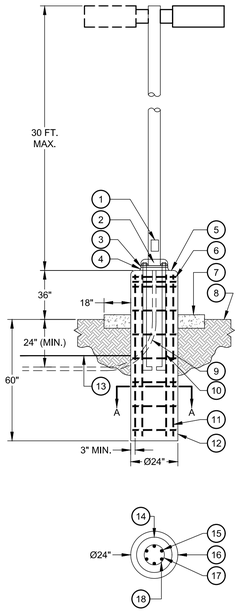
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ELECTRICAL SINGLE LINE

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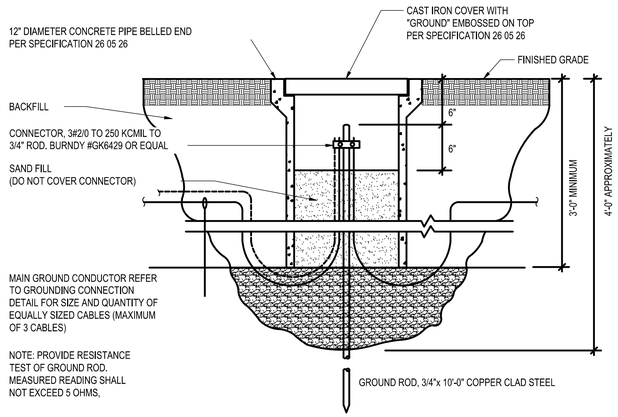
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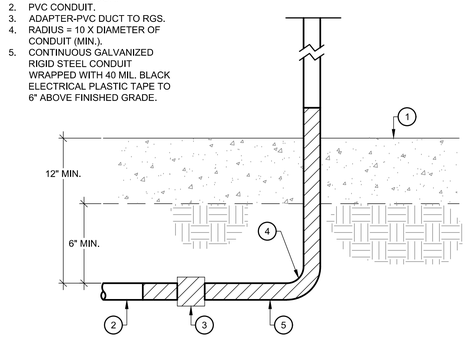
1. HANDHOLE IN BASE OF POLE COMPLETE WITH GASKETED COVER.
2. BOND GROUND WIRE/CONDUIT TO POLE.
3. POLE BASE WITH WASHERS AND NUTS ON TOP AND BOTTOM AND FULL BASE COVER.
4. GROUT AROUND POLE BASE AFTER LEVELING.
5. RAISED CONCRETE BASE WITH EASED TOP EDGE 1/2" RADIUS CORNERS. SACK AND PATCH SURFACE TO ACHIEVE A SMOOTH UNIFORM FINISH.
6. PLACE THREE #3 TIES IN TOP 5" BASE.
7. MOW STRIP SHALL BE FLUSH WITH SIDEWALK.
8. FINISHED GRADE.
9. THREE 3/4" CONDUITS - ONE FOR LIGHTING, ONE FOR POWER & ONE FOR SIGNAL.
10. TYPICAL OF SIX 1" x 48" GALVANIZED THREADED RODS WITH NUTS DOUBLED. STEEL GRADE FOR ANCHOR BOLTS SHALL BE F15554 GRADE 36 STEEL (YIELD STRESS 36KSI).
11. SIX #6 VERTICAL REBAR WITH #6 TIES ON 9" CENTER TO FORM CAGE.
12. CONCRETE BASE. CONCRETE TO BE MIN. 3000 PSI. IN 28 DAYS, POURED IN NATURALLY COMPACTED EARTH HOLE FREE OF LOOSE DIRT OR DEBRIS.
13. PLASTIC WARNING TAPE MARKED "ELECTRICAL" 6" ABOVE CONDUIT.
14. TYP. 18" DIAMETER ROUND STEEL CAGE.
15. TYP. 10" DIAMETER ROUND CAGE WITH 9.5" BOLT CIRCLE.
16. CONCRETE BASE.
17. #6 VERTICAL REBAR, TYPICAL OF SIX FOR EACH STEEL CAGE.
18. BOLT WITH #3 TIE, TYP.

NOTE:
1. REFER TO FIXTURE SCHEDULE FOR POLE AND FIXTURE TYPES.
2. PER IR-A22, LIGHT POLES LESS THAN 35' TALL SUPPORTED ON GRADE ARE EXEMPT FROM INSPECTION; NOT PART OF THE DSA APPROVAL.

LIGHTING POLE MOUNTING DETAIL
N.T.S | 4

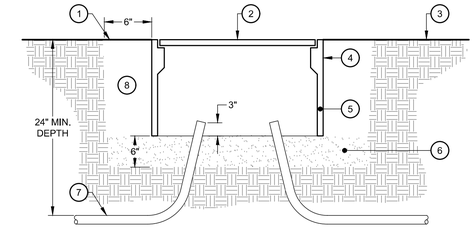


GROUND WELL ASSEMBLY
N.T.S | 5



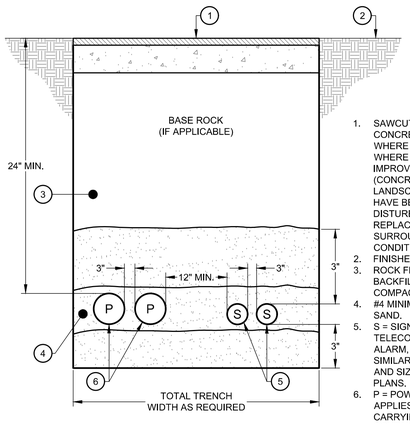
1. CONCRETE FLOOR.
2. PVC CONDUIT.
3. ADAPTER-PVC DUCT TO RGS.
4. RADIUS = 10 X DIAMETER OF CONDUIT (MIN.).
5. CONTINUOUS GALVANIZED RIGID STEEL CONDUIT WRAPPED WITH 40 MIL. BLACK ELECTRICAL PLASTIC TAPE TO 6" ABOVE FINISHED GRADE.

CONDUIT RISER DETAIL
N.T.S | 1



1. SET BOX FLUSH WITH FINISHED GRADE. WHERE EXISTING SURFACE IMPROVEMENTS (CONCRETE, PAVEMENT, LANDSCAPING, TURF, ETC.) HAVE BEEN REMOVED OR DISTURBED. REPAIR OR REPLACE TO MATCH SURROUNDING CONDITIONS.
2. TRAFFIC RATED COVER WHERE APPLICABLE, NON-TRAFFIC RATED REINFORCED CONCRETE COVER OTHERWISE. COVER MARKED OR INSCRIBED WITH INTENDED USE.
3. FINISHED GRADE.
4. REINFORCED CONCRETE PULLBOX. QTY AND SIZE AS SHOWN ON PLANS.
5. PROVIDE BOX EXTENSION RINGS AS REQUIRED.
6. CRUSHED GRAVEL DRAIN BASE BEDDING.
7. TYPICAL UNDERGROUND CONDUIT PER PLANS. DEPTH MIN. 24", SEE TYPICAL TRENCH DETAIL.
8. EXCAVATE A MINIMUM WIDTH EQUAL TO THE DIMENSIONS OF THE BOX PULS 6" ON ALL SIDES. BACKFILL WITH ROCK-FREE NATIVE SOIL AT 90% COMPACTION.

UNDERGROUND PULLBOX DETAIL
N.T.S | 2



1. SAWCUT AND REMOVE CONCRETE OR PAVING WHERE APPLICABLE. WHERE EXISTING SURFACE IMPROVEMENTS (CONCRETE, PAVING, LANDSCAPING, TURF, ETC.) HAVE BEEN REMOVED OR DISTURBED, REPAIR OR REPLACE TO MATCH SURROUNDING CONDITIONS.
2. FINISHED GRADE.
3. ROCK FREE NATIVE BACKFILL, 90% COMPACTION.
4. #4 MINIMUM SALT-FREE SAND.
5. S = SIGNAL (INCLUDES TELECOM, CATV, FIRE ALARM, SECURITY OR SIMILAR CABLING. QTY. AND SIZE AS SHOWN ON PLANS.
6. P = POWER (THIS DETAIL APPLIES TO CONDUITS CARRYING 600V OR BELOW CONDUCTORS. HIGHER VOLTAGE HAS DIFFERENT REQUIREMENTS. QTY. AND SIZE AS SHOWN ON PLANS

GENERAL NOTES:

1. THE EXTENT THAT PEDESTRIAN SURFACES ARE TRENCHED AND PATCHED, THE PATCH SHALL COMPLY WITH CBC §11B-302.1 AND §11B-303.

TRENCH DETAIL
N.T.S | 3

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McNAIR HIGH SCHOOL STORMWATER PUMP STATION

LODI UNIFIED SCHOOL DISTRICT
McNAIR HIGH SCHOOL
9550 Ronald E. McNair Way
Stockton, CA 95210

LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 10/28/2025
DRAWN BY: CAL CHKED BY: G.L.

REVISIONS

#	DESCRIPTION	DATE

CITY SUBMITTAL

ELECTRICAL DETAILS

E6.1

This document is for plan review only

PUMP SYSTEM AND WET WELL SIZING INFORMAITON

1. 26,000 GPM IS MAX WATER FLOW INTO SITE.
2. 24,000 GALLONS IS THE VOLUME OF THE WET WELL
3. 6 IS MAX START AND STOPS PER HOUR FOR PUMPS PER CITY STANDARDS
4. P-1, P-2, AND P-3 MAX PUMP FLOW IS 13,000 GPM
5. FLOW AT 50% SPEED IS 6,500 GPM EACH
6. MAX START STOPS = 24,000 GALLON WET WELL / 6,500 GALLONS = 4 MIN RUN
7. 4 MIN RUN X 6 RUNS PER HOUR X 3 PUMPS = 72 MIN OF RUN TIME
8. 72 MIN OF RUN TIME / 60 MIN = 1.20% OF RUN TIME AVAILABLE WITH PUMPS P-1, P-2, AND P-3

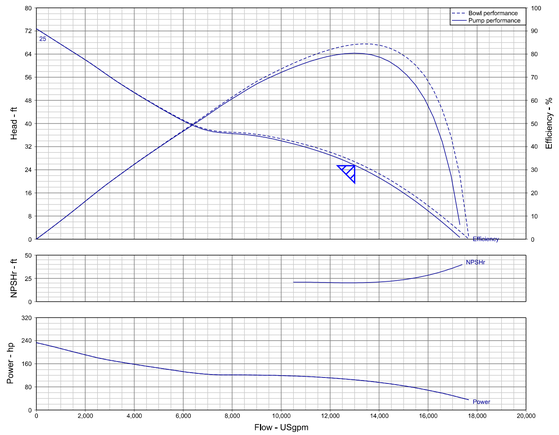
CASCADE PUMP COMPANY

Pump and Bowl Performance Curve
Page 1 of 1

Customer : G3 ENGINEERING, INC.
Customer Reference :
Job Name : Stockton SWPS

Pump Model : 20AM_A5_B_RPM890
Quote/Serial No. : CQ2747

Pump and bowl (dashed) performance.



Curves show approximately the characteristics when pumping clear non-aerated water. No guarantee is made except for the rated point.

Quantity	: 1	Stages	: 1
Flow, rated	: 13,000.0 USgpm	Speed, rated	: 890 rpm
Differential head / pressure, rated / TDH	: 25.40 ft	Efficiency (bowl / pump)	: 84.20 / 80.44 %
Fluid density, rated / max	: 1.000 / 1.000 SG	Power, rated	: 104 hp
Date	: 09/04/2025	NPSH required	: 20.29 ft
Item Number	: A		
Application	:		

WWW.CASCADEPUMP.COM
MADE IN USA SINCE 1948

HYDRAULIC INSTITUTE PROUD MEMBER

PUMP SCHEDULE

NUMBER	P-1	P-2	P-3	P-4
TYPE	AXIAL FLOW	AXIAL FLOW	AXIAL FLOW	AXIAL FLOW
MOUNTING	VERTICAL	VERTICAL	VERTICAL	VERTICAL
HP / BHP	104 / -	104 / -	104 / -	25 / -
VOLTS / PHASE	460 / 3	460 / 3	460 / 3	460 / 3
MOTOR FLA	-	-	-	-
RPM	890	890	890	890
STAGES	1	1	1	1
GPM / TDH (FT. WC.)	13000 / 25.4	13000 / 25.4	13000 / 25.4	2500 / 25.4
NPSH (FT. WC.)	20.29	20.29	20.29	20.29
EFF. % (BOWL/PUMP)	84.20/80.44	84.20/80.44	84.20/80.44	84.20/80.44
SERVICE	PUMP STATION	PUMP STATION	PUMP STATION	PUMP STATION
OPER. WT. (LBS.)	-	-	-	-
MANUFACURER	CASCADE PUMP	CASCADE PUMP	CASCADE PUMP	CASCADE PUMP
MODEL	20AM-A5-B-RPM890	20AM-A5-B-RPM890	20AM-A5-B-RPM890	5AM-A5-B-RPM890

NOTES:
1. SEE PUMPS P-1, P-2, P-3 PERFORMANCE CURVE THIS SHEET.
2. PROVIDE VFD AND FULL PUMP CONTROL PACKAGE FOR PUMPS P-1, P-2, P-3, AND P-4.
3. SEE SHEET CP4.0 FOR PUMP START STOP LEVELS.
4. REFER TO ELECTRICAL SHEETS FOR PUMP CONTROLS.

NUTRIENT SEPARATING BAFFLE BOX

NUMBER	NSBB-1
STRUCTURE SIZE (FT X FT)	8X16
MAX PIPE SIZE (IN)	48
MIN RIM TO INVERT DEPTH (FT)	6.00
SUMP DEPTH (FT)	3.0
SUMP VOLUME (CF)	360.0
SCREEN VOLUME	124.6
5 MM TRASH CAPTURE (CFS)	72.00
MAX. PEAK FLOW (CFS)	108
SERVICE	PUMP STATION
OPER. WT. (LBS.)	-
MANUFACURER	OLDCASTLE INFRASTRUCTURE
MODEL	NSBB-816-TC

NOTES:

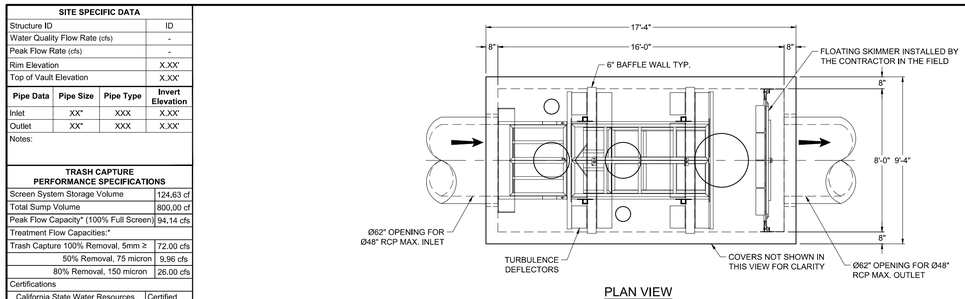
SITE SPECIFIC DATA	
Structure ID	ID
Water Quality Flow Rate (cfs)	-
Peak Flow Rate (cfs)	-
Rim Elevation	X.XX'
Top of Vault Elevation	X.XX'

Pipe Data	Pipe Size	Pipe Type	Invert Elevation
Inlet	XX"	XXX	X.XX'
Outlet	XX"	XXX	X.XX'

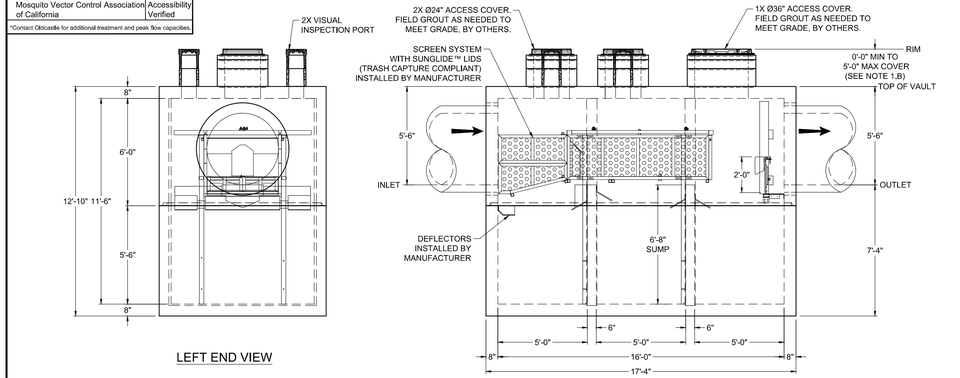
Notes:

TRASH CAPTURE PERFORMANCE SPECIFICATIONS	
Screen System Storage Volume	124.63 cf
Total Sump Volume	800.00 cf
Peak Flow Capacity* (100% Full Screen)	94.14 cfs
Treatment Flow Capacities:*	
Trash Capture 100% Removal, 5mm ≥	72.00 cfs
50% Removal, 75 micron	9.96 cfs
80% Removal, 150 micron	26.00 cfs
Certifications	
California State Water Resources Control Board	Certified Full Capture
Mosquito Vector Control Association of California	Accessibility Verified

*Contact Oldcastle for additional treatment and peak flow capacities.



PLAN VIEW



LEFT END VIEW

ELEVATION VIEW

THIS PRODUCT IS PROTECTED BY ONE OR MORE OF THE FOLLOWING US PATENT(S): 6,426,692; 7,270,747; 7,981,283; 8,142,668; 8,366,923; 8,491,797; 7,846,327; 8,034,236; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

NOTES:
1. DESIGN LOADINGS:
   A. AASHTO HS-20-44 (WITH IMPACT)
   B. DESIGN SOIL COVER: 5'-0" MAXIMUM
   C. ASSUMED WATER TABLE: BELOW BASE OF PRECAST (ENGINEER-OF-RECORD TO CONFIRM SITE WATER TABLE ELEVATION)
   D. LATERAL EARTH PRESSURE: 45 PCF (DRAINED)
   E. LATERAL LIVE LOAD SURCHARGE: 80 PSF (APPLIED TO 6'-0" BELOW GRADE)
   F. NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
2. CONCRETE 28-DAY MINIMUM COMPRESSIVE STRENGTH: 5,000 PSI MINIMUM.
3. REINFORCING: REBAR, ASTM A615/A706, GRADE 60
4. CEMENT: ASTM C150
5. REQ'D ALLOWABLE SOIL BEARING CAPACITY: 2,500 PSF
6. REFERENCE STANDARD:
   A. ASTM C890
   B. ASTM C913
   C. ACI 318-14
7. THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. ENGINEER-OF-RECORD SHALL VERIFY THAT NOTED PARAMETERS MEET OR EXCEED PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE INFRASTRUCTURE UPON REVIEW OF THIS SUBMITTAL.
8. OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3,000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS. PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE.
9. CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS, AND ELEVATIONS OF OPENINGS.
10. CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED AND LEVEL PER PROJECT SPECIFICATIONS).
11. SECTION HEIGHTS, SLAB/WALL THICKNESSES, AND KEYWAYS ARE SUBJECT TO CHANGE AS REQUIRED FOR SITE REQUIREMENTS AND/OR DUE TO PRODUCT AVAILABILITY AND PRODUCTION FACILITY CONSTRAINTS.
12. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT OLDCASTLE INFRASTRUCTURE.
13. MAXIMUM PICK WEIGHT: 54,000 LBS.
    (* COMBINED WEIGHT INCLUDES BAFFLE WALLS AND PRODUCT INTERNALS.)
14. INTERNALS SHALL CONSIST OF A FLOATING SKIMMER, FLOW DEFLECTORS, ELEVATED CENTRAL SCREEN SYSTEM AND SLIDING LIDS. THESE COMPONENTS EFFECTIVELY REDUCE HEAD LOSS, INCREASE POLLUTANT REMOVAL AND SIMPLIFY MAINTENANCE.

Oldcastle Infrastructure
A CRH COMPANY
PH: 800.579.8819 | www.oldcastleinfrastructure.com/stormwater

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Nutrient Separating Baffle Box® (STANDARD)
Trash Capture Treatment

CUSTOMER:
-
PROJECT NAME:
-

SHEET NAME:	REVISION:	SHEET:
Specifier Drawing NSBB-816-TCT	- REV. DATE	1 OF 1

LEAF ENGINEERS A CRH COMPANY
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Folsom, CA 95630
916.335.9992 p
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McNAIR HIGH SCHOOL STORMWATER PUMP STATION
LODI UNIFIED SCHOOL DISTRICT
McNAIR HIGH SCHOOL
9550 Ronald E. McNair Way
Stockton, CA 95210

LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 12/19/2025
DRAWN BY: KL CHKED BY: G.L.

CITY SUBMITTAL

#	DESCRIPTION	DATE

CIVIL PLUMBING SCHEDULES

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CP0.0

GENERAL NOTES

1. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE CITY OF STOCKTON STANDARD SPECIFICATIONS AND PLANS, 09-27-2016 (LATEST EDITION), AND ALL AMENDMENTS THERE TO TO-DATE, CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS (CALTRANS) LATEST EDITION AND CA MUTCD LATEST EDITION, WHERE APPLICABLE. WHERE THERE IS A CONFLICT BETWEEN THE PLANS AND THE CITY'S STANDARD SPECIFICATIONS AND PLANS, THE CITY OF STOCKTON STANDARD SPECIFICATIONS AND PLANS SHALL PREVAIL. ALL WORK SHALL BE UNDER THE INSPECTION OF THE CITY OF STOCKTON.
2. FOR ELEVATIONS REFER TO BENCHMARK REFERENCED ON THIS SHEET OF THE PLANS.
3. PRIOR TO AND DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR BEING FAMILIAR WITH THE CURRENT CITY OF STOCKTON STANDARDS AND ALL UPDATES AND REVISIONS MADE TO ANY OF THE CITY OF STOCKTON STANDARD DETAILS SHOWN ON THESE PLANS, THE CONTRACTOR IS ALSO RESPONSIBLE FOR BEING FAMILIAR WITH THE WRITTEN SPECIFICATIONS AND/OR OTHER STANDARD DETAILS NOT SHOWN BUT WHICH ARE INCLUDED IN THE "CITY OF STOCKTON STANDARD SPECIFICATIONS AND PLANS".
4. DRAWING NUMBERS SHOWN ON THE PLANS REFER TO CITY OF STOCKTON STANDARD PLANS, SHOWN THUS: DETAIL NO.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING FROM DAMAGE ALL EXISTING IMPROVEMENTS THAT ARE TO REMAIN. SUCH IMPROVEMENTS THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT HIS OR HER EXPENSE.
6. ALL TRENCH EXCAVATION SHALL BE IN ACCORDANCE WITH CITY OF STOCKTON STANDARD SPECIFICATION CHAPTER 8.
7. EXCAVATION OF 5 FEET OR MORE IN DEPTH WILL REQUIRE AN EXCAVATION PERMIT FROM THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY.
8. THE CONTRACTOR SHALL DEMOLISH, EXCAVATE, REMOVE AND DISPOSE OF ALL EXISTING CONCRETE CURB, GUTTER OR SIDEWALK, ASPHALT CONCRETE PAVING, AND DELETERIOUS MATERIAL AS REQUIRED TO CONSTRUCT THE CONTRACT WORK. ALL SUCH EXCESS MATERIAL GENERATED SHALL BE DISPOSED OF FROM THE SITE BY THE CONTRACTOR.
9. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FOR ANY WORK DONE WITHIN THE CITY RIGHT-OF-WAY FROM THE CITY OF STOCKTON PUBLIC WORKS DEPARTMENT, AND NOTIFY THE CITY 48 HOURS IN ADVANCE OF STARTING ANY WORK TO BE ACCEPTED FOR OWNERSHIP AND MAINTENANCE BY THE CITY OF STOCKTON.
10. EXISTING UTILITIES ARE SHOWN AS THEY ARE BELIEVED TO EXIST. THE OWNER AND THE ENGINEER DO NOT ACCEPT RESPONSIBILITY FOR THEIR ACCURACY. NOT ALL UTILITIES ARE SHOWN. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL HAVE EACH UTILITY COMPANY ACCURATELY LOCATE IN THE FIELD THEIR MAINS AND SERVICE LINES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES.
11. ATTENTION IS CALLED TO: SECTION 1540 (A) (1) OF THE CONSTRUCTION SAFETY ORDERS (TITLE 8 CALIFORNIA ADMINISTRATION CODE SECTION 1540), ISSUED BY THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PURSUANT TO THE CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT OF 1973, AS AMENDED, WHICH STATES:

    "PRIOR TO OPENING AN EXCAVATION, EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATION I.E., SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND, IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH AN INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING AND WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION."
12. THE CONTRACTOR SHALL CONTACT CALIFORNIA WATER SERVICE COMPANY AT LEAST 72 HOURS IN ADVANCE OF THE CONTRACTOR'S INTENT TO CONNECT TO PUBLIC UTILITIES TO COORDINATE THE CONNECTION TO PUBLIC WATER, SEWER AND STORM DRAINAGE SYSTEMS.
13. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE IN THE FIELD THEIR MAIN SERVICE LINES. THE CONTRACTOR SHALL NOTIFY MEMBERS OF THE UNDERGROUND SERVICE ALERT (U.S.A.) 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER (800-227-2600).
14. THE CONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES AND VERIFY ALL UTILITY LOCATIONS. IT SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF HIS CONTRACT. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICES TO THE DEVELOPMENT.
15. WHENEVER EXISTING PAVEMENT IS BROKEN OR CUT DURING THE INSTALLATION OF THE WORK COVERED BY THESE PLANS AND SPECIFICATIONS, THE PAVEMENT SHALL BE REPLACED WITH PAVEMENT MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL PAVING. THE FINISHED PAVEMENT SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER IF LOCATED WITHIN CITY RIGHT-OF-WAY.
16. PAYMENT FOR PAVEMENT WILL BE MADE FOR THE AREAS SHOWN ON THE PLANS. REPLACEMENT OF PAVEMENT WHICH IS BROKEN OR CUT IN THE INSTALLATION OF THE IMPROVEMENTS COVERED BY THESE PLANS AND SPECIFICATIONS, AND WHICH LIES OUTSIDE OF SAID AREAS, SHALL BE INCLUDED IN THE STREET CONTRACTOR'S UNIT PRICE FOR PAVEMENT, AND NO ADDITIONAL PAYMENT SHALL BE MADE FOR SUCH WORK.
17. THE CONTRACTOR SHALL EXPOSE EXISTING STORM DRAINS, WATER MAINS, AND SANITARY SEWERS WHERE CONNECTIONS AND CROSSINGS ARE TO BE MADE SO EXISTING FLOWLINES AND LOCATIONS CAN BE VERIFIED BEFORE THE START OF CONSTRUCTION.
18. THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
19. CONSTRUCTION STAKING: CONSTRUCTION STAKING IS NORMALLY PERFORMED BY THE ENGINEER WHO PREPARED THE PLAN. THIS PERMITS APPROPRIATE ON-SITE INTERPRETATION AND ADJUSTMENT OF THE PLANS, IF NECESSARY. CONTRACTOR SHALL NOTIFY THE ENGINEER FORTY-EIGHT (48) HOURS PRIOR TO THE ACTUAL NEED FOR STAKING. ANY STAKING REQUESTED BY THE CONTRACTOR OR HIS SUBCONTRACTORS WHICH EXTENDS BEYOND THE ORIGINAL SCOPE OF WORK DEFINED IN THESE PLANS SHALL BE SUBJECT TO AN EXTRA WORK CHARGE TO THE CONTRACTOR. THIS NOTE GIVES FORMAL NOTICE THAT THE FIRM OF SIEGFRIED ENGINEERING, INC. CANNOT, AND WILL NOT, TAKE RESPONSIBILITY FOR ERRORS OR OMISSIONS, IF ANY, WHICH MIGHT OCCUR AND WHICH COULD HAVE BEEN AVOIDED OR DETECTED AND/OR CORRECTED OR MITIGATED HAD SIEGFRIED ENGINEERING, INC. PERFORMED THE CONTRACT STAKING WORK.
20. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE CALIFORNIA WATER SERVICE COMPANY FOR USE OF WATER FROM FIRE HYDRANTS FOR CONSTRUCTION PURPOSES. THE PERMIT SHALL BE APPROVED BY THE CITY OF STOCKTON FIRE DEPARTMENT.
21. THE PROPERTY OWNERS, DEVELOPERS, AND/OR SUCCESSORS IN INTEREST SHALL COMPLY WITH THE PROVISIONS OF THE CALIFORNIA GENERAL CONSTRUCTION ACTIVITY STORM WATER PERMIT AND STATE WATER RESOURCES CONTROL BOARD ORDER NUMBER 99-08-DWQ COMPLIANCE IS MANDATORY PER THE CITY OF STOCKTON'S GRADING AND EROSION CONTROL STANDARDS.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT AND A GRADING AND EROSION CONTROL PERMIT PRIOR TO STARTING ANY WORK, UNLESS OTHERWISE APPROVED BY THE CITY.
23. DUST CONTROL SHALL BE PERFORMED AT ALL TIMES, AT THE CONTRACTORS' EXPENSE, TO MINIMIZE ANY DUST NUISANCE AND STORING OF ALL CONSTRUCTION MATERIAL, VEHICULAR PARKING, EQUIPMENT, ETC. SHALL BE IN ACCORDANCE WITH SECTION 10 OF CALTRANS STANDARD SPECIFICATIONS AND THE REQUIREMENTS OF THE CITY OF STOCKTON. SHALL TAKE PLACE ON THE SITE. ENCROACHMENT WITHIN THE PUBLIC RIGHT OF WAY MUST BE REVIEWED AND APPROVED BY THE CITY IN ADVANCE OF PERFORMING THE WORK. ENCROACHMENT PERMIT WILL BE ACCOMPANIED BY TRAFFIC CONTROL PLAN PREPARED BY THE PROJECT REPRESENTATIVE IN ACCORDANCE WITH THE MUTCD.
24. THE CONTRACTOR SHALL FURNISH, INSTALL OPERATE AND MAINTAIN ALL MACHINERY, APPLIANCES AND EQUIPMENT TO MAINTAIN ALL EXCAVATIONS FREE FROM WATER DURING CONSTRUCTION, AND SHALL DEWATER AND DISPOSE OF THE WATER SO AS TO NOT CAUSE INJURY TO PUBLIC OR PRIVATE PROPERTY, OR TO CAUSE A NUISANCE OR MENACE TO THE PUBLIC. THE DEWATERING SYSTEM SHALL BE INSTALLED AND OPERATED SO THE GROUNDWATER LEVEL OUTSIDE THE EXCAVATION IS NOT REDUCED TO THE EXTENT WHICH WOULD CAUSE DAMAGE OR ENDANGER ADJACENT STRUCTURES OR PROPERTY. ALL COSTS FOR DEWATERING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL PIPE CONSTRUCTION. THE STATIC WATER LEVEL SHALL BE DRAWN DOWN A MINIMUM OF 1 FOOT BELOW THE BOTTOM OF EXCAVATION OF ANY FILL TO THE SPECIFIED DENSITY. DISPOSAL OF WATER SHALL BE IN ACCORDANCE WITH THE APPROVED SWPPP AND SHALL NOT DAMAGE PROPERTY, CREATE A PUBLIC NUISANCE OR VIOLATE THE LAW. THE CONTRACTOR SHALL HAVE ON HAND, PUMPING EQUIPMENT AND MACHINERY IN GOOD WORKING CONDITION FOR EMERGENCIES AND SHALL HAVE WORKMEN AVAILABLE FOR ITS OPERATION. THE DEWATERING SYSTEM SHALL OPERATE CONTINUOUSLY UNTIL BACK-FILL HAS BEEN COMPLETED TO 1 FOOT ABOVE THE NORMAL STATIC GROUNDWATER LEVEL.
25. SITE PREPARATION SHALL INCLUDE STRIPPING AND REMOVAL OF ALL VEGETATION AND ANY DEBRIS FROM THE CONSTRUCTION AREAS. THE DEPTH OF STRIPPING ONSITE SHALL BE EVALUATED BY THE OWNER'S SOILS ENGINEER. EXISTING PAVING SHALL BE INCORPORATED INTO THE STRUCTURAL FILL AND ALL OTHER STRIPPED VEGETATION AND DEBRIS SHALL NOT BE INCORPORATED IN ANY OF THE STRUCTURAL FILLS.
26. ANY VOIDS LEFT BY THE REMOVAL OF UNDERGROUND UTILITIES OR OTHER BURIED OBJECTS SHALL BE CLEANED OF ALL LOOSE SOILS AND SHALL BE PROPERLY BACKFILLED WITH ENGINEERED FILL THAT THE OWNER'S SOIL ENGINEER APPROVES, MONITORS, TESTS, AND APPROVES.
27. THE SUBGRADE SOILS BENEATH ALL PAVING AREAS SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE DRY DENSITY WHICH THE OWNER'S SOIL ENGINEER SPECIFIES.
28. ANY SOFT OR LOOSE SOIL POCKETS FOUND ONSITE DURING THE STRIPPING OR RECOMPACTION PROCESS SHALL BE OVER EXCAVATED AND RECOMPACTED.
29. ENGINEERED FILL SHALL BE PLACED IN HORIZONTAL LAYERS A MAXIMUM OF 8 INCHES IN LOOSE THICKNESS AND BE COMPACTED TO A MINIMUM OF 90 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE OWNER'S SOIL ENGINEER.
30. SUBGRADE SOILS UNDER EXTERIOR CONCRETE SHALL BE MOISTURE CONDITIONED AS APPROVED, TESTED AND INSPECTED BY THE OWNER'S SOIL ENGINEER.
31. CONTRACTOR SHALL MAINTAIN MOISTURE CONDITION RIGHT UP TO POURING OF CONCRETE.
32. PRIOR TO THE SCHEDULING OF A PRE-CONSTRUCTION MEETING OR THE ISSUANCE OF AN ENCROACHMENT PERMIT THE DEVELOPER OR CONTRACTOR SHALL OBTAIN A GRADING PERMIT FROM THE CITY OF STOCKTON'S COMMUNITY DEVELOPMENT DEPARTMENT, BUILDING DIVISION.
33. CONTRACTOR SHALL PRESERVE ALL EXISTING SURVEY MONUMENTS, PROPERTY PINS, ETC., AFFECTED BY PROJECT IN ACCORDANCE WITH SECTION 8771 OF THE PROFESSIONAL LAND SURVEYORS ACT IN THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA. LOCATIONS OF EXISTING MONUMENTATION KNOWN TO THE ENGINEER THAT ARE WITHIN THE AREA OF PROJECT HAVE BEEN INDICATED ON THE PLANS. CONTRACTOR'S LICENSED SURVEYOR SHALL TIE DOWN EXISTING MONUMENTS AND SUBMIT THE INFORMATION TO THE ENGINEER. A NEW RECORD OF SURVEY SHALL BE FILED AT COUNTY RECORDERS OFFICE.
34. THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL MECHANICAL; ELECTRICAL AND INSTRUMENTATION EQUIPMENT; PIPING AND CONDUITS; STRUCTURES AND OTHER FACILITIES. THE AS-BUILTS OF THE ELECTRICAL SYSTEM SHALL INCLUDE THE STREET LIGHT LAYOUT PLAN SHOWING LOCATION OF LIGHTS, CONDUITS, CONDUCTORS, POINTS OF CONNECTIONS TO SERVICES, PULLBOXES, AND WIRE SIZES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR.

STORM DRAIN

1. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL NEW DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING, EXCEPT WHERE OTHERWISE APPROVED.

WATER

1. ALL WATER LINES SHALL BE PRESSURE-TESTED, DISINFECTED, FLUSHED, AND TESTED FOR BACTERIA IN CONFORMANCE WITH THE CITY OF STOCKTON SPECIFICATIONS AND/OR CALWATER SPECIFICATIONS, AS APPLICABLE, PRIOR TO FINAL ACCEPTANCE BY THE CITY.
2. ALL VALVES, TEES AND CROSSES TO BE FLANGED TO THEIR RESPECTIVE FITTINGS. WATER VALVES TO BE RESILIENT SEAT ONLY.
3. WATER MAINS SHALL BE AS PER CITY AND/OR CALWATER STANDARDS AS APPLICABLE. ALL UNDERGROUND 6" FIRE WATER SERVICE LINES SHALL BE PVC PIPE, FM APPROVED CLASS 150, JM EAGLE BLUE BRUTE OR APPROVED EQUAL MEETING AWWA C900 STANDARDS.
4. ALL VALVE STEMS MUST BE BROUGHT TO A MINIMUM OF 4' BELOW FINISH GRADE WITH STEM EXTENSION UNITS.
5. THRUST BLOCKS SHALL BE PROVIDED AT ALL REQUIRED LOCATIONS ON WATER LINE IN ACCORDANCE WITH THE CITY OF STOCKTON AND/OR CALWATER SPECIFICATIONS AND DETAILS, AS APPLICABLE.
6. ALL BACKFLOW DEVICES SHALL BE INSTALLED WITH A WEATHER BLANKET FOR PROTECTION.

GRADING NOTES

1. GRADING AND LAND STABILIZATION SHALL INCLUDE COST OF DEWATERING; REMOVING FROM THE SITE ALL STRIPPED VEGETATION, DEBRIS, STRUCTURES, POWER POLES, EXISTING PAVEMENT, BUILDINGS, TREES, AND OTHER DELETERIOUS MATERIALS.
2. TOPOGRAPHICAL INFORMATION SHOWN REFLECTS A TOPOGRAPHY SURVEY PERFORMED BY SIEGFRIED ENGINEERING OCTOBER 2018.
3. ANY AND ALL SEDIMENT AND/OR EROSION CONTROL DETAILS CONTAINED WITHIN THESE PLANS ARE TO BE CONSIDERED AS "REFERENCE DETAILS" ONLY AND THE CITY'S APPROVAL OF THESE PLANS AND "REFERENCE DETAILS" DOES NOT RELIEVE THE OWNER/DEVELOPER FROM COMPLIANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN AS APPROVED BY THE CITY'S STORM WATER DIVISION.

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LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 12/19/2025
DRAWN BY: KL CHKED BY: G.L.

CITY SUBMITTAL

#	DESCRIPTION	DATE

CIVIL PLUMBING NOTES

This document is for plan review only

CP0.1

C0.1 CIVIL SHEET INDEX, LEGEND, SCHEDULES & NOTES

GENERAL NOTES FOR PAVING:

1. THE WORK EMBRACED HEREIN SHALL BE DONE IN ACCORDANCE WITH THE APPROPRIATE PROVISIONS OF THE SPECIFICATIONS ENTITLED CITY OF FRESNO, STANDARD SPECIFICATIONS, FEBRUARY 2016 EDITION, INSOFAR AS THE SAME MAY APPLY, WHICH SPECIFICATIONS HEREINAFTER ARE REFERRED TO AS THE STANDARD SPECIFICATION.
2. THE SANITARY SEWER SYSTEM AND HOUSE CONNECTIONS, TOGETHER WITH WATER MAIN, GAS MAINS, IF ANY, AND THEIR RESPECTIVE SERVICE CONNECTIONS SHALL BE COMPLETED IN THE STREET BEFORE INSTALLATION OF THE STREET SURFACING.
3. INSTALL SIDEWALKS, CURBS, AND GUTTERS AS PER CITY OF FRESNO STANDARD DRAWING P–5 AND IN ACCORDANCE WITH DETAILS ON THESE DRAWINGS. CURBS AND GUTTERS SHALL BE CONSTRUCTED BEFORE PLACING THE STREET SURFACING AND BASE COURSE.
4. PERMITS MUST BE OBTAINED AND FEES PAID IN ACCORDANCE WITH ORDINANCES OF THE CITY OF FRESNO.
5. THE TYPICAL CROSS SECTIONS SHOWN SHALL BE USED ONLY FOR THE PAVEMENT STRUCTURAL SECTION, OVERLAY THICKNESS AND SIDE SLOPES. SEE PLAN AND PROFILE SHEETS FOR HORIZONTAL LIMITS AND LOCATIONS OF CURB AND GUTTER, MEDIAN ISLANDS, SAWCUTTING, GRINDING, OVERLAYS, SIDEWALKS, FENCES, ROW LINES, EXISTING FEATURES AND ANY OTHER PROPOSED IMPROVEMENTS. THE TYPICAL CROSS SECTION SHOULD NOT BE USED FOR STAKING OF PROPOSED IMPROVEMENTS.
6. ALL STREETS SHALL BE SURFACED IN ACCORDANCE WITH THIS PLAN AND THE FOLLOWING SPECIFICATIONS:
   A. 6–INCH SUBGRADE AND ALL FILLS IN EXCESS OF 6 INCHES WILL BE COMPACTED IN ACCORDANCE WITH THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, SECTION 19 OF THE STANDARD SPECIFICATIONS, 2015 EDITION.
   B. AGGREGATE BASE SHALL CONFORM TO AND BE PLACED IN ACCORDANCE WITH SECTION 12 OF THE CITY STANDARDS SPECIFICATIONS, USING CLASS 2 AGGREGATE BASE, AND AGGREGATE SUB–BASE SHALL UTILIZE CLASS 2 AGGREGATE SUB–BASE MATERIAL (MINIMUM 50 R–VALUE).
   C. PAINT BINDER WILL BE AS SPECIFIED BY THE CITY ENGINEER AND SHALL CONFORM TO AND BE APPLIED IN ACCORDANCE WITH SECTION 13 OF THE CITY STANDARD SPECIFICATIONS.
   D. ASPHALT CONCRETE SURFACING SHALL BE TYPE A USING PG 64–10 ASPHALT BINDER, CONFORMING TO AND PLACED IN ACCORDANCE WITH SECTION 13 OF THE CITY SPECIFICATIONS.
7. ALL BOUNDARY STREETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THIS PLAN.
8. THE TRANSITION BETWEEN THE EDGE AND END OF THE REQUIRED STREET SURFACING AND THE EXISTING SURFACING OR GROUND SHALL NOT HAVE A SLOPE STEEPER THAN 5 PERCENT.
9. ANY CONCRETE WORK TO BE CONSTRUCTED SHALL CONFORM TO CITY OF FRESNO STANDARDS ADOPTED BY RESOLUTION NO. 70–36, AS REVISED.
10. INSTALL STREET LIGHTING SYSTEM IN ACCORDANCE WITH RESOLUTION NO. 78–522 AND 88–229. LOCATION OF LIGHTS TO BE DETERMINED AND APPROVED BY THE TRAFFIC ENGINEER, SERVICE LOCATION TO BE DETERMINED BY PG&E. THE STREETLIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH PUBLIC WORKS STANDARDS E–1 THROUGH E–27.
11. TRAFFIC REQUIREMENTS:
    A. ALL SIGNING, DETOURING AND BARRICADING SHALL CONFORM TO THE 2014 CALIFORNIA SUPPLEMENT TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES ISSUED BY THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION.
    B. ALL SIGNS SHALL BE RETROFLECTIVE PER CHAPTER 2A.08 OF THE LATEST VERSION OF THE 2014 CALIFORNIA MUTCD.
    C. HIGH LEVEL WARNING DEVICES SHALL BE USED ON ALL APPROACHES TO THE CONSTRUCTION AREA.
    D. SPECIAL ATTENTION IS CALLED TO SECTION 7–10.1 THROUGH 10.3 OF THE CITY STANDARD SPECIFICATIONS.
    E. ONE (1) 12–FOOT DRIVING LANE MUST BE MAINTAINED IN EACH DIRECTION AT ALL TIMES.
    F. NO PUBLIC STREET SHALL BE CLOSED WITHOUT PRIOR APPROVAL FROM THE CITY TRAFFIC ENGINEER.
    G. STREET WORK PERMITS ISSUED TO ALLOW WORK IN THE PUBLIC RIGHT–OF–WAY SHALL BE REVOKED IF THE ABOVE REQUIREMENTS OF SUBPARAGRAPHS "A" THROUGH "G" ARE NOT STRINGENTLY COMPLIED WITH BY THE DEVELOPER'S FORCES DURING OFF–SITE STREET IMPROVEMENT CONSTRUCTION OPERATIONS. REVOKED PERMITS SHALL NOT BE RE–ISSUED UNTIL SUCH TIME AS THE PUBLIC WORKS DIRECTOR IS SATISFIED THAT THE DEVELOPER'S CONTRACTORS WILL PERFORM THEIR OPERATION IN COMPLIANCE WITH THE ABOVE REQUIREMENTS, INCLUDING THE CONDITIONS OF THE STREET WORK PERMIT.
12. EXISTING PAVEMENT SHALL NOT BE REMOVED UNTIL SUCH TIME AS ALL UTILITIES ARE COMPLETED AND PAVING CONTRACTOR IS READY TO REPAIR WITHIN 5 DAYS.
13. ALL STORM DRAINAGE WORK AT THE CONNECTION TO THE STORM DRAIN MANHOLE SHALL BE DONE IN ACCORDANCE WITH FRESNO METROPOLITAN FLOOD CONTROL DISTRICT STANDARD SPECIFICATIONS AND STANDARD PLANS, APRIL 1, 2011 EDITION, AND REVISIONS THEREOF.
14. CONTRACTOR SHALL NOTIFY THE F.M.F.C.D CONSTRUCTION MANAGER, AT (559) 456–3292, 48 HOURS PRIOR TO CONSTRUCTION RELATING TO OR CONNECTING TO ANY STORM DRAIN FACILITY, AND/OR COMMENCING WORK AROUND EXISTING F.M.F.C.D. STORM DRAIN FACILITIES.
15. CONSTRUCT ACCESSIBLE RAMPS AND FINISH RAMP SURFACES AS DIRECTED BY ENGINEER.
16. ALL SEWER MANHOLES AFFECTED BY THIS PROJECT SHALL BE ADJUSTED TO GRADE AS NECESSARY AND INCLUDED IN THIS WORK.
17. ALL EXISTING WATER MAIN VALVES (CAP AND LID) SHALL BE ADJUSTED TO GRADE BY CONTRACTOR. FOR COORDINATION WITH WATER DIVISION, CALL (559) 621–5360.
18. TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION, THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT, TOLL FREE, AT 1–800–227–2600, OR 811.
19. INITIAL COMPACTION TESTS SHALL BE PAID FOR BY THE DEVELOPER, ANY REQUIRED RETESTS SHALL BE PAID FOR BY THE CONTRACTOR.
20. THE DEVELOPER SHALL OBTAIN POLE IDENTIFICATION NUMBERS FROM PG&E AND THE DEVELOPER SHALL INSTALL NUMBERS IN ACCORDANCE WITH CITY OF FRESNO STANDARD DRAWING E–25.
21. ALL EXISTING OVERHEAD UTILITIES SHALL BE PLACED UNDERGROUND AS PER RESOLUTION NO. 78–522 AND 88–229. IF OVERHEAD UTILITIES ARE TO BE RELOCATED, THE RELOCATION SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE OF THE STREET IMPROVEMENTS BY THE CITY.
22. APPROVAL OF STREET PLANS SHALL IN NO WAY BE CONSTRUED AS A GRANT BY THE CITY OF ANY RIGHTS TO THE SUBDIVIDER TO TRESPASS UPON LAND RIGHTFULLY IN THE POSSESSION OF, OR OWNED BY ANOTHER, WHETHER SUCH LAND IS PRIVATELY OR PUBLICLY OWNED. THE DEVELOPER SHALL OBTAIN WRITTEN AUTHORIZATION FROM ANY ADJACENT PROPERTY OWNER GIVING HIM PERMISSION TO ENTER HIS PROPERTY FOR PURPOSE OF CONSTRUCTING THE IMPROVEMENTS DELINEATED ON THESE PLANS AND TRANSITIONS THERETO. THE DEVELOPER SHALL PROVIDE THE CITY WITH A COPY OF OWNER'S PERMISSION PRIOR TO START OF WORK.
23. AN ENCROACHMENT PERMIT IS REQUIRED FOR ANY WORK TO BE PERFORMED IN THE COUNTY OF FRESNO ROAD RIGHT–OF–WAY. CONTACT THE COUNTY PERMIT ENGINEER AT (559) 262–4107 TO OBTAIN PERMIT. IF AN ENCROACHMENT PERMIT HAS NOT BEEN OBTAINED WITHIN 12 MONTHS OF THE APPROVAL DATE OF THESE PLANS, ADDITIONAL REVIEW AND REVISIONS TO THE PLANS MAY BE REQUIRED BEFORE PERMIT IS ISSUED.
24. DEVELOPER TO FURNISH AND INSTALL LOCAL STREET NAME SIGNS AT EACH INTERSECTION WITHIN SUBDIVISION PER CITY OF FRESNO STANDARD DRAWING P–92.

ELECTRICAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION 86 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS DATED 2015, AND SECTIONS ES–1 THRU ES–16D OF THE STATE OF CALIFORNIA STANDARD PLANS.
2. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES AND PROVIDE PROTECTION PRIOR TO AND DURING TRENCHING.
3. POTENTIAL OVERHEAD CONFLICT WITH HIGH VOLTAGE LINES MAY EXIST. MAINTAIN PROPER CLEARANCE. CONTACT PG&E TO VERIFY WIRE LOCATION.
4. POLES SHALL BE LOCATED IN THE FIELD BY THE CITY OF FRESNO. NOTIFY TRAFFIC ENGINEERING TWO WORKING DAYS IN ADVANCE AT 621–1312.
5. PULL BOXES SHALL BE NO. 5(E), UNLESS OTHERWISE NOTED ON THE PLANS. PULL BOXES SHALL NOT BE INSTALLED IN CURB RAMPS. VANDAL RESISTANT LOCKING LIDS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT FINAL INSPECTION OF THE TRAFFIC SIGNAL. CONTRACTOR SHALL PROVIDE TEMPORARY LIDS DURING CONSTRUCTION. LOCKING LIDS SHALL BE GALVANIZED STEEL DIAMOND PLATE, MINIMUM THICKNESS 3/16", WITH MINIMUM TWO (2) CLAMPING JAWS AND BE KEYED TO THE CITY OF FRESNO KEY. ALL PULL BOXES SHALL BE AT A MAXIMUM OF 200' APART.
6. ALL PULL BOXES INSTALLED IN NON–CONCRETE AREAS SHALL BE SURROUNDED BY A ONE (1) FOOT WIDE CONCRETE COLLAR, TO A DEPTH EQUAL TO THE PULL BOX AND EXTENSION, PER CITY OF FRESNO SPECIFICATIONS, AND SHALL HAVE A VANDAL RESISTANT (SEE NOTE ABOVE) LOCKING LID INSTALLED. ALL CONDUIT ENTRIES INTO ADVANCE DETECTION, INTERMEDIATE DETECTION, AND STREET LIGHTING PULL BOXES INSTALLED IN NON–CONCRETE AREAS SHALL ENTER THE PULL BOX FROM THE BOTTOM, USING 90 DEGREE ELBOWS AND EXTENDING 3 TO 5 INCHES ABOVE THE FINISHED GROUT.
7. ALL CONDUITS SHALL HAVE BUSHINGS INSTALLED PRIOR TO INSTALLING CONDUCTORS. STEEL CONDUITS SHALL HAVE LAY IN STYLE LUGS THAT ARE CAST INTEGRAL WITH THE BUSHING.
8. CONDUIT BENDS OF 90 DEGREES ARE PROHIBITED UNLESS OTHERWISE NOTED OR WRITTEN PERMISSION IS GIVEN BY THE CITY OF FRESNO ENGINEER.

SEWER AND WATER GENERAL NOTES:

1. THE WORK EMBRACED HEREIN SHALL BE DONE IN ACCORDANCE WITH THE APPROPRIATE PROVISIONS OF THE SPECIFICATIONS ENTITLED CITY OF FRESNO, STANDARD SPECIFICATIONS, DEPARTMENT OF PUBLIC WORKS, LATEST EDITION, AND ANY AMENDMENTS THERETO, INSOFAR AS THE SAME MAY APPLY, WHICH SPECIFICATION HEREINAFTER ARE REFERRED TO AS THE STANDARD SPECIFICATION.
2. INITIAL COMPACTION TESTS REQUIRED BY THE CITY SHALL BE PAID FOR BY THE DEVELOPER. ANY RETESTS REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR.
3. ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE REQUIREMENTS OF THE CONSTRUCTION SAFETY ORDER, ISSUED BY THE DIVISION OF INDUSTRIAL SAFETY, FOR TRENCHES AND EXCAVATION. THE CONTRACTOR SHALL COMPLY WITH THE CALIFORNIA CODE OF REGULATION, SECTION 64572 TITLE 22, REGARDING REQUIRED SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER.
4. TRENCH BACKFILL AND SURFACE RESTORATION SHALL CONFORM TO THE CITY OF FRESNO STANDARD AND FRESNO CITY STREET WORK PERMIT. BACKFILL SHALL BE 95% RELATIVE COMPACTION OF THE TOP TWO FEET FROM FINISH GRADE. ANY SEWER CUT IN EXISTING PAVEMENT SHALL REQUIRE IMMEDIATE TEMPORARY TRENCH RESURFACING. ANY EXISTING STREETS CUT FOR THE INSTALLATION OF SEWER AND WATER SERVICES SHALL RECEIVE A 1 INCH OVERLAY IN ADDITION TO THE REQUIREMENTS OF PUBLIC WORKS STANDARD DRAWING P–48.
5. SEWER NOTES:
   ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OF FRESNO, STANDARD SPECIFICATIONS, DEPARTMENT OF PUBLIC WORKS, LATEST EDITION AND ANY AMENDMENT THERETO, WITH THE FOLLOWING:
   a. TRENCH BACKFILL SHALL HAVE A RELATIVE COMPACTION OF 90% TO WITHIN 24 INCHES OF FINISH GRADE AND THE TOP 24 INCHES SHALL BE 95%.
   b. HOUSE BRANCH LOCATION SHALL BE MARKED BY STAMPING AN "S" SYMBOL ON THE FACE OF THE CONCRETE CURB.
6. SEWER PIPE MAY BE SDR 35 PVC SOLID WALL PLASTIC SEWER PIPE, EXTRA STRENGTH VITRIFIED CLAY PIPE, COMPRESSION JOINT, WEDGE–LOCK, SPEED SEAL, AND PVC LINED DUCTILE IRON PIPE, OR APPROVED EQUAL. BAND SEAL IS ACCEPTABLE ONLY WITH PLASTIC SLEEVES AT ALL JOINTS 6 INCH AND LARGER.
7. USE OF ANY OTHER TYPE OF PIPE OR FITTINGS SHALL REQUIRE THE WRITTEN APPROVAL OF THE CITY ENGINEER PRIOR TO INSTALLATION.
8. SDR 35 PVC SOLID WALL PLASTIC SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH PUBLIC WORKS STANDARD DRAWING S–10.
9. AIR TEST OF THE SEWER MAINS AND HOUSE SERVICES SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER OF UNIBELL PLASTIC PIPE ASSOCIATION, AIR TESTING MANUAL. THE AIR TEST IS TO BE MADE ON THE PIPE INSTALLATION WITHOUT THE ADDITION OF SEALERS TO THE PIPE INTERIOR. THE APPLICATION OF MORTAR, EPOXY, CAULKING COMPOUNDS, OR OTHER MATERIAL TO THE PIPE WILL BE PROHIBITED. FAILURE TO MEET THE AIR TEST WILL REQUIRE THE CONTRACTOR TO REPLACE SECTIONS AS REQUIRED. THE CONTRACTOR MAY ELECT IN LIEU OF EXPOSING THE ENTIRE LINE, THE OPTION TO SELECT AN APPROVED PIPELINE PHOTOGRAPHIC CONTRACTOR TO DETERMINE DEFECTIVE PORTIONS OF THE PIPELINE, OR ISOLATE THE MAIN IN MINIMUM OF 5 FOOT SECTIONS, AND RETEST EACH SECTION UNTIL THE FAILURE IS LOCATED, AND THEN REPLACE AS NECESSARY. ALL COSTS, (INCLUDING PHOTOGRAPHER'S WORK ASSOCIATED WITH THE FINAL REPAIR WILL BE THE CONTRACTOR'S). AIR TEST IS TO BE PERFORMED UPON COMPLETION OF COMPACTION.
10. IN ADDITION TO AIR TEST, THE CITY OF FRESNO SHALL INSPECT THE SEWER INSTALLATION WITH A CLOSED CIRCUIT TELEVISION CAMERA. ANY BROKEN PIPE, SEPARATION OF JOINTS, OR ANY PIPE NOT LAID TO TRUE LINE AND GRADE, EXCEPT FOR THE VARIATIONS IN SECTIONS 17, PARAGRAPH 4 OF THE CITY STANDARD SPECIFICATIONS SHALL BE REPLACED. ALL COSTS ASSOCIATED WITH THE FINAL REPAIR WILL BE THE CONTRACTOR'S.
11. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ADEQUATE ACCESS TO THE MANHOLES AND A WATER SUPPLY TO FACILITATE FINAL CAMERA INSPECTION AND ONE INSPECTION AFTER REPAIRS ARE SUCCESSFULLY MADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CAMERA INSPECTIONS.
12. FINAL AIR TEST OF THE SEWER SYSTEM SHALL BE MADE AFTER ALL UNDERGROUND UTILITIES HAVE BEEN INSTALLED AND COMPACTED IN THE AREA. T.V. CAMERA CHECK OF THE SEWER SYSTEM SHALL BE MADE AFTER AIR TEST AND PRIOR TO PLACING OF FINAL PAVEMENT IN STREETS.
13. THE CONSTRUCTION OF SEWER MAINS SHALL COMMENCE AT THE LOWEST POINT OF THE SYSTEM (I.E. AT A MANHOLE OR AT THE END OF EXISTING MAIN). THE INSTALLATION OF SEWER MAINS SHALL ALWAYS PROCEED UPSTREAM IN ALL LOCATIONS.
14. SLOPE AND ALIGNMENT CONTROL SHALL BE MAINTAINED USING AN APPROVED LASER BEAM INSTRUMENT.
15. LOCATION AND FLOW LINE ELEVATIONS OF ALL HOUSE BRANCHES SHALL BE STAKED BY DEVELOPER'S ENGINEER PRIOR TO CONSTRUCTION.
16. SEWER AIR TEST, CAMERA CHECK AND WATER PRESSURE TEST SHALL BE MADE AFTER ALL UNDERGROUND UTILITIES ARE INSTALLED AND COMPACTED.
17. SEWER HOUSE BRANCHES SHALL BE CONSTRUCTED TO A FLOWLINE DEPTH OF 5 FEET BELOW PROPOSED FINISHED GRADE AT A POINT 10 FEET BEHIND PROPERTY LINES WHENEVER POSSIBLE. IN NO CASE SHALL THE FLOWLINE DEPTH BE LESS THAN 4.5 FEET, UNLESS APPROVED BY CONSTRUCTION MANAGEMENT. DROP SEWER HOUSE BRANCHES IN MANHOLES ARE NOT PERMITTED.
18. TRAFFIC REQUIREMENTS:
    a. ALL SIGNING, DETOURING AND BARRICADING SHALL CONFORM TO THE MANUAL OF TRAFFIC CONTROLS, LATEST EDITION, ISSUED BY THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION.
    b. ALL SIGNS SHALL BE REFLECTORIZED FOR NIGHT–TIME VISIBILITY.
    c. HIGH LEVEL WARNING DEVICES SHALL BE USED ON ALL APPROACHES TO THE CONSTRUCTION AREA.
    d. SPECIAL ATTENTION IS DIRECTED TO SECTIONS 7–10.1, 10.2 AND 10.3 OF THE CITY STANDARD SPECIFICATIONS.
    e. ONE TWELVE–FOOT DRIVING LANE MUST BE MAINTAINED IN EACH DIRECTION AT ALL TIMES.
    f. NO PUBLIC STREET SHALL BE CLOSED WITHOUT PRIOR APPROVAL FROM THE CITY TRAFFIC ENGINEER.
    g. STREET WORK PERMITS ISSUED TO ALLOW WORK IN THE PUBLIC RIGHT–OF–WAY SHALL BE REVOKED IF THE ABOVE REQUIREMENTS OF SUBPARAGRAPHS 18a THROUGH 18h ARE NOT STRINGENTLY COMPLIED WITH BY THE DEVELOPER'S FORCES DURING OFF–SITE STREET IMPROVEMENT CONSTRUCTION OPERATIONS. REVOKED PERMITS SHALL NOT BE RE–ISSUED UNTIL SUCH TIME AS THE PUBLIC WORKS DIRECTOR IS SATISFIED THAT THE DEVELOPER'S CONTRACTORS WILL PERFORM THEIR OPERATIONS IN COMPLIANCE WITH THE ABOVE REQUIREMENTS INCLUDING THE CONDITIONS OF THE STREET WORK PERMIT.
    h. THE CONTRACTOR SHALL MAINTAIN AT ALL TIMES A MINIMUM OF TWO TWELVE–FOOT WIDE TEMPORARILY PAVED TRAVEL LANES ALONG THE SEWER TRENCH FOR CONTINUOUS USE DURING CONSTRUCTION. IN LIEU OF THE ABOVE, THE CONTRACTOR MAY ELECT TO BACKFILL THE SEWER TRENCH AND PLACE TEMPORARY TRENCH PAVING FOR THE LENGTH OF THE TRENCH OPENED DURING EACH DAY'S WORK. CONTRACTORS SHALL PROVIDE ACCEPTABLE ACCESS AT ALL TIME TO PROPERTIES ALONG THE CONSTRUCTION ROUTE. ALL TEMPORARY SURFACING SHALL BE MAINTAINED IN A SMOOTH CONDITION UNTIL THE REQUIRED PERMANENT SURFACING CONFORMING TO PUBLIC WORKS STANDARD DRAWING P–48.
19. WATER NOTES:
    a. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FRESNO, STANDARD SPECIFICATIONS, DEPARTMENT OF PUBLIC WORKS, LATEST EDITION, AND ANY AMENDMENT THERETO.
    b. FIRE HYDRANT AND VALVE SHALL BE INSTALLED PER PUBLIC WORKS STANDARD DRAWING W–3.
    c. ALL WORK SHOWN ON THESE PLANS SHALL BE INSPECTED BY THE CITY OF FRESNO. NOTIFY WATER SYSTEMS MANAGER AND CONSTRUCTION MANAGEMENT 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
    d. SANITARY SEWERS MUST BE COMPLETE BEFORE WATER MAIN CONSTRUCTION IS STARTED.
    e. WATER MAIN CONSTRUCTION MUST BE COMPLETE BEFORE P.G.&E. STARTS THE GAS AND ELECTRICAL UNDERGROUND INSTALLATION.
    f. MAXIMUM LENGTH OF RISER, TO BRING FIRE HYDRANTS TO GRADE, SHALL BE INSTALLED PER PUBLIC WORKS STANDARD DRAWING W–3.
    g. WATER SERVICES AND METER BOXES SHALL BE INSTALLED AS PER PUBLIC WORKS STANDARD DRAWINGS W–1 AND/OR W–2.
    h. PIPE RESTRAINT FITTINGS SHALL BE PROVIDED AT ALL TEES, CROSSES, REDUCERS, BENDS, CAPS, PLUGS, AND VALVES IN ACCORDANCE TO PUBLIC WORKS WITH THE CITY OF FRESNO, DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS, LATEST EDITION.
    i. THE USE OF CONCRETE THRUST BLOCKS MAY BE APPROVED IN SPECIAL SITUATIONS, BUT WILL ONLY BE USED WHEN SPECIFICALLY APPROVED IN WRITING BY THE CITY ENGINEER.
20. POLYVINYL CHLORIDE (PVC) WATER MAIN IS TO BE INSTALLED IN ACCORDANCE WITH CITY OF FRESNO, DEPARTMENT OF PUBLIC WORKS, STANDARD DRAWING W–29, LATEST EDITION.
21. TWO DAYS BEFORE EXCAVATION, CALL UNDERGROUND SERVICE ALERT TOLL FREE AT 811.
22. POT–HOLE WATER MAIN AT ALL CITY WET–TIE CONNECTION LOCATIONS TO FACILITATE WET–TIE CONNECTIONS TO LINE AND GRADE.
23. WATER SERVICES AND METER BOXES LOCATED WITHIN DRIVEWAY APPROACHES SHALL BE RELOCATED AT THE DEVELOPER'S EXPENSE.
24. TRACER WIRE SHALL BE INSTALLED ALONG ALL PVC WATER MAINS PER SECTION 22–3.3 OF CITY OF FRESNO STANDARD SPECIFICATIONS.

EARTHWORK NOTES:

1. CUT AND FILL QUANTITIES ARE TO BE USED FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL EARTHWORK QUANTITIES FOR BIDDING PURPOSES. QK DOES NOT, EXPRESSLY OR BY IMPLICATION, EXTEND ANY WARRANTY FOR EARTHWORK QUANTITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE GROUND ELEVATIONS AND OVERALL TOPOGRAPHY OF THE SITE PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY QK IMMEDIATELY, AND IN WRITING, OF ANY DIFFERENCES IN TOPOGRAPHY FROM THAT SHOWN ON THIS PLAN, WHICH MAY REQUIRE CHANGES IN DESIGN AND/OR AFFECT THE EARTHWORK QUANTITIES.
3. THE ACTUAL AMOUNT OF EARTH MOVED WILL VARY DEPENDING ON COMPACTION, CONSOLIDATION, STRIPPING AND THE CONTRACTOR'S METHOD OF SITE PREPARATION.
4. THE CONTRACTOR SHALL CALCULATE THE EARTHWORK QUANTITIES TO THEIR SATISFACTION PRIOR TO THE START OF CONSTRUCTION, INCLUDING ALLOWANCE FOR SHRINKAGE, TRENCH SPOILS, STRIPPING, PRE–COMPACTION, AND CONSOLIDATION. NO ADDITIONAL COMPENSATION WILL BE MADE FOR ANY EXPORT OR IMPORT REQUIRED.
5. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNMENT ORDINANCES AND REGULATIONS RELATING TO THE WORK SHOWN ON THIS PLAN.
6. ALL GRADING SHALL CONFORM TO THE CITY OF FRESNO'S GRADING ORDINANCE, STANDARDS, AND SPECIFICATIONS; AND TO THE LATEST EDITION OF THE UNIFORM BUILDING CODE (CHAPTER 33); AND TO THE RECOMMENDATIONS OF THE PROJECT SOILS REPORT.
7. MATERIAL TO BE USED AS BACKFILL OR EMBANKMENT SHALL BE APPROVED BY THE SOILS ENGINEER AND BE FREE OF OBJECTIONABLE MATERIAL SUCH AS TREES, STUMPS, ROOTS, LOGS, OR OTHER DELETERIOUS MATERIAL. THE CONTRACTOR SHALL FOLLOW THE SITE DEVELOPMENT RECOMMENDATIONS OF THE SOILS REPORT.
8. THESE PLANS DO NOT AUTHORIZE SITE DISTURBANCE BEYOND THE LIMITS OF GRADING OR IMPROVEMENTS SHOWN HEREON. THE CONTRACTOR SHALL OBTAIN PERMISSION TO ENTER UPON ADJOINING PROPERTY TO CONSTRUCT IMPROVEMENTS OR TO GRADE ELSEWHERE PRIOR TO COMMENCING WORK. THE CITY OF FRESNO DOES NOT AUTHORIZE ENTRY PER THESE APPROVED PLANS.
9. THE OWNER SHALL CONTRACT WITH A SOILS ENGINEER TO SUPERVISE THE GRADING AND CERTIFY THAT ALL GRADING HAS BEEN DONE IN CONFORMANCE WITH THESE PLANS, CHAPTER 33 OF THE UNIFORM BUILDING CODE, AND THE RECOMMENDATIONS OF THE PROJECT SOILS REPORT.

MONUMENT PRESERVATION NOTE:

1. CONTRACTOR TO COORDINATE WITH THE PROJECT ENGINEER/SURVEYOR FOR PRESERVATION AND/OR PERPETUATION OF ALL EXISTING SURVEY MONUMENTS WHICH CONTROL SUBDIVISIONS, TRACTS, PROPERTY, BOUNDARIES, STREETS, HIGHWAYS, OR OTHER RIGHT–OF–WAY EASEMENTS. CONTRACTOR SHALL PROVIDE A MINIMUM OF 10 WORKING DAYS NOTICE TO PROJECT ENGINEER/SURVEYOR PRIOR TO DISTURBANCE OR REMOVAL OF EXISTING MONUMENTS. PROJECT ENGINEER/SURVEYOR SHALL PROVIDE CORNER TIES AND FILE THE REQUIRED DOCUMENTATION WITH THE COUNTY SURVEYOR PURSUANT TO BUSINESS AND PROFESSIONS CODE SECTION 8771. CONTRACTOR SHALL CONSTRUCT THE REPLACEMENT MONUMENTATION PER CITY STANDARD OR AS APPROVED BY THE CITY ENGINEER/SURVEYOR AND CONTACT THE PROJECT ENGINEER/SURVEYOR FOR VERIFICATION.

CONSTRUCTION GENERAL NOTES:

1. ALL LABOR, MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THESE PLANS AND THE CURRENT VERSION OF ALL APPLICABLE LOCAL AND STATE CODES, ORDINANCES AND STANDARDS OR AS REQUIRED BY PERMITS FROM OTHER AGENCIES AND/OR UTILITY COMPANIES INVOLVED IN THE WORK.
2. THE TYPE, LOCATIONS AND SIZES OF EXISTING UNDERGROUND STRUCTURES AND UTILITIES HAVE BEEN LOCATED IN THE FIELD OR OBTAINED FROM AVAILABLE RECORDS, RESPONSIBLE DILIGENCE HAS BEEN EXERCISED IN LOCATING ALL LINES, BUT THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION NOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES ENCOUNTERED BUT NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL ASSUME THE SOLE RESPONSIBILITY FOR DETERMINING OR CONFIRMING THE EXACT LOCATIONS OF THESE FACILITIES AND PROTECTING SAME FROM DAMAGE. ALL UTILITY SERVICES AND FACILITIES DAMAGED OR BROKEN BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED IN ACCORDANCE WITH THE REQUIREMENTS OF SAID UTILITY.
3. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY AND ALL CONFLICTS BETWEEN THE CONTRACT DOCUMENT AND THE ACTUAL SITE CONDITIONS PRIOR TO COMMENCING WORK IN ANY GIVEN AREA AND ALLOW TIME FOR THE ENGINEER TO ISSUE RESOLUTION TO ANY DISCOVERED CONFLICT. THE CONTRACTOR SHALL CONTINUE WORK IN OTHER AREAS OF THE PROJECT WITHOUT SUCH CONFLICTS UNTIL THE ENGINEER HAS ISSUED RESOLUTION BY CHANGE ORDER OR OTHER PROJECT APPROVED LINES OF COMMUNICATION.
4. UNAUTHORIZED CHANGES AND USES: THE ENGINEER PREPARING THESE PLANS SHALL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS BY OTHERS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER ANY PROPOSED MODIFICATIONS AND/OR CHANGES TO THE PLANS AND SPECIFICATIONS IN WRITING WITH SUFFICIENT DETAILED INFORMATION AND TIME TO ALLOW THE ENGINEER TO CONDUCT AN ANALYSIS OF THE PROPOSED CHANGE AND PREPARE A WRITTEN RESPONSE TO THE CONTRACTOR. APPROVED CHANGES AND/OR MODIFICATIONS TO THE PLANS AND SPECIFICATIONS SHALL BE ISSUED BY THE ENGINEER AS CHANGE ORDERS.
5. CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING HE SAFETY OF ALL PERSONS AND PROPERTY; THAT THE REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY WORK ON THIS PROJECT, EXCEPTING THE LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER/ENGINEER.
6. THESE PLANS ARE THE PROPERTY AND COPYRIGHT OF THE ENGINEER AND SHALL NOT BE USED ON ANY OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ENGINEER.
7. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND FIELD DIMENSIONS SHALL BE VERIFIED AT THE PROJECT SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE START OF ANY WORK.
8. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT 811, A MINIMUM OF 2 WORKING DAYS PRIOR TO ANY EXCAVATION OR WORK WITHIN THE PROJECT AREA.

NOTE TO OWNER AND CONTRACTOR:

1. THIS PLAN HAS BEEN PREPARED WITH THE INTENT THAT QK WILL BE PERFORMING THE CONSTRUCTION STAKING FOR THE COMPLETE PROJECT. IF, HOWEVER ANOTHER ENGINEERING AND/OR SURVEYING FIRM SHOULD BE EMPLOYED TO USE THEIR PLANS FOR THE PURPOSE OF CONSTRUCTION STAKING, NOTICE IS HEREBY GIVEN THAT THE FIRM OF QK WILL NOT ASSUME ANY RESPONSIBILITY FOR ERRORS OR OMISSIONS, IF ANY, WHICH MIGHT OCCUR AND WHICH COULD HAVE BEEN AVOIDED, CORRECTED OR MITIGATED IF QK HAD PERFORMED THE STAKING WORK.

GENERAL GRADING NOTES:

1. ALL GRADING SHALL COMPLY WITH THE 2019 CALIFORNIA BUILDING CODE.
2. THE OVERALL BUILDING SITE SHALL HAVE A MINIMUM SLOPE OF 0.5% IN ALL AREAS TO AN APPROVED DRAINAGE FACILITY OR A PUBLIC STREET.
3. NO SURFACE DRAINAGE SHALL BE PERMITTED TO DRAIN ONTO ADJACENT PROPERTIES EXCEPT FOR THE MAJOR STORM FLOW TO THE WEST ALONG THE PG&E EASEMENT PER FMFCD REQUIREMENTS.
4. ALL FILLS USED TO SUPPORT THE FOUNDATIONS OF ANY BUILDING OR STRUCTURE SHALL BE PLACED UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER, WITH FULL TIME OBSERVATION BY THE ENGINEER OR HIS QUALIFIED REPRESENTATIVE. A SOILS INVESTIGATION REPORT AND A REPORT OF SATISFACTORY PLACEMENT OF FILL, BOTH ACCEPTABLE TO THE BUILDING OFFICIAL, SHALL BE SUBMITTED.
5. A SOILS GRADING REPORT PREPARED BY A GEOTECHNICAL ENGINEER AND IN CONFORMANCE WITH THE CALIFORNIA BUILDING CODE SECTION 3318.1.2 SHALL BE PREPARED UPON COMPLETION OF GRADING.
6. ANY VERTICAL DIFFERENTIAL OF 1.0 FEET OR GREATER BETWEEN ADJACENT PROPERTIES SHALL BE SUPPORTED BY AN APPROVED RETAINING WALL.
7. ALL BLOCK WALLS AND RETAINING WALLS WILL REQUIRE SEPARATE BUILDING PERMITS IN ADDITION TO THE GRADING PERMIT.
8. ALL REQUIRED RETAINING WALLS WILL NEED TO BE FINALED BEFORE AS–GRADE CAN BE APPROVED.
9. THE CONTRACTOR IS RESPONSIBLE FOR LEGALLY DISPOSING OF ALL EXCESS SOIL.
10. THIS GRADING PLAN IS FOR APPROVAL OF ON–SITE ELEVATIONS ONLY. THE ELEVATIONS SHOWN WITHIN THE PUBLIC RIGHT OF WAY REQUIRE SEPARATE APPROVAL AND PERMIT. ANY NOTES THAT APPLY TO THE PUBLIC RIGHT OF WAY ARE FOR REFERENCE ONLY. IF ON SITE ELEVATIONS SHOWN DO NOT COINCIDE WITH APPROVED STREET PLANS, AN APPROVED AMENDMENT IS REQUIRED.
11. ALL TRENCHING SHALL BE IN COMPLIANCE WITH THE CBC APPENDIX 'J' 106.2.
12. PRIOR TO START OF WORK AN ASSIGNED "COMPETENT PERSON" IS TO INSPECT THE TRENCH DAILY FOR HAZARDOUS SOIL PROBLEMS AND ATMOSPHERE CONDITIONS AT THE BASE OF THE TRENCH.
13. PRIOR TO BACK FILLING THE TRENCH, THE SOIL ENGINEER IS TO INSPECT THE EXCAVATIONS AND TEST EACH LIFT OF SOIL PLACED PER THE SOIL ENGINEER'S RECOMMENDATIONS.
14. THE EDGE OF THE SOIL SPOIL PILES ARE TO BE PLACED NO CLOSER THAN 2' OF THE EXCAVATION.
15. TRENCHES DEEPER THAN 5' REQUIRE SHORING PLACED 18" ABOVE THE ADJACENT GRADE/SLOPE.
16. THIS GRADING PLAN IS INTENDED FOR ROUGH GRADING ONLY. THE GRADING INFORMATION AND DETAILS SHOWN ON THESE PLANS ARE NOT INTENDED TO BE ADEQUATE TO PROVIDE COMPLETED FUNCTIONING DRAINAGE SYSTEM ON INDIVIDUAL LOTS, NOR IS IT POSSIBLE TO DO SO WITHOUT ADDITIONAL ENGINEERING DESIGN RELATED TO THE SPECIFIC PLAN OF IMPROVEMENTS PROPOSED FOR EACH LOT. BUILDING CONSTRUCTION UPON THESE LOTS MAY REQUIRE ADDITIONAL FILL MATERIAL, ADDITIONAL GRADING, THE CONSTRUCTION OF DRAINAGE PIPES, CURBS, GUTTERS, PAVING OR OTHER WORK AND ADDITIONAL DESIGN AND SURVEYING SERVICES CONNECTED WITH SUCH PROPOSED IMPROVEMENTS IN ORDER TO ENSURE THAT AN ADEQUATE COMPLETED DRAINAGE SYSTEM WILL BE PROVIDED FOR EACH LOT. FAILURE TO PROVIDE SUCH ADDITIONAL MEASURES MAY RESULT IN ADVERSE SITE SPECIFIC PHYSICAL CONDITIONS INCLUDING EXCESSIVE MOISTURE AND POTENTIAL HEALTH HAZARDS INCLUDING THE PRESENCE OF POTENTIALLY TOXIC MOLD AND/OR OTHER PROBLEMS THAT CAN NOT BE ANTICIPATED.

SITE PREPARATION NOTES:

1. GENERAL SITE CLEARING SHALL INCLUDE REMOVAL OF VEGETATION; CONCRETE; ASPHALTIC CONCRETE; EXISTING UTILITIES; STRUCTURES INCLUDING FOUNDATIONS; BASEMENT WALLS AND FLOORS; EXISTING STOCKPILED SOIL; TREES AND ASSOCIATED ROOT SYSTEMS; RUBBLE; RUBBISH; AND ANY LOOSE AND/OR SATURATED MATERIALS. SEE SOILS REPORT AND REPORT UPDATE FOR RECOMMENDATIONS REGARDING SITE CLEARING AND STRIPPING.
2. FOLLOWING STRIPPING, FILL REMOVAL, DEBRIS REMOVAL, TREE REMOVAL, DEMOLITION ACTIVITIES, AND PRIOR TO FILL PLACEMENT, THE UPPER 6 INCHES MINIMUM OF THE NATIVE SOILS WITHIN THE BUILDING, EXTERIOR FLATWORK, AND PAVEMENT AREAS SHOULD BE EXCAVATED, WORKED UNTIL UNIFORM AND FREE FROM LARGE CLODS, MOISTURE–CONDITIONED TO A MINIMUM OF 2 PERCENT ABOVE OPTIMUM MOISTURE CONTENT, AND RECOMPACTED TO A MINIMUM OF 90 PERCENT OF MAXIMUM DENSITY BASED ON ASTM TEST METHOD D 1557.
3. TREES AND SHRUBS WERE PREVIOUSLY LOCATED THROUGHOUT THE SITE. TREE AND SHRUB REMOVAL OPERATIONS SHOULD INCLUDE ROOTS GREATER THAN 1 INCH IN DIAMETER. THE RESULTING EXCAVATIONS SHOULD BE BACKFILLED WITH ENGINEERED FILL, COMPACTED TO A MINIMUM OF 90 PERCENT OF MAXIMUM DENSITY BASED ON ASTM TEST METHOD D1557.
4. THE UPPER SOILS, DURING WET WINTER MONTHS, BECOME VERY MOIST DUE TO THE ABSORPTIVE CHARACTERISTICS OF THE SOIL. EARTHWORK OPERATIONS PERFORMED DURING WINTER MONTHS MAY ENCOUNTER VERY MOIST UNSTABLE SOILS, WHICH MAY REQUIRE REMOVAL TO GRADE A STABLE BUILDING FOUNDATION. PROJECT SITE WINTERIZATION, CONSISTING OF PLACEMENT OF AGGREGATE BASE AND PROTECTING EXPOSED SOILS DURING THE CONSTRUCTION PHASE, SHOULD BE PERFORMED.
5. A GEOTECHNICAL ENGINEER, OR THEIR REPRESENTATIVE, SHOULD BE PRESENT DURING ALL SITE CLEARING AND GRADING OPERATIONS TO TEST AND OBSERVE EARTHWORK CONSTRUCTION. THIS TESTING AND OBSERVATION IS AN INTEGRAL PART OF THE GEOTECHNICAL ENGINEER'S SERVICE, AS ACCEPTANCE OF EARTHWORK CONSTRUCTION IS DEPENDENT UPON COMPACTION AND STABILITY OF THE MATERIAL. THE GEOTECHNICAL ENGINEER MAY REJECT ANY MATERIAL THAT DOES NOT MEET COMPACTION AND STABILITY REQUIREMENTS. FURTHER RECOMMENDATIONS OF THE GEOTECHNICAL REPORT ARE PREDICATED UPON THE ASSUMPTION THAT THE EARTHWORK CONSTRUCTION WILL CONFORM TO RECOMMENDATIONS SET FORTH IN THE REPORT.

NOTICE TO CONTRACTORS:

1. ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS" OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS "CONSTRUCTION SAFETY ORDERS." THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.
2. CONTRACTOR FURTHER AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB–SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
3. THE EXISTENCE AND APPROXIMATE LOCATIONS OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. THE CIVIL ENGINEER ASSUMES NO LIABILITY AS TO THE EXACT LOCATION OF SAID LINES NOR FOR UTILITY OR IRRIGATION LINES WHOSE LOCATIONS ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY AND IRRIGATION COMPANIES PRIOR TO WORK OR EXCAVATION TO DETERMINE THE EXACT LOCATIONS OF ALL LINES AFFECTING THIS WORK, WHETHER OR NOT SHOWN HEREON, AND FOR ANY DAMAGE OR PROTECTION TO THESE LINES.

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LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 12/19/2025
DRAWN BY: KL CHKED BY: G.L.

CITY SUBMITTAL

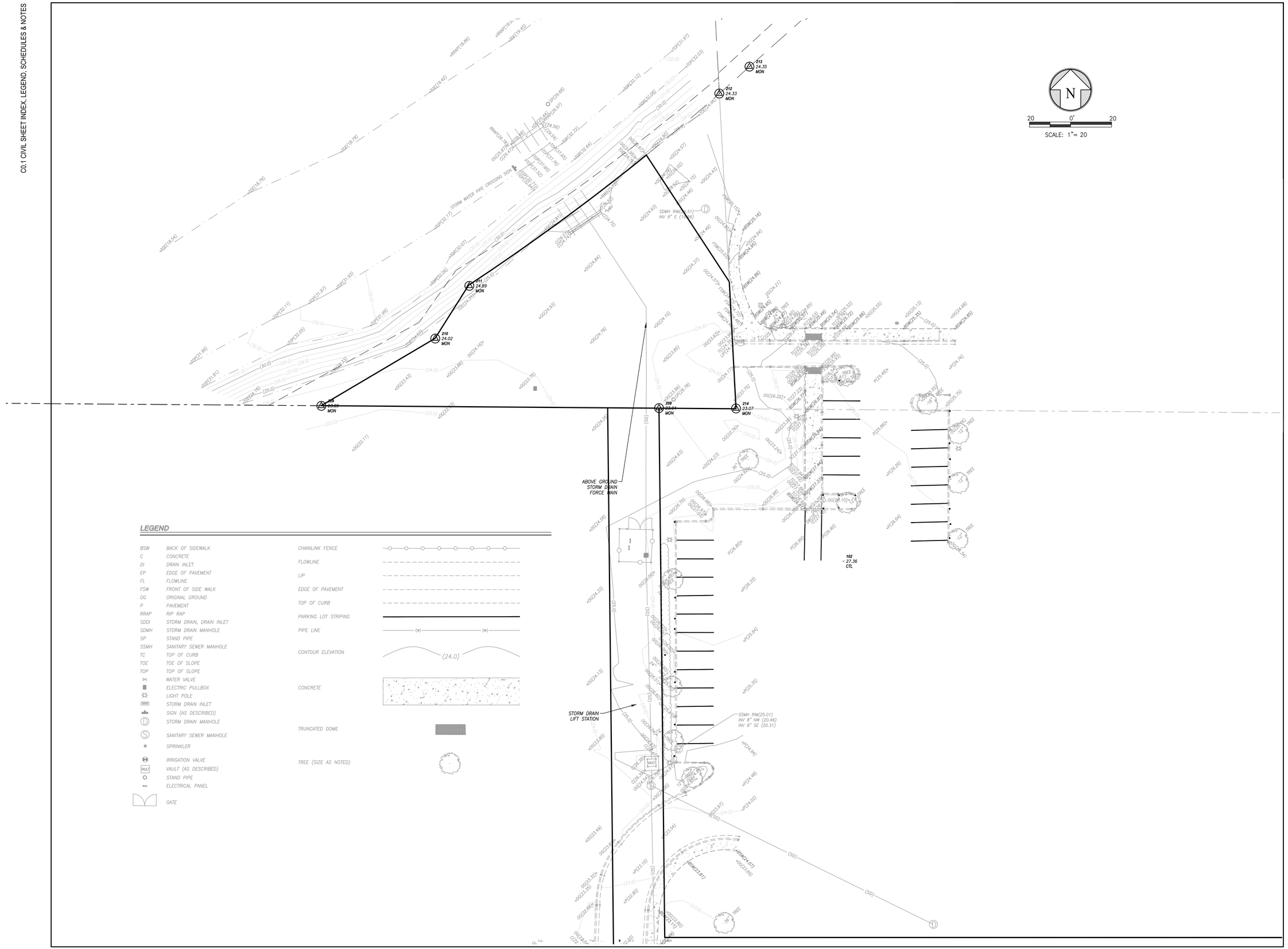
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CIVIL PLUMBING NOTES

CP0.2

C0.1 CIVIL SHEET INDEX, LEGEND, SCHEDULES & NOTES



LEGEND

BSW	BACK OF SIDEWALK	CHAINLINK FENCE	
C	CONCRETE	FLOWLINE	
DI	DRAIN INLET	LIP	
EP	EDGE OF PAVEMENT	EDGE OF PAVEMENT	
FL	FLOWLINE	TOP OF CURB	
FSW	FRONT OF SIDE WALK	PARKING LOT STRIPING	
OG	ORIGINAL GROUND	PIPE LINE	(W) (W)
P	PAVEMENT	CONTOUR ELEVATION	(24.0)
RRAP	RIP RAP	CONCRETE	
SDDI	STORM DRAIN, DRAIN INLET	TRUNCATED DOME	
SDMH	STORM DRAIN MANHOLE	TREE (SIZE AS NOTED)	
SP	STAND PIPE		
SSMH	SANITARY SEWER MANHOLE		
TC	TOP OF CURB		
TOE	TOE OF SLOPE		
TOP	TOP OF SLOPE		
⋈	WATER VALVE		
■	ELECTRIC PULLBOX		
☼	LIGHT POLE		
SDDI	STORM DRAIN INLET		
	SIGN (AS DESCRIBED)		
Ⓓ	STORM DRAIN MANHOLE		
Ⓢ	SANITARY SEWER MANHOLE		
✳	SPRINKLER		
	IRRIGATION VALVE		
VAULT	VAULT (AS DESCRIBED)		
○	STAND PIPE		
▬	ELECTRICAL PANEL		
	GATE		

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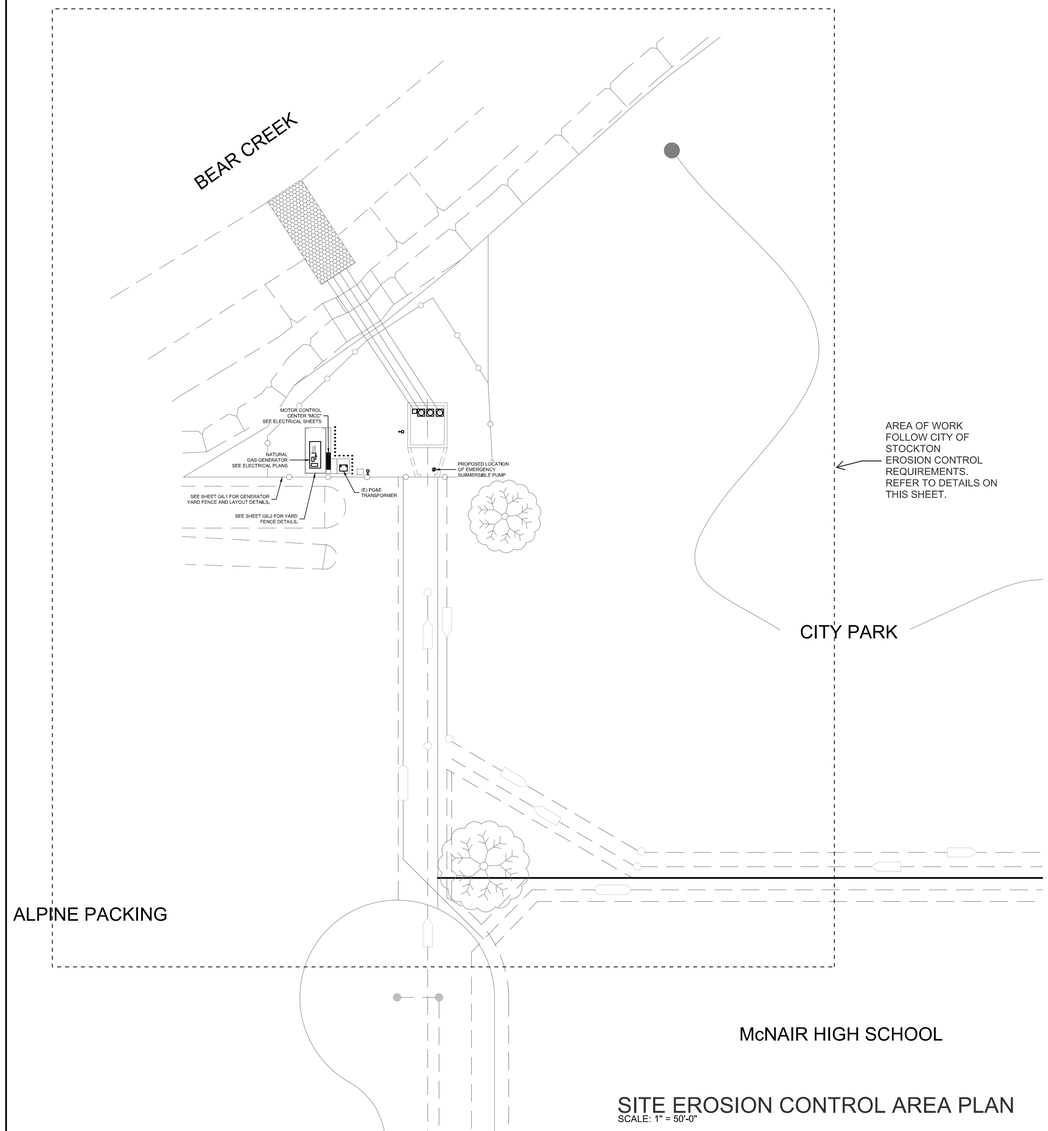
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CIVIL PLUMBING TOPO SURVEY PLAN

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CP1.0

C0.1 CIVIL SHEET INDEX, LEGEND, SCHEDULES & NOTES



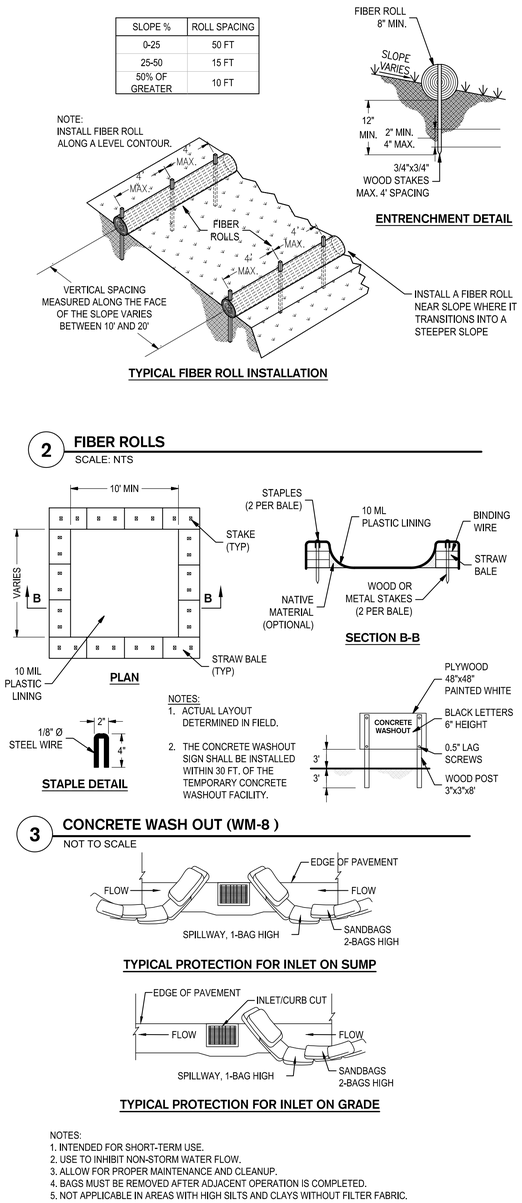
SITE EROSION CONTROL AREA PLAN

SCALE: 1" = 50'-0"

EROSION CONTROL LEGEND

SYMBOL	DESCRIPTION
	FIBER ROLLED WATTLE, SEE DETAIL THIS SHEET
	CONSTRUCTION FENCE
	SILT FENCE, SEE DETAIL THIS SHEET
	DRAIN INLET PROTECTION, SEE DETAIL THIS SHEET
	STABILIZED CONSTRUCTION ENTRANCE/EXIT, SEE DETAIL THIS SHEET
	CONCRETE WASHOUT, CONTRACTOR TO DETERMINE LOCATION, SEE DETAIL THIS SHEET

SLOPE %	ROLL SPACING
0-25	50 FT
25-50	15 FT
50% OF GREATER	10 FT



TYPICAL FIBER ROLL INSTALLATION

ENTRENCHMENT DETAIL

2 FIBER ROLLS

SCALE: NTS

PLAN

SECTION B-B

STAPLE DETAIL

NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

3 CONCRETE WASH OUT (WM-8)

NOT TO SCALE

TYPICAL PROTECTION FOR INLET ON SUMP

TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:
1. INTENDED FOR SHORT-TERM USE.
2. USE TO INHIBIT NON-STORM WATER FLOW.
3. ALLOW FOR PROPER MAINTENANCE AND CLEANUP.
4. BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
5. NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

4 DI PROTECTION TYPE 3 - GRAVEL BAG DETAIL (SE-10)

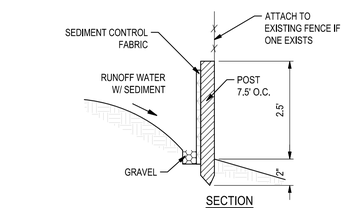
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EROSION CONTROL GENERAL NOTES

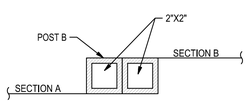
1. PLANS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW ALL OFFSETS. THE SITE IS DYNAMIC AND CHANGES ON A DAILY BASIS, CHANGES SHOULD BE MADE ACCORDING TO EXISTING CONDITIONS. BECAUSE IT IS IMPOSSIBLE TO PREDICT ALL POSSIBLE SITUATIONS, CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES TO ENSURE QUALITY CONTROL.
2. THE CONTRACTOR SHALL REVIEW THE CURRENT STORM WATER POLLUTION PREVENTION PLAN (SWPPP). IT IS THE CONTRACTORS SOLE RESPONSIBILITY FOR CONDUCTING HIS/HER OPERTATIONS IN ADHERANCE TO THE SWPPP. THE CONTRACTOR IS RESPONSIBLE FOR ANY FINES, DELAYS, AND/OR DAMAGES RESULTING FROM ANY STATE WATER QUALITY CONTROL BOARD SANCTIONS CAUSED BY THE OPERATION OF THE CONTRACTOR OF HIS/HER SUBCONTRACTORS.
3. THE FOLLOWING PLANS ARE ACCURATE FOR EROSION CONTROL PURPOSES ONLY. THE CONTRACTOR SHALL FOLLOW THESE PLANS UNLESS FIELD CONDITIONS DICTATE MODIFICATION. IF MODIFICATION IS NECESSARY, A SWPPP AMENDMENT MUST BE DONE. THIS MAY REQUIRE MODIFICATION TO THESE DRAWINGS AND ENGINEER CONCURRENCE.
4. INSPECT AND REPAIR FILTERS AFTER EACH STORM EVENT. REMOVE SEDIMENT WHEN 1/2 OF THE FILTER DEPTH HAS BEEN FILLED. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA TRIBUTARY TO A SEDIMENT BASIN OR OTHER FILTERING MEASURE. SEDIMENT AND GRAVEL SHALL BE IMMEDIATELY REMOVED FROM PAVEMENT OF ROAD.
5. UNFINISHED AND DISTURBED ARE TO BE PROTECTED WITH AN APPLICATION OF BLOWN STRAW AND ORGANIC BINDER.

ITEM	LB/ACRE
STRAW	4,000
ORGANIC BINDER	200

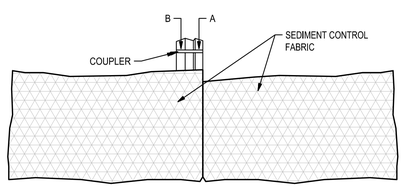
6. ALTERNATE INLET PROTECTION SHALL BE USED ON ROADS OPEN TO THE PUBLIC IF ANY HAZARDOUS MATERIALS OR WASTES WHICH HAVE BEEN TREATED, STORED, DISPOSED, SPILLED, OR LEAKED IN SIGNIFICANT QUANTITIES ONTO THE CONSTRUCTION SITE, THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE THEM FROM THE SITE AND DISPOSE OF PROPERLY.
7. CHLORINATED OR DECHLORINATED WATER SHALL NOT BE DISCHARGED INTO THE STORM DRAIN SYSTEM. THE CONTRACTOR MAY DISPOSE THIS WATER INTO THE SANITARY SEWER SYSTEM UPON APPROVAL BY THE GOVERNING AGENCY.
8. THE CONTRACTOR SHALL KEEP MAINTENANCE, INSPECTION, AND REPAIR PROCEDURES TO ENSURE THAT ALL GRADED SURFACES, WALLS, BERMS, DRAINAGE STRUCTURES, VEGETATION, EROSION AND SEDIMENT CONTROL MEASURES, AND OTHER CONTROLS ARE MAINTAINED IN GOOD AND EFFECTIVE CONDITION AND ARE PROMPTLY REPAIRED OR RESTORED WHEN NECESSARY. ANY DEWATERING WATER SHALL NOT BE DISCHARGED DIRECTLY INTO THE STORM WATER SYSTEM, AND SHALL NOT BE DISCHARGED INTO THE SEWER SYSTEM.
9. ALL DEWATERING WATER MUST BE CHANNELED THROUGH AN APPROVED SEDIMENT BARRIER PRIOR TO THE WATER ENTERING THE STORM SYSTEM.
10. PAVEMENT CLEANING- FLUSHING OF STREETS/ PARKING LOTS TO REMOVE DIRT AND CONSTRUCTION DEBRIS IS PROHIBITED UNLESS PROPER SEDIMENT CONTROLS ARE USED. PREFERABLY, AREAS REQUIRING CLEANING SHOULD BE SWEPT.
11. ALL STOCKPILES OF MATERIALS THAT ARE NOT GOING TO BE USED FOR 14 DAYS SHALL BE COVERED.
12. CONTRACTOR TO USE BEST MANAGEMENT PRACTICES (BMPs) THROUGHOUT CONSTRUCTION. USE ALL BMPs THAT APPLY TO THE PROJECT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING BMPs:
    - A. DRAIN INLET PROTECTION - CALIFORNIA STORMWATER BMP HANDBOOK SECTION SE-10
    - B. SOLID WASTE MANAGEMENT - CALIFORNIA STORMWATER BMP HANDBOOK SECTION WM-5
    - C. MATERIAL STORAGE - CALIFORNIA STORMWATER BMP HANDBOOK SECTION WM-1
    - D. PAVING - CALIFORNIA STORMWATER BMP HANDBOOK SECTION NS-3
    - E. DUST CONTROL, SEDIMENT CONTROL, EROSION CONTROL AND CONCRETE WASHOUT AREAS - SHOWN ON THIS SHEET WITH DETAILS
13. CONTRACTOR SHALL INSTALL DRAIN INLET PROTECTION FOR ALL CATCH BASINS LOCATED IN THE VICINITY OF WORK. THIS INCLUDES ANY CATCH BASINS LOCATED IN THE PUBLIC RIGHT-OF-WAY, AS WELL AS ANY ON-SITE CATCH BASINS LOCATED IN THE PARKING LOT.
14. CONTRACTOR SHALL ENSURE THAT CONSTRUCTION ACTIVITIES DO NOT DEPOSIT SEDIMENT ONTO THE PARKING LOT OR PUBLIC ROADWAY, SIDEWALK, AND GUTTERS.
15. CONTRACTOR SHALL USE STREET SWEEPING OR OTHER DRY-SWEEPING METHOD, AS NECESSARY, TO REMOVE CONSTRICTION-RELATED SEDIMENTS FROM PAVEMENT IN PROJECT AREA PARKING LOT AND PUBLIC SIDEWALKS, GUTTERS, AND ROADWAY.
16. CONTRACTOR SHALL SCHEDULE WORK FOR DRY-WEATHER DAYS WHEN NO RAIN IS IN THE IMMEDIATE FORECAST.



SECTION



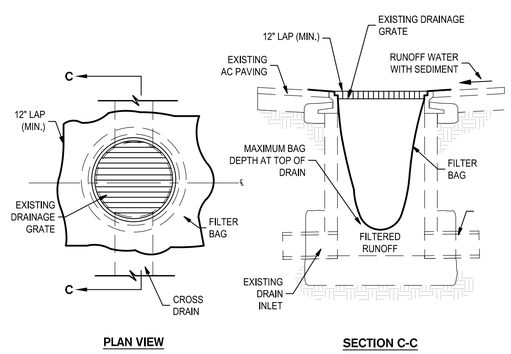
PLAN VIEW



JOINING

1 SILT FENCE SEDIMENT BARRIER (SE-1)

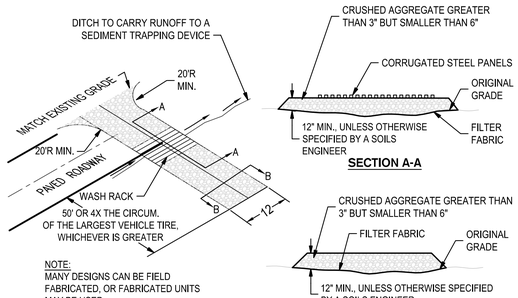
NOT TO SCALE



PLAN VIEW **SECTION C-C**

6 DI PROTECTION TYPE 3 - GRAVEL BAG DETAIL (SE-10)

NOT TO SCALE



NOTE:
MANY DESIGNS CAN BE FIELD FABRICATED, OR FABRICATED UNITS MAY BE USED.

SECTION A-A

5 STABILIZED CONSTRUCTION ENTRANCE/EXIT TIRE WASH (TC-1)

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KEY PLAN

NORTH: PLAN TRUE

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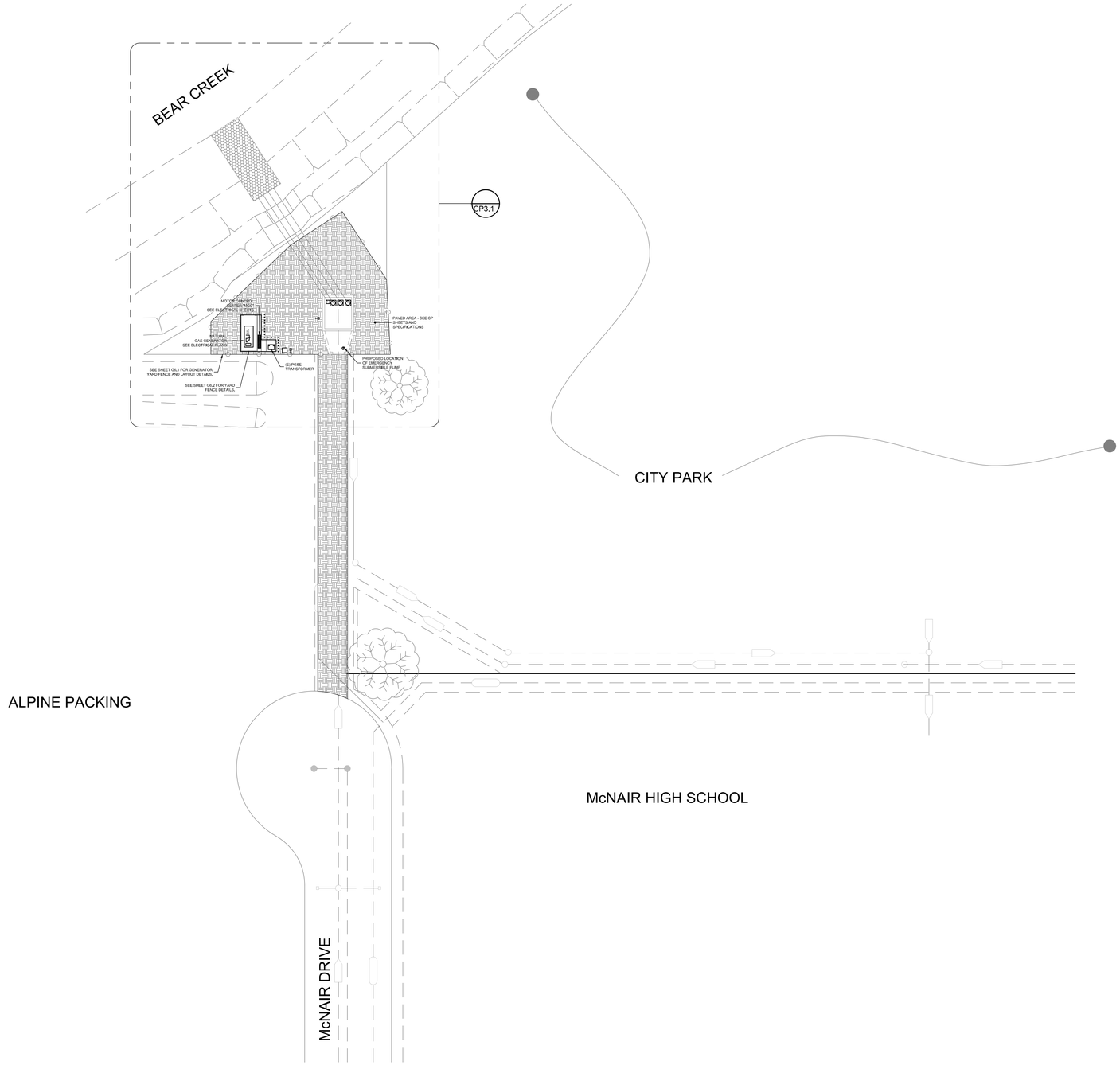
#	DESCRIPTION	DATE

CIVIL PLUMBING SITE EROSION CONTROL PLAN

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C0.1 CIVIL SHEET INDEX, LEGEND, SCHEDULES & NOTES



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LODI UNIFIED SCHOOL DISTRICT

KEY PLAN
NORTH: PLAN TRUE

Architect / Engineer

CLIENT
LODI UNIFIED SCHOOL DISTRICT
PROJECT NUMBER
250131
DATE: 12/19/2025
DRAWN BY: KL CHKED BY: G.L.

CITY SUBMITTAL

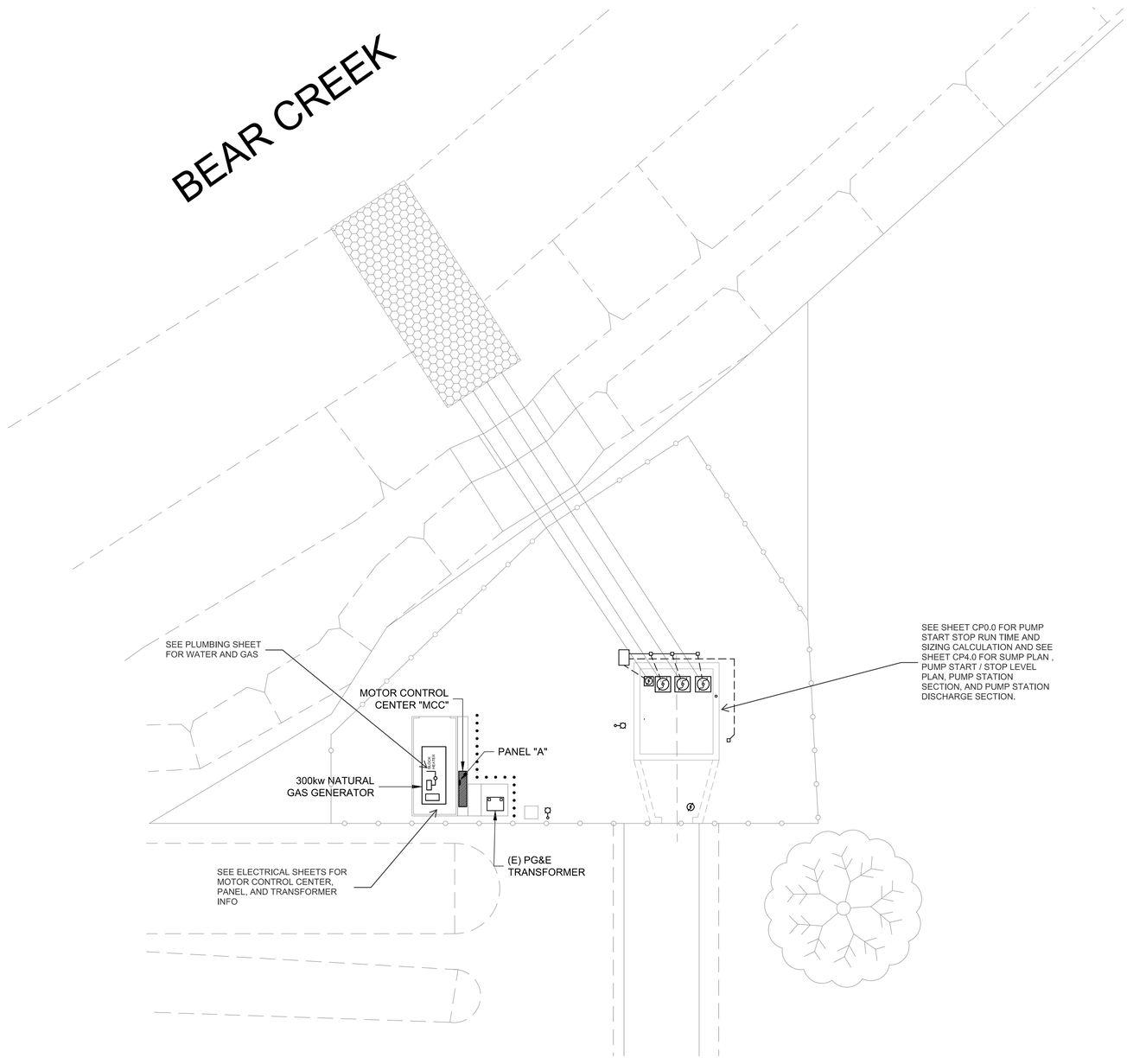
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CIVIL PLUMBING SITE PLAN

This document is for plan review only

CP3.0

C0.1 CIVIL SHEET INDEX, LEGEND, SCHEDULES & NOTES



CIVIL PLUMBING ENLARGED SITE PLAN

SCALE: 1" = 50'-0"

LEAF ENGINEERS
FOLSOM
1100 Iron Point Rd., Suite 200
Folsom, CA 95630
916.335.9992 p
LEAFengineers.com

McNAIR HIGH SCHOOL STORMWATER PUMP STATION

LODI UNIFIED SCHOOL DISTRICT
McNAIR HIGH SCHOOL
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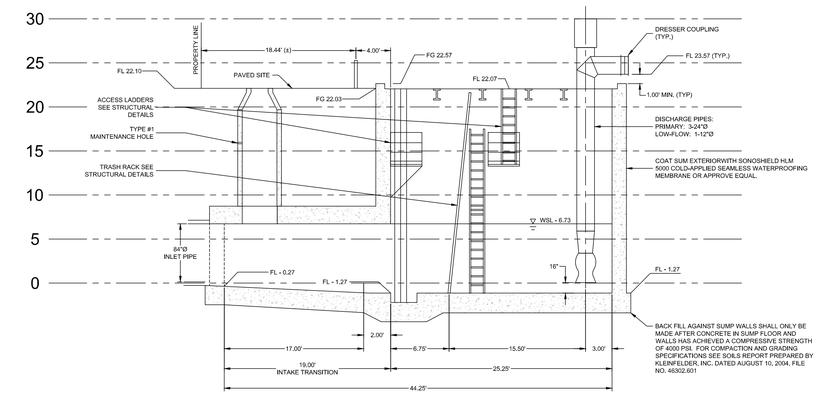
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CIVIL PLUMBING ENLARGED SITE PLAN

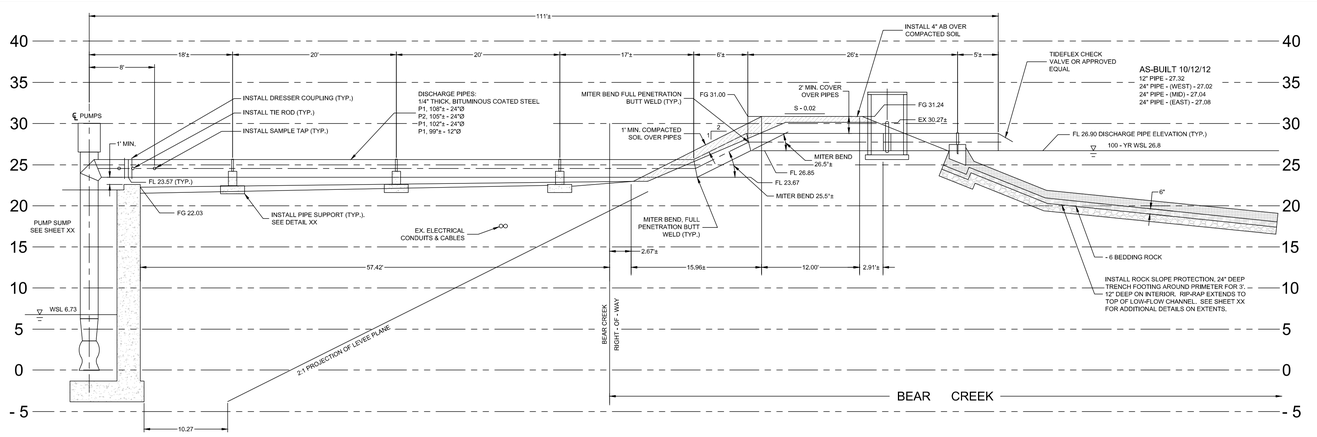
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CP3.1

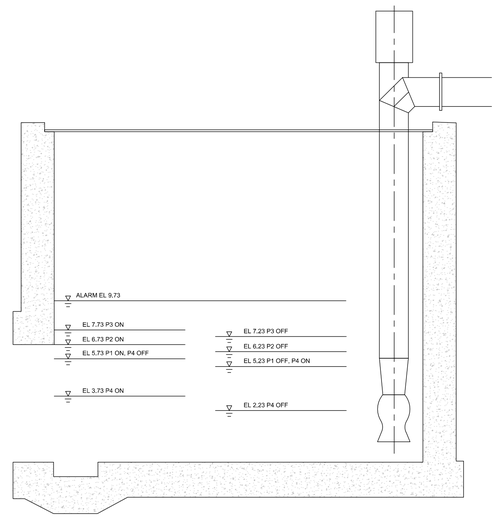
C0.1 CIVIL SHEET INDEX, LEGEND, SCHEDULES & NOTES



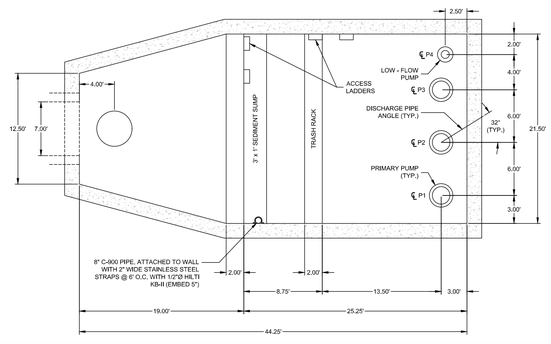
N.T.S | 02 | PUMP STATION INTAKE SECTION | N.T.S | 01



PUMP STATION DISCHARGE SECTION | N.T.S | 03



PUMP START / STOP LEVELS | N.T.S | 06



SUMP PLAN | N.T.S | 04

N.T.S | 05

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CIVIL PLUMBING DETAILS AND SECTIONS

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