



Project Manual

for the

GATEWAY PROGRAM PORTABLE AND SHADE STRUCTURES BID SPECS

September 14, 2026

DSA File Number: 7-H4

DSA Application Number: 01-122796

PTN: 61721-99

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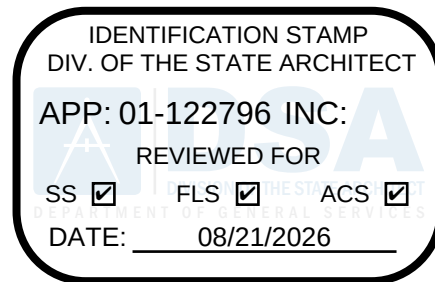
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ARCHITECT'S PROJECT NO.: 2497.00

DOCUMENT 00 0107

PROFESSIONAL SEALS AND DSA IDENTIFICATION STAMP

DIVISION OF THE STATE ARCHITECT IDENTIFICATION STAMP



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Gateway Portable and Shade Structures
Liberty Union High School District
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FOR

PORTABLE, SHADE STRUCTURES & LANDSCAPE

IMPROVEMENTS AT

THE GATEWAY PROGRAM

FOR THE

LIBERTY UNION HIGH SCHOOL DISTRICT

**19 Oak Street
Brentwood, CA 94513
Telephone: (925) 634-2166**

September 11, 2026



DSA APP. No. 01-122796

LUHSD Bid No. 26-27-02

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EXHIBIT B: OCIP Project Insurance Manual

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EXHIBIT E: Alternate Bid Descriptions

NOTICE INVITING BIDS

LIBERTY UNION HIGH SCHOOL DISTRICT

NOTICE IS HEREBY GIVEN that the Liberty Union High School District, acting by and through its Governing Board, will receive, prior to **October 13, 2026 at 2:00 PM.**, sealed bids for the award of a contract for the Liberty Union High School District's **Portable, Shade Structures & Landscape Improvements at the Gateway Program** project. Bid documents are available on the Liberty Union High School District website at www.luhsd.net.

All interested bidders must attend a mandatory Pre-Bid conference at Independence High School, 929 2nd Street, Brentwood, CA 94513, at **11:00 AM on Tuesday, September 29, 2026.**

DSA App. No. **01-122796**

PROJECT: Portable, Shade Structures & Landscape Improvements at the Gateway Program

All bids shall be made and presented only on the forms presented by the District. Bids shall be received in the Maintenance and Operations Office of the District located at 19 Oak Street, Brentwood, California 94513, and all Bids shall be opened and publicly read aloud at the above stated time and place. The District's time clock shall govern and control the time for all bids to be received by the District and no other clock shall be used to determine the time when bids shall be received by the District in accordance with this Notice Inviting Bids. Any bids received after the time specified above or after any extensions due to material changes shall be returned unopened.

The Contract Time is 5-months (refer to Exhibit C: Milestone Schedule)

CONTRACTOR should consult the General Conditions, Supplementary Conditions, and General Requirements regarding Milestones and Liquidated Damages.

PREQUALIFICATION OF PRIME CONTRACTORS IS REQUIRED FOR THIS PROJECT. ALL BIDDERS MUST HAVE RECEIVED PRIOR PREQUALIFICATION APPROVAL FROM THE DISTRICT IN ORDER TO SUBMIT A BID FOR THIS PROJECT.

The engineer's approximate estimate for this project is \$2,800,000.00.

Scope of work:

This Project includes the relocation of one staged portable classroom building to a new pad, addition of fire sprinklers to an existing portable classroom building, underground utilities, a new driveway and bus drop off loop, new shade structures, and associated site improvements including but not limited to new concrete flatwork, artificial turf, landscaping, fencing and gates.

Bid Alternates:

TBD

Each bidder shall be a licensed contractor pursuant to the California Business and Professions Code, and be licensed to perform the work called for in the Contract Documents. The successful bidder must possess a valid and active **Class “A” and/or Class “B”** License at the time of bid and throughout the duration of this Contract. The Contractor’s California State License number shall be clearly stated on the bidder’s proposal.

Subcontractors shall be licensed pursuant to California law for the trades necessary to perform the Work called for in the Contract Documents.

Each bid must strictly conform with and be responsive to the Contract Documents as defined in the General Conditions.

The District reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding.

Each bidder shall submit with its bid — on the form furnished with the Contract Documents — a list of the designated subcontractors on this Project as required by the Subletting and Subcontracting Fair Practices Act, California Public Contract Code section 4100 et seq.

In accordance with California Public Contract Code section 22300, the District will permit the substitution of securities for any moneys withheld by the District to ensure performance under the Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the District, or with a state or federally chartered bank as the escrow agent, who shall then pay such moneys to the Contractor. Upon satisfactory completion of the Contract, the securities shall be returned to the Contractor.

Each bidder’s bid must be accompanied by one of the following forms of bidder’s security: (1) cash; (2) a cashier’s check made payable to the District; (3) a certified check made payable to the District; or (4) a bidder’s bond executed by a California admitted surety as defined in Code of Civil Procedure section 995.120, made payable to the District in the form set forth in the Contract Documents. Such bidder’s security must be in an amount not less than ten percent (10%) of the maximum amount of bid as a guarantee that the bidder will enter into the proposed Contract, if the same is awarded to such bidder, and will provide the required Performance and Payment Bonds, insurance certificates and any other required documents. In the event of failure to enter into said Contract or provide the necessary documents, said security will be forfeited.

The Contractor and all subcontractors shall comply with the requirements set forth in Division 2, Part 7, Chapter 1 of the Labor Code. The District has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this work is to be performed for each craft, classification or type of worker needed to execute the Contract. These per diem rates, including holiday and overtime work, as well as employer payments for health and welfare, pension, vacation, and similar purposes, are on file at the District, and are also available from the Director of the Department of Industrial Relations. Pursuant to California Labor Code section 1720 et seq., it shall be mandatory upon the Contractor to whom the Contract is awarded, and upon any subcontractor under such Contractor, to pay not less than the said specified rates to all workers employed by them in the execution of the Contract.

A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in the Labor Code, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. It is not a violation of this section for an unregistered

contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

All payroll records as detailed in Labor Code §1776 of the Contractor and all Subcontractors shall be certified and furnished directly to the Labor Commissioner in accordance with Labor Code §1771.4(a)(3) once every thirty (30) days while Work is being performed on the Project and within thirty (30) days after the final day of Work performed on the Project (or more frequently if required by the District or the Labor Commissioner). The Contractor and all Subcontractors shall submit their own payroll records to the Labor Commissioner on the internet website of the Department of Industrial Relations and such payroll records shall be in an electronic format prescribed by the Labor Commissioner. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

Each Bidder shall comply with all In-Use Off-Road Diesel-Fueled Fleets Regulations (the “Fleets Regulation”) implemented by the California Air Resources Board (“CARB”) which apply broadly to all self-propelled off-road diesel vehicles 25 horsepower or greater and other forms of equipment used in California. Bidders are required to comply with all CARB orders and Fleets Regulation requirements, including, without limitation, all applicable sections of the Fleets Regulation, as codified in Title 13 of the California Code of Regulations section 2449 et seq. throughout the duration of the Project. Bidders must provide, with their Bid, copies of the Bidder’s and all listed subcontractors’ most recent and valid Certificate(s) of Reported Compliance (“CRC”) issued by the CARB. Any Bidder’s failure to provide valid CRCs as required herein may render such Bidder’s Bid non-responsive. Additionally, any Bidder’s failure to complete and submit the enclosed Fleet Compliance Certification form with its Bid, may render such Bid non-responsive.

No bidder may withdraw any bid for a period of ninety (90) calendar days after the date set for the opening of bids.

Separate payment and performance bonds, each in an amount equal to 100% of the total Contract amount, are required, and shall be provided to the District prior to execution of the Contract and shall be in the form set forth in the Contract Documents.

All bonds (Bid, Performance, and Payment) must be issued by a California admitted surety as defined in California Code of Civil Procedure section 995.120.

Where applicable, bidders must meet the requirements set forth in Public Contract Code section 10115 et seq., Military and Veterans Code section 999 et seq. and California Code of Regulations, Title 2, Section 1896.60 et seq. regarding Disabled Veteran Business Enterprise (“DVBE”) Programs. Forms are included in this Bid Package.

Any request for substitutions pursuant to Public Contract Code section 3400 must be made at the time of Bid on the Substitution Request Form set forth in the Contract Documents and included with the bid.

No telephone or facsimile machine will be available to bidders on the District premises at any time.

It is each bidder's sole responsibility to ensure its bid is timely delivered and received at the location designated as specified above. Any bid received at the designated location after the scheduled closing time for receipt of bids shall be returned to the bidder unopened.

LIBERTY UNION HIGH SCHOOL DISTRICT

INSTRUCTIONS TO BIDDERS

1. **Preparation of Bid Form.** Proposals under these specifications shall be submitted on the blank forms furnished herewith at the time and place stated in the Notice Inviting Bids. The District's time clock shall govern and control the time for all bids to be received by the District and no other clock shall be used to determine the time when bids shall be received by the District in accordance with the Notice Inviting Bids. All blanks in the bid form must be appropriately filled in, and all proposed prices must be stated clearly and legibly in both words and numerals. All bids must be signed by the bidder in permanent black or blue ink and submitted to the District in accordance with the Notice Inviting Bids. The District reserves the right to reject any Bid if all of the above information is not furnished. It is each Bidder's sole responsibility to ensure its Bid is timely submitted and received by the District in accordance with the Notice Inviting Bids. Any bid received by the District after the scheduled closing time for the receipt of Bids shall be returned to the Bidder unopened.

2. **Bid Security.** Each bid must be accompanied by one of the following forms of bidder's security: (1) cash; (2) a cashier's check made payable to the District; (3) a certified check made payable to the District; or (4) a bidder's bond executed by a California admitted surety as defined in Code of Civil Procedure section 995.120, made payable to the District, in the form set forth in the Contract Documents. Such bidder's security must be in an amount not less than ten percent (10%) of the maximum amount of such bidder's bid as a guarantee that the bidder will enter into the Contract, if the same is awarded to such bidder, and will provide the required Performance and Payment Bonds, insurance certificates and any other required documents. In the event that a bidder is awarded the Contract and such bidder fails to enter into said Contract or provide the surety bond or bonds within five (5) calendar days after award of the Contract to bidder, said security will be forfeited.

3. **Signature.** The bid form, all bonds, all designations of subcontractors, the Contractor's Certificate, the Agreement, and all Guarantees must be signed in permanent blue ink in the name of the bidder and must bear the signature in longhand of the person or persons duly authorized to sign the bid.

If bidder is a corporation, the legal name of the corporation shall first be set forth, together with two signatures: one from the President and one from the Secretary or Assistant Secretary. Alternatively, the signature of other authorized officers or agents may be affixed, if a certified copy of the resolution of the corporate board of directors authorizing them to do so is provided to the District. Such documents shall include the title of such signatories below the signature and shall bear the corporate seal.

If bidder is a partnership, the true name of the firm shall first be set forth, together with the names of all persons comprising the partnership or co-partnership. The bid must be signed by all partners comprising the partnership unless proof in the form of a certified copy of a statement of partnership acknowledging the signer to be a general partner is presented to the District, in which case the general partner may sign.

Bids submitted as joint ventures must so state and be signed by each joint venturer.

Bids submitted by individuals must be signed by the bidder unless an up to date power- of-attorney is on file in the District office, in which case, said person may sign for the individual.

The above rules also apply in the case of the use of a fictitious firm name. In addition, however, where a fictitious name is used, it must be so indicated in the signature.

4. Modifications. Changes in or additions to the bid form, recapitulations of the work bid upon, alternative proposals, or any other modification of the bid form which is not specifically called for in the Contract Documents may result in the District's rejection of the bid as not being responsive to the Notice Inviting Bids. **No oral or telephonic modification of any bid submitted will be considered.**

5. Erasures, Inconsistent or Illegible Bids. The bid submitted must not contain any erasures, interlineations, or other corrections unless each such correction creates no inconsistency and is suitably authenticated by affixing in the margin immediately opposite the correction the signature or signatures of the person or persons signing the bid. In the event of inconsistency between words and figures in the bid price, words shall control figures. In the event that the District determines that any bid is unintelligible, inconsistent, or ambiguous, the District may reject such bid as not being responsive to the Notice Inviting Bids.

6. Examination of Site and Contract Documents. Each bidder shall visit the site of the proposed work and become fully acquainted with the conditions relating to the construction and labor so that the facilities, difficulties, and restrictions attending the execution of the work under the Contract are fully understood. Bidders shall thoroughly examine and be familiar with the drawings and specifications and all other documents and requirements that are attached to and/or contained in the Project Manual or other documents issued to bidders. The failure or omission of any bidder to receive or examine any Contract Documents, form, instrument, addendum, or other document or to visit the site and become acquainted with conditions there existing shall not relieve any bidder from obligations with respect to the bid or to the contract. The submission of a bid shall be taken as prima facie evidence of compliance with this Section. Bidders shall not, at any time after submission of the bid, dispute, complain, or assert that there were any misunderstandings with regard to the nature or amount of work to be done.

7. Withdrawal of Bids. Any bid may be withdrawn, either personally or by written request, at any time prior to the scheduled closing time for receipt of bids. The bid security for bids withdrawn prior to the scheduled closing time for receipt of bids, in accordance with this paragraph, shall be returned upon demand therefor.

No bidder may withdraw any bid for a period of ninety (90) calendar days after the date set for the opening of bids.

8. Agreements, Insurance and Bonds. The Agreement form which the successful bidder, as Contractor, will be required to execute, and the forms and amounts of surety bonds and insurance endorsements which Contractor will be required to be furnished at the time of execution of the Agreement, are included in the Bid Documents and should be carefully examined by the bidder. The number of executed copies of the Agreement, the Performance Bond, and the Payment Bond required is three (3). Payment and Performance bonds must be executed by an admitted surety insurer as defined in Code of Civil Procedure 995.120. Additionally, the Contractor must provide to the District with its executed Agreement: (i) a complete and accurate copy of the Contractor's Workplace Violence Prevention Plan in accordance with Labor Code Section 6401.9 that is applicable to the Project (the "Project WVPP"); and (ii) the name, position, and telephone number of each person having responsibility for implementing the Project WVPP and receiving reports of workplace violence, if and to the extent that information is not conspicuously specified in the Project WVPP.

9. Interpretation of Plans and Documents/Pre-Bid Clarification. If any prospective bidder is in doubt as to the true meaning of any part of the Contract Documents, or finds discrepancies in, or omissions, a written request for an interpretation or correction thereof may be submitted to the District. The bidder submitting the request shall be responsible for its prompt delivery. **Any interpretation or correction of**

the Contract Documents will only be made by Addendum duly issued, and a copy of such Addendum will be made available for each contractor receiving a set of the Contract Documents. No person is authorized to make any oral interpretation of any provision in the Contract Documents, nor shall any oral interpretation be binding on the District. If discrepancies on drawings, specifications or elsewhere in the Contract Documents are not covered by addenda, bidder shall include in their bid methods of construction and materials for the higher quality and complete assembly. Each request for clarification shall be submitted to the District in writing, via email, to only the following person(s)

TO: Tracie Rose, Architect, tracier@qka.com

CC: Paul Melloni, Director of Facilities, mellonip@luhsd.net

AND

Austin Gray, Construction Manager, Austin.Gray@lathropconstruction.com

Each transmitted request shall contain the name of the person and/or firm filing the request, address, telephone and fax number, Specifications and/or Drawing number. Bidder is responsible for the legibility of any and all requests. Pre-bid clarification requests shall be filed a minimum of **six (6)** days prior to the bid opening. Requests received less than **six (6)** days before the bid opening shall not be considered or responded to by the District. The District will issue a written response to all timely pre-bid clarification requests that materially affect a bidder's price through a Addendum duly issued by the District not less than seventy-two (72) hours prior to the bid opening.

10. Bidders Interested in More Than One Bid. No person, firm, or corporation shall be allowed to make, or file, or be interested in more than one prime bid for the same work unless alternate bids are specifically called for. A person, firm, or corporation that has submitted a proposal to a bidder, or that has quoted prices of materials to a bidder, is not thereby disqualified from submitting a proposal or quoting prices to other bidders or making a prime proposal.

11. Award of Contract. The Contract will be awarded to the lowest responsive responsible bidder by action of the governing Board. The District reserves the right to reject any or all bids, or to waive any irregularities or informalities in any bids or in the bidding process. In the event an award is made to bidder, and such bidder fails or refuses to execute the Contract and provide the required documents detailed in Section 8 above within five (5) calendar days after award of the Contract to bidder, the District may award the Contract to the next lowest responsible and responsive bidder or release all bidders. **Each bid must conform and be responsive to the Contract Documents as defined in the General Conditions.**

12. Bid Protest Procedure. Any bidder may file a bid protest. The protest shall be filed in writing with the District's Director of Facilities not more than five (5) business days after the date of the bid opening. An e-mail address shall be provided and by filing the protest, protesting bidder consents to receipt of e-mail notices for purposes of the protest and protest related questions and protest appeal, if applicable. The protest shall specify the reasons and facts upon which the protest is based.

a. Resolution of Bid Controversy: Once the bid protest is received, the apparent lowest responsible bidder will be notified of the protest and the evidence presented. If appropriate, the apparent low bidder will be given an opportunity to rebut the evidence and present evidence that the apparent low bidder should be allowed to perform the Work. If deemed appropriate by the District, an informal hearing will be held. District will issue a written decision within fifteen (15) calendar days of receipt of the protest, unless factors beyond the District's reasonable control prevent such resolution. The decision on the bid protest will be copied to all parties involved in the protest.

b. Appeal: If the protesting bidder or the apparent low bidder is not satisfied with the decision, the matter may be appealed to the Chief Business Official or their designee, within three (3) business days after receipt of the District's written decision on the bid protest. The appeal must be in writing and sent via overnight registered mail with all accompanying information relied upon for the appeal and an e-mail address from which questions and responses may be provided to:

Liberty Union High School District
Business Department
20 Oak Street
Brentwood, CA 94513

c. Appeal Review: The Chief Business Official or their designee shall review the decision on the bid protest from the Director of Facilities and issue a written response to the appeal, or if appropriate, appoint a Hearing Office to conduct a hearing and issue a written decision. The written decision of the Chief Business Official or the Hearing Officer shall be rendered within fifteen (15) calendar days and shall state the basis for the decision. The decision concerning the appeal will be final and not subject to any further appeals.

d. Reservation of Rights to Proceed with Project Pending Appeal. The District reserves the right to proceed to award the Project and commence construction pending an Appeal. If there is State Funding or a critical completion deadline, the District may choose to shorten the time limits set forth in this Section if written notice is provided to the protesting party. E-mailed notice with a written confirmation sent by First Class Mail shall be sufficient to constitute written notice. If there is no written response to a written notice shortening time, the District may proceed with the award.

e. Finality. Failure to comply with this Bid Protest Procedure shall constitute a waiver of the right to protest and shall constitute a failure to exhaust the protesting bidder's administrative remedies.

13. Alternates. If alternate bids are called for, the Contract may be awarded at the election of the Governing Board to the lowest responsible and responsive bidder using the method and procedures outlined in the Notice Inviting Bids and as specified in the section entitled Bid Alternates.

a. Subcontractor Listing for Alternates. If alternate bids are called for and the bidder intends to use different or additional subcontractors, a separate list of subcontractors must be submitted for each such alternate.

14. Evidence of Responsibility. Upon the request of the District, a bidder whose bid is under consideration for the award of the Contract shall submit promptly to the District satisfactory evidence showing the bidder's financial resources, surety and insurance claims experience, construction experience, completion ability, workload, organization available for the performance of the Contract, and other factors pertinent to a Project of the scope and complexity involved.

15. Listing Subcontractors. Each bidder shall submit with his bid, on the form furnished with the Contract Documents, a list of the names, license numbers, scopes of work, locations of the places of business, contact information, and Department of Industrial Relations ("DIR") registration numbers of each subcontractor who will perform work or labor or render service to the bidder in or about the project, or a subcontractor who under subcontract to the bidder, specially fabricates and installs a portion of the work, in an amount in excess of one-half of 1 percent of the bidder's total bid as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code section 4100, et seq.) Pursuant to Labor Code section 1725.5, all subcontractors (of any tier) performing work on this Project must be properly registered with DIR.

16. Workers' Compensation. In accordance with the provisions of Labor Code section 3700, the successful bidder as the Contractor shall secure payment of compensation to all employees. The Contractor shall sign and file with the District the following certificate prior to performing the work under this contract: "I am aware of the provisions of Section 3700 of the Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract." The form of such certificate is included as a part of the Bid Documents.

17. Contractor's License. To perform the work required by this notice, the Contractor must possess the Contractor's License as specified in the Notice Inviting Bids, and the Contractor must maintain the license throughout the duration of the contract. If, at the time of bid, bidder is not licensed to perform the Project in accordance with Division 3, Chapter 9, of the Business and Professions Code for the State of California and the Notice to Contractors calling for bids, such bid will not be considered and the Contractor will forfeit its bid security to the District.

18. Anti-Discrimination. It is the policy of the District that in connection with all work performed under contracts, there be no discrimination against any prospective or active employee engaged in the work because of race, color, ancestry, national origin, religious creed, sex, age, or marital status. The Contractor agrees to comply with applicable federal and California laws, including, but not limited to, the California Fair Employment and Housing Act, beginning with Government Code section 12900 and Labor Code section 1735. In addition, the Contractor agrees to require like compliance by any subcontractors employed on the work by such Contractor.

19. Preference for Materials and Substitutions.

a. One Product Specified. Unless the Plans and Specifications state that no Substitution is permitted, whenever the Contract Documents indicate any specific article, device, equipment, product, material, fixture, patented process, form, method, construction, or any specific name, make, trade name, or catalog number, with or without the words, "or equal," such specification shall be read as if the language "or equal" is incorporated.

b. Request for Substitution. Bidder may, unless otherwise stated, offer any material, process, article, etc., which is materially equal or better in every respect to that so indicated or specified ("Specified Item") and will completely accomplish the purpose of the Contract Document. If bidder desires to offer a Substitution for a Specified Item, such bidder must make a request in writing on the District's Substitution Request Form ("Request Form") and submit the completed Request Form with the bidder's bid. The Request Form must be accompanied by evidence as to whether the proposed substitution:

- 1) Is equal in quality, service, and ability to the Specified Item as demonstrated by a side by side comparison of key characteristics and performance criteria (CSI comparison chart);
- 2) Will entail no changes in detail, construction and scheduling of related work;
- 3) Will be acceptable in consideration of the required design and artistic effect;
- 4) Will provide no cost disadvantage to the District;
- 5) Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and
- 6) Will require no change in the Contract Time.

In completing the Request Form, bidder must state with respect to each requested substitution whether bidder will agree to provide the Specified Item in the event that the District denies bidder's request for substitution of a Specified Item. In the event that bidder does not agree in the Request

Form to provide the Specified Item and the District denies the requested Substitution, the bidder's bid shall be considered non-responsive and the District may award the Contract to the next lowest bidder or in its sole discretion, release all bidders. In the event that bidder has agreed in the Request Form to provide the Specified Item and the District denies bidder's requested substitution for a Specified Item, bidder shall execute the Agreement and provide the Specified Item without any additional cost or charge to the District, and if bidder fails to execute the Agreement with the Specified Item(s), bidder's bid bond will be forfeited.

After the bids are opened, the apparent lowest bidder shall provide, within five (5) calendar days of opening such bids, any and all Drawings, Specifications, samples, performance data, calculations, and other information as may be required to assist the Architect and the District in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

After the District's receipt of such evidence by bidder, the District will make its final decision as to whether the bidder's request for Substitution for any Specified Items will be granted. The District shall have sole discretion in deciding as to whether a proposed request for Substitution is equal to or better than a Specified Item. Any request for Substitution which is granted by the District shall be documented and processed through a Change Order. The District may condition its approval of any Substitution upon delivery to the District of an extended warranty or other assurances of adequate performance of the Substitution. Any and all risks of delay due to DSA, or any other governmental agency having jurisdiction shall be on the bidder.

20. Disqualification of Bidders and Proposals. More than one proposal for the same work from any individual, firm, partnership, corporation, or association under the same or different names will not be accepted; and reasonable grounds for believing that any bidder is interested in more than one proposal for the work will be cause for rejecting all proposals in which such bidder is interested and the bidder will forfeit their bid security to the District.

21. Unbalanced or Altered Bids. Proposals in which the prices are obviously unbalanced, and those which are incomplete or show any alteration of form, or contain any additions or conditional or alternate bids that are not called for or otherwise permitted, may be rejected. A proposal on which the signature of the bidder has been omitted may be rejected. If, in the District's sole discretion, it determines any pricing, costs or other information submitted by a bidder may result in an unbalanced bid, the District may deem such bid non-responsive. A bid may be determined by the District to be unbalanced if the bid is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the District even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advanced payment.

22. Employment of Apprentices. The Contractor and all Subcontractors shall comply with the provisions of California Labor Code including, but not limited to sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices. The Contractor and any Subcontractor under him shall comply with the requirements of said sections, including applicable portions of all subsequent amendments in the employment of apprentices; however, the Contractor shall have full responsibility for compliance with said Labor Code sections, for all apprenticeable occupations, regardless of any other contractual or employment relationships alleged to exist.

23. Non-Collusion Declaration. Public Contract Code section 7106 requires bidders to submit declaration of non-collusion with their bids. This form is included with the bid documents and must be signed and dated by the bidder under penalty of perjury.

24. Wage Rates, Travel and Subsistence.

a. The Contractor and all subcontractors shall comply with the requirements set forth in Division 2, Part 7, Chapter 1 of the Labor Code. Pursuant to Labor Code section 1770 et seq., the District has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this work is to be performed for each craft, classification or type of worker needed to execute the contract. Copies are available from the District to any interested party on request and are also available from the Director of the Department of Industrial Relations. The Contractor shall obtain copies of the above-referenced prevailing wage sheets and post a copy of such wage rates at appropriate, conspicuous, weatherproof points at the Site.

b. Any worker employed to perform work on the Project and such work is not covered by any classification listed in the published general prevailing wage rate determinations or per diem wages determined by the Director of the Department of Industrial Relations, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the employment of such person in such classification.

c. Holiday and overtime work, when permitted by law, shall be paid for at the rate set forth in the prevailing wage rate determinations issued by the Director of the Department of Industrial Relations or at least one and one-half (1½) times the specified basic rate of per diem wages, plus employer payments, unless otherwise specified in the Contract Documents or authorized by law.

d. These per diem rates, including holiday and overtime work, and employer payments for health and welfare, pension, vacation, and similar purposes, are on file at the administrative office of the District, located as noted above and are also available from the Director of the Department of Industrial Relations. It is the Contractor's responsibility to ensure the appropriate prevailing rates of per diem wages are paid for each classification. It shall be mandatory upon the Contractor to whom the Contract is awarded, and upon any subcontractor under such Contractor, to pay not less than the said specified rates to all workers employed by them in the execution of the Contract.

25. DIR Registration of Contractor and Subcontractors. A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

This Project is a public works project as defined in Labor Code section 1720. Each contractor bidding on this Project and all subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with DIR and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project. For more information and up to date requirements, contractors are recommended to periodically review the DIR's website at www.dir.ca.gov. Contractor shall be solely responsible for ensuring compliance with Labor Code section 1725.5 as well as any requirements implemented by DIR applicable to its services or its subcontractors throughout the term of the Agreement and in no event shall contractor be granted increased payment from the District or any time extensions to complete the Project as a result of contractor's efforts to maintain compliance with the Labor Code or any requirements implemented by the DIR. Failure to comply with these requirements shall be deemed a material breach of this Agreement

and grounds for termination for cause. The contractor and all subcontractors shall furnish certified payroll records as required pursuant Labor Code section 1776 directly to the Labor Commissioner in accordance with Labor Code section 1771.4(a)(3) once every thirty (30) days while Work is being performed on the Project and within thirty (30) days after the final day of Work performed on the Project (or more frequently if required by the District or the Labor Commissioner). The Contractor and all Subcontractors shall submit their own payroll records to the Labor Commissioner on the internet website of the Department of Industrial Relations and such payroll records shall be in an electronic format and manner prescribed by the Labor Commissioner. The District reserves the right to withhold contract payments if the District is notified, or determines as the result of its own investigation, that contractor is in violation of any of the requirements set forth in Labor Code section 1720 et seq. at no penalty or cost to the District. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

26. No Telephone or Facsimile Availability. No telephone or facsimile machine will be available to bidders on the District premises at any time.

27. Obtaining Bidding Documents. Bidding Documents, may be obtained from:

Bid documents are available on the Liberty Union High School District website at www.luhisd.net. Quality Bidders also has bid documents available at www.qualitybidders.com .

Bidder shall utilize a complete set of Bidding Documents in preparing a bid. The failure or omission of bidder to receive any Bidding Document, form, instrument, Addendum, or other document shall not relieve bidder from any obligations with respect to the bid and/or Contract.

28. Addenda. The District reserves the right to revise the Contract Documents prior to the Bid Opening date. Clarifications, revisions or any other notice of a change in the Contract Documents will be issued only by the District and only in the form of a written Addendum. Each prospective Bidder shall provide the District a name, address, email address, and facsimile number to which Addenda may be sent, as well as a telephone number by which the District can contact the Bidder. Copies of Addenda will be furnished by fax, mail, e-mail, or other proper means of delivery to all who are known by the issuing office to have received a complete set of the Contract Documents and provided such current information. Any other purported Addenda are void and unenforceable. _____

Bidder is responsible for receiving and ascertaining the disposition of all Addenda issued regardless of District notification and to acknowledge all Addenda in the submitted sealed bid prior to the Bid Opening. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for inspection. Each Addendum will be numbered, dated, and identified with the Project number. Oral statements or any instructions in any form, other than Addendum as described above, shall be void and unenforceable. Any Addendum duly issued by the District and not noted as being acknowledged by Bidder as required in the Bid Form, may result in the Bid being deemed non-responsive.

29. Debarment. Bidder may also be subject to debarment, in addition to seeking remedies for False Claims under Government Code section 12650 et seq. and Penal Code section 72, the District may debar a Contractor pursuant to Article 15 of the General Conditions if the Board, or the Board may designate a hearing officer who, in his or her discretion, finds the Contractor has done any of the following:

- a. Intentionally or with reckless disregard, violated any term of a contract with the District
- b. Committed an act or omission which reflects on the Contractor's quality, fitness or capacity to perform work for the District;
- c. Committed an act or offense which indicates a lack of business integrity or business honesty; or,
- d. Made or submitted a false claim against the District or any other public entity (See Government Code section 12650, et seq., and Penal Code section 72).

30. Iran Contracting Act Certification Form. Each bidder shall submit a completed Iran Contracting Act Certification Form to the District with its Bid. Failure to (1) submit a fully executed Iran Contracting Act Certification Form to the District prior to the Bid Opening, or (2) complete any required portion of the Iran Contracting Act Certification Form may result in the bidder/Contractor being deemed non-responsive by the District.

31. Fleet Compliance Certification Form. The District is a Public Works Awarding Body, as defined under Title 13 California Code of Regulations section 2449(c)(46). Accordingly, all Bidders must submit, with their Bids, valid Certificate(s) of Reported Compliance ("CRC") for the Bidder's fleet and for the fleet(s) of its listed subcontractors (including any applicable leased equipment or vehicles). Each Bidder must also complete and submit to the District, with its Bid, the enclosed Fleet Compliance Certification form for the Project. **FAILURE TO PROVIDE ALL APPLICABLE CRC'S TO THE DISTRICT FOR THE BIDDER, AND FOR ALL LISTED SUBCONTRACTORS, MAY RENDER A BID NON-RESPONSIVE. ADDITIONALLY, FAILURE TO COMPLETE AND SUBMIT THE ENCLOSED FLEET COMPLIANCE CERTIFICATION FORM, MAY RENDER A BID NON-RESPONSIVE.**

CHECKLIST OF MANDATORY BID FORMS

(For Contractor's use and reference only. Additional documents may be required so bidders should carefully review all Contract Documents and Bid Documents)

- ☐ Designation of Subcontractors
- ☐ Bid Form
- ☐ Contractor's Certificate Regarding Workers Compensation (form must be provided with bid documents even though an OCIP is in-place)
- ☐ Non-Collusion Declaration
- ☐ Bid Bond (or Bid Guarantee form if Security is other than Bid Bond)
- ☐ Substitution Request Form (If Substitution Request Form is not submitted then NO Substitutions will be allowed after the bids are opened)
- ☐ Acknowledgment of Bidding Practices Regarding Indemnity
- ☐ DVBE Participation Statement
- ☐ Contractor's Certificate Regarding Drug-Free Work Place
- ☐ Contractor's Certificate Regarding Alcoholic Beverage and Tobacco-Free Campus Policy
- ☐ Iran Contracting Act Certification Form
- ☐ Fleet Compliance Certification Form and All Applicable Certificates of Reported Compliance

PROJECT NAME:	GATEWAY PROGRAM PROJECT		
PROJECT NUMBER:	LUHSD 26-27-02		
TO:	Paul Melloni & Tracie Rose	EMAIL:	mellonip@luhsd.net & tracier@qka.com

DATE:			
FROM:		EMAIL:	
DOCUMENT/DIVISION NUMBER:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:
RESPONSE TO CLARIFICATION:

**LIBERTY UNION HIGH SCHOOL DISTRICT
GATEWAY PROGRAM PROJECT**

DESIGNATION OF SUBCONTRACTORS

In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code section 4100 et seq.,) and any amendments thereof, each Bidder shall set forth below: (a) the name, license number, and location of the place of business of each subcontractor who will perform work or labor or render service to the Contractor, who will perform work or labor or work or improvement to be performed under this Contract, or a subcontractor licensed by the State of California who, under subcontract to the Contractor, specially fabricates and installs a portion of the work or improvements according to detailed Drawings contained in the Plans and Specifications in an amount in excess of one-half of one percent of the Contractor's total bid; and (b) the portion and description of the work which will be done by each subcontractor under this Act. The Contractor shall list only one subcontractor for each such portion as is defined by the Contractor in this bid. All subcontractors shall be properly licensed by the California State Licensing Board.

If a Contractor fails to specify a subcontractor, or if a Contractor specifies more than one subcontractor for the same portion of work to be performed under the Contract in excess of one-half of one percent of the Contractor's total bid, the Contractor shall be deemed to have agreed that the Contractor is fully qualified to perform that portion, and that the Contractor alone shall perform that portion.

No Contractor whose bid is accepted shall (a) substitute any subcontractor, (b) permit any subcontractor to be voluntarily assigned or transferred or allow the relevant portion of the work to be performed by anyone other than the original subcontractor listed in the original bid, or (c) sublet or subcontract any portion of the work in excess of one-half of one percent of the Contractor's total bid where the original bid did not designate a subcontractor, except as authorized in the Subletting and Subcontracting Fair Practices Act.

Subletting or subcontracting of any portion of the work in excess of one-half of one percent of the Contractor's total bid where no subcontractor was designated in the original bid shall only be permitted in cases of public emergency or necessity, and then only after a finding, reduced to writing as a public record, of the authority awarding this Contract setting forth the facts constituting the emergency or necessity.

All subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with the California Department of Industrial Relations and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project.

NOTE: If alternate bids are called for and bidder intends to use different or additional subcontractors on the alternates, a separate list of subcontractors must be provided for each such Alternate.

DESIGNATION OF SUBCONTRACTORS FORM

Scope of Work	Name of Subcontractor	Location & Place of Business	License Type and Number	DIR Registration Number	<i>E-Mail & Telephone*</i>

Scope of Work	Name of Subcontractor	Location & Place of Business	License Type and Number	DIR Registration Number	E-Mail & Telephone*

* This information must be provided at the time of submission of bid or must be provided within 24 hours after the time set for the opening of bids. Bidders who choose to provide this information within 24 hours after the time set for the opening of bids are solely responsible to ensure the District receives this information in a timely manner. The District is not responsible for any problems or delays associated with emails, faxes, delivery, etc. Absent a verified fax or email receipt date and time by the District, the District's determination of whether the information was received timely shall govern and be determinative. Bidder shall not revise or amend any other information in this form submitted at the time of bid. The information submitted at the time of bid shall govern over any conflicts, discrepancies, ambiguities or other differences in any subsequent Subcontractor Designation Forms submitted by the bidder.

Proper Name of Bidder:

Date:

Name:

Signature of Bidder

Representative:

Address:

Phone:

BID FORM

FOR

PORTABLE, SHADE STRUCTURES & LANDSCAPE IMPROVEMENTS AT

THE GATEWAY PROGRAM PROJECT

929 2ND STREET
BRENTWOOD, CA 94513

DSA App. No. 01-122796
Bid No. 26-27-02

FOR

LIBERTY UNION HIGH SCHOOL DISTRICT

CONTRACTOR
NAME:

ADDRESS:

TELEPHONE:

() _____

FAX:

() _____

EMAIL

TO: Liberty Union High School District, acting by and through its Governing Board, herein called "District".

1. Pursuant to and in compliance with your Notice Inviting Bids and other documents relating thereto, the undersigned bidder, having thoroughly studied and familiarized himself with the terms of the Contract, the local conditions affecting the performance of the Contract, the cost of the work at the place where the work is to be done, the labor market, the supply chain market for materials and equipment necessary to complete the Project, with the Drawings and Specifications, and other Contract Documents, hereby proposes and agrees to perform within the time stipulated, the Contract, including all of its component parts, and everything required to be performed, including its acceptance by the District, and to provide and furnish any and all labor, materials, tools, expendable equipment, and utility and transportation services necessary to perform the Contract and complete all of the Work in a workmanlike manner required in connection with the construction of:

BID NO. 26-27-02

Portable, Shade Structures & Landscape Improvements at the Gateway Program Project

in the District described above, all in strict conformance with the drawings and other Contract Documents on file at the Maintenance & Operations Office of said District for amounts set forth herein.

2. BIDDER ACKNOWLEDGES THE FOLLOWING ADDENDUMS/BID CLARIFICATIONS:

Number	Number	Number	Number	Number	Number	Number	Number
_____	_____	_____	_____	_____	_____	_____	_____

Acknowledge the inclusion of all addenda/bid clarifications issued prior to bid in the blanks provided above. Your failure to do so may render your bid non-responsive.

3. TOTAL BASE BID PRICE IN WORDS & NUMBERS:

_____ DOLLARS
(\$ _____)

4. ALLOWANCES: The following amounts shall be added to the Base Bid.

Allowance No. 1 – Unforeseen Conditions

TBD DOLLARS

(STBD)

5. TOTAL BID PRICE IN WORDS & NUMBERS (Total Base Bid Price + Allowance No. 1)

_____ DOLLARS
(\$ _____)

6. ALTERNATE BIDS: The following amount shall added to the Total Bid Price at the District's Option. Alternates are fully described in **EXHIBIT E**.

Alternate No. 1 – **TBD**:

ADD/DELETE _____ Dollars (\$_____)

Alternate No. 2 – **TBD**:

ADD/DELETE _____ Dollars (\$_____)

7. TIME FOR COMPLETION: The District may give a notice to proceed within ninety (90) days of the award of the bid by the District. Once the Contractor has received the notice to proceed, the Contractor shall complete the work in the time specified in the Agreement. By submitting this bid, Contractor has thoroughly studied this Project, the labor market, and the supply chain market for materials and equipment that are necessary to complete the Project and Contractor agrees that the Contract Time for this Project is adequate for the timely and proper completion of the Project. Further, Contractor has included in the analysis of the time required for this Project, Rain Days, Governmental Delays, and the requisite time to complete Punch List.

In the event that the District desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that with reasonable notice to the Contractor, giving the notice to proceed may be postponed by the District. It is further expressly understood by the Contractor, that the Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of giving the notice to proceed.

If the Contractor believes that a postponement will cause a hardship to it, the Contractor may terminate the contract with written notice to the District within ten (10) days after receipt by the Contractor of the District's notice of postponement. Should the Contractor terminate the Contract as a result of a notice of postponement, the District shall have the authority to award the Contract to the next lowest responsible bidder, if applicable.

It is understood that the District reserves the right to reject any or all bids and/or waive any irregularities or informalities in this bid or in the bid process. The Contractor understands that it may not withdraw this bid for a period of ninety (90) days after the date set for the opening of bids.

8. Attached is bid security in the amount of not less than ten percent (10%) of the bid:

Bid bond (10% of the Bid), certified check, or cashier's check (circle one)

9. The required List of Designated Subcontractors is attached hereto.

10. The required Non-Collusion Declaration is attached hereto.

11. The Substitution Request Form, if applicable, is attached hereto.

12. It is understood and agreed that if written notice of the acceptance of this bid is mailed, telegraphed, or delivered to the undersigned after the opening of the bid, and within the time this bid is required to remain open, or at any time thereafter before this bid is withdrawn, the undersigned will execute and deliver to the District a Contract in the form attached hereto in accordance with the bid as accepted, and that he or she will also furnish and deliver to the District the Performance Bond and Payment Bond, all within five (5) calendar days after award of Contract, and that the work under the Contract shall be commenced by the undersigned bidder, if awarded the Contract, by the start date provided in the District's Notice to Proceed, and shall be completed by the Contractor in the time specified in the Contract Documents.

13. The names of all persons interested in the foregoing proposal as principals are as follows:

(IMPORTANT NOTICE: If bidder or other interested person is a corporation, state the legal name of such corporation, as well as the names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state the true names of the firm, as well as the names of all individual co-partners comprising the firm; if bidder or other interested person is an individual, state the first and last names in full.)

14. PROTEST PROCEDURES. If there is a bid protest, the grounds shall be submitted as set forth in the Instructions to Bidders.

15. The undersigned bidder shall be licensed and shall provide the following California Contractor's license information:

License Number: _____
License Expiration Date: _____
Name on License: _____
Class of License: _____
DIR Registration Number: _____

If the bidder is a joint venture, each member of the joint venture must include the above information.

16. Time is of the essence regarding this Contract, therefore, in the event the bidder to whom the Contract is awarded fails or refuses to post the required bonds and return executed copies of the Agreement form within five (5) calendar days from the date of receiving the Notice of Award, the District may declare the bidder's bid deposit or bond forfeited as damages.

17. The bidder declares that he/she has carefully examined the location of the proposed Project, that he/she has examined the Contract Documents, including the Plans, General Conditions, Supplemental Conditions, Addenda, and Specifications, all others documents and requirements that are attached to and/or contained in the Project Manual, all other documents issued to bidders and read the accompanying instructions to bidders, and hereby proposes and agrees, if this proposal is accepted, to furnish all materials and do all work required to complete the said work in accordance with the Contract Documents, in the time and manner therein prescribed for the unit cost and lump sum amounts set forth in this Bid Form. The undersigned bidder hereby acknowledges and agrees that such bidder shall not be entitled to any price increase to the Total Cash Purchase Price set forth above on account of or due to any external factors including, but not limited to, inflation, labor shortages, and/or supply chain issues/shortages.

18. DEBARMENT. In addition to seeking remedies for False Claims under Government Code section 12650 et seq. and Penal Code section 72, the District may debar a Contractor pursuant to Article 15 of the General Conditions if the Board, or the Board may designate a hearing officer who, in his or her discretion, finds the Contractor has done any of the following:

- a. Intentionally or with reckless disregard, violated any term of a contract with the District;
- b. Committed an act or omission which reflects on the Contractor's quality, fitness or capacity to perform work for the District;
- c. Committed an act or offense which indicates a lack of business integrity or business honesty; or
- d. Made or submitted a false claim against the District or any other public entity. (See Government Code section 12650, et seq., and Penal Code section 72)

19. DESIGNATION OF SUBCONTRACTORS. In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code section 4100 et seq.) and any amendments thereof, each bidder shall list subcontractors on the District's form Subcontractor list. This subcontractor list shall be submitted with the bid and is a required form

I agree to receive service of notices at the e-mail address listed below.

I the below-indicated bidder, declare under penalty of perjury that the information provided and representations made in this bid are true and correct.

Proper Name of Company

Name of Bidder Representative

Street Address

City, State, and Zip

()

Phone Number

()

Fax Number

E-Mail

By:

Signature of Bidder Representative

Date:

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of authorized officers or agents and the document shall bear the corporate seal; if bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership; and if bidder is an individual, his signature shall be placed above.

All signatures must be made in permanent blue ink.

CONTRACTOR'S CERTIFICATE REGARDING WORKERS'
COMPENSATION FORM

(form must be provided with bid documents even though an OCIP is in-place)

Labor Code section 3700 in relevant part provides:

Every employer except the State shall secure the payment of compensation in one or more of the following ways:

1. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this State.
2. By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to employees.
3. For any county, city, city and county, municipal corporation, public district, public agency, or any political subdivision of the state, including each member of a pooling arrangement under a joint exercise of powers agreement (but not the state itself), by securing from the Director of Industrial Relations a certificate of consent to self-insure against workers' compensation claims, which certificate may be given upon furnishing proof satisfactory to the director of ability to administer workers' compensation claims properly, and to pay workers' compensation claims that may become due to its employees. On or before March 31, 1979, a political subdivision of the state which, on December 31, 1978, was uninsured for its liability to pay compensation, shall file a properly completed and executed application for a certificate of consent to self-insure against workers' compensation claims. The certificate shall be issued and be subject to the provisions of Section 3702.

I am aware of the provisions of Labor Code section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provision before commencing the performance of the work of this Contract.

(Signature)

(Print)

(Date)

In accordance with Article 5 (commencing at section 1860), Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and submitted with the Contractor's bid.

Contractor's Certificate Regarding Workers' Compensation Form

NON-COLLUSION DECLARATION

The undersigned declares:

I am the _____ [Title] of _____ [Name of Company], the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [Date], at _____ [City], _____ [State].

Signed: _____

Typed Name: _____

BID GUARANTEE FORM

(Use only when not using a Bid Bond)

Accompanying this proposal is a cashier's check payable to the order of the Liberty Union High School District or a certified check payable to the order of the Liberty Union High School District in an amount equal to ten percent (10%) of the base bid and alternates (\$_____).

The proceeds of this check shall become the property of said District, if, this proposal shall be accepted by the District through the District's Governing Board, and the undersigned fails to execute a Contract with and furnish the sureties required by the District within the required time; otherwise, said check is to be returned to the undersigned.

Bidder

Note: Use this form, in lieu of Bid Bond form, when a cashier's check or certified check is accompanying the bid

BID BOND FORM

KNOW ALL MEN BY THESE PRESENT that we, the undersigned, (hereafter called "Principal"), and _____ (hereafter called "Surety"), are hereby held and firmly bound unto the Liberty Union High School District (hereafter called "District") in the sum of _____ (\$_____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors, and assigns.

SIGNED this _____ day of _____, 20____.

The condition of the above obligation is such that whereas the Principal has submitted to the District a certain Bid, attached hereto and hereby made a part hereof, to enter into a Contract in _____ writing _____ for _____ the _____ construction _____ of _____.

NOW, THEREFORE,

- a. If said Bid is rejected, or
- b. If said Bid is accepted and the Principal executes and delivers a Contract or the attached Agreement form within five (5) calendar days after acceptance (properly completed in accordance with said Bid), and furnishes bonds for his faithful performance of said Contract and for payment of all persons performing labor or furnishing materials in connection therewith,

Then this obligation shall be void; otherwise, the same shall remain in force and effect.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract, or the call for bids, or the work to be performed thereunder, or the specifications accompanying the same, shall in anyway affect its obligation under this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of said Contract, or the call for bids, or the work, or to the specifications.

In the event suit is brought upon this bond by the District and judgment is recovered, the Surety shall pay all costs incurred by the District in such suit, including without limitation, attorneys' fees to be fixed by the court.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year first set forth above.

(Corporate Seal)

By _____

Principal's Signature

Typed or Printed Name

Principal's Title

(Corporate Seal)

By _____

Surety's Signature

Typed or Printed Name

Title

(Attached Attorney in Fact Certificate)

Surety's Name

Surety's Address

Surety's Phone Number

IMPORTANT:

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code section 105, and if the work or project is financed, in whole or in part, with federal, grant, or loan funds, it must also appear on the Treasury Department's most current list (Circular 570 as amended).

THIS IS A REQUIRED FORM.

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for service of process in California if different from above)

(Telephone Number of Surety and agent or representative for service of process in California).

REQUEST FOR SUBSTITUTION AT TIME OF BID

Pursuant to Public Contract Code section 3400, bidder submits the following request to Substitute with the bid that is submitted. I understand that if the request to substitute is not an “or equal” or is not accepted by District and I answer “no” I will not provide the specified item, then I will be held non-responsive and my bid will be rejected. With this understanding, I hereby request Substitution of the following articles, devices, equipment, products, materials, fixtures, patented processes, forms, methods, or types of construction:

	Specification Section	Specified Item	Requested Substituted Item	Contractor Agrees to Provide Specified Item if request to Substitute is Denied ¹ (circle one)	District Decision (circle one)
1.				Yes No	Grant Deny
2.				Yes No	Grant Deny
3.				Yes No	Grant Deny
4.				Yes No	Grant Deny
5.				Yes No	Grant Deny
6.				Yes No	Grant Deny
7.				Yes No	Grant Deny
8.				Yes No	Grant Deny
9.				Yes No	Grant Deny
10.				Yes No	Grant Deny
11.				Yes No	Grant Deny
12.				Yes No	Grant Deny

This Request Form must be accompanied by evidence as to whether the proposed Substitution (1) is equal in quality, service, and ability to the Specified Item; (2) will entail no change in detail, construction, and scheduling of related work; (3) will be acceptable in consideration of the required design and artistic

¹ Bidder must state whether bidder will provide the Specified Item in the event the Substitution request is evaluate and denied. If bidder states that bidder will not provide the Specified Item the denial of a request to Substitute shall result in the rejection of the bidder as non-responsive. However, if bidder states that bidder will provide the Specified Item in the event that bidder’s request for Substitution is denied, bidder shall execute the Agreement and provide the Specified Item(s). If bidder refuses to execute the Agreement due to the District’s decision to require the Specified Item(s) at no additional cost, bidder’s Bid Bond shall be forfeited.

effect; (4) will provide no cost disadvantage to the District; (5) will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; (6) will require no change of the construction schedule or milestones for the Project; and, (7) Contractor agrees to pay for any DSA Fees or other Governmental Plan check costs associated with this Substitution Request. (See General Conditions Section 3.6)

The undersigned states that the following paragraphs are correct:

1. The proposed Substitution does not affect the dimensions shown on the Drawings.
2. The undersigned will pay for changes to the building design, including Architect, engineering, or other consultant design, detailing, DSA plan check or other governmental plan check costs, and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse effect on other trades, the Contract Time, or specified warranty requirements.
4. Maintenance and service parts will be available locally for the proposed substitution.
5. In order for the Architect to properly review the substitution request, within five (5) days following the opening of bids, the Contractor shall provide samples, test criteria, manufacturer information, and any other documents requested by Architect or Architect's engineers or consultants, including the submissions that would ordinarily be required under Article 3.7 for Shop Drawings along with a document which provides a side by side comparison of key characteristics and performance criteria (often known as a CSI side by side comparison chart).
6. If Substitution Request is accepted by the District, Contractor is still required to provide a Submittal for the substituted item pursuant to Article 3.7 and shall provide required Schedule information (including schedule fragments, if applicable) for the substituted item as required under Article 8.3.2.1. The approval of the Architect, Engineer, or District of the substitution request does not mean that the Contractor is relieved of Contractor's responsibilities for Submittals, Shop Drawings, and schedules under Article 3.7 and 8.3.2 if the Contractor is awarded the Project.

Name of Bidder: _____

By: _____

District: _____

By: _____

ACKNOWLEDGMENT OF BIDDING PRACTICES REGARDING INDEMNITY FORM

TO: Liberty Union High School District

RE: LUHSD Bid No. 26-27-02

**Portable, Shade Structures & Landscape Improvements at
the Gateway Program Project**

Construction Contract for:

Please be advised that with respect to the above-referenced Project the undersigned Contractor on behalf of itself and all subcontractors hereby waives the benefits and protection of Labor Code section 3864, which provides:

“If an action as provided in this chapter is prosecuted by the employee, the employer, or both jointly against the third person results in judgment against such third person, the employer shall have no liability to reimburse or hold such third person harmless on such judgment or settlement in the absence of a written agreement to do so executed prior to the injury.”

This Agreement has been signed by an authorized representative of the contracting party and shall be binding upon its successors and assignees. The undersigned further agrees to promptly notify the District of any changes of ownership of the contracting party or any subcontractor while this Agreement is in force.

Contracting Party

Name of Agent/Title

DISABLED VETERAN BUSINESS ENTERPRISE (DVBE) PARTICIPATION
STATEMENT

Each bidder must complete this form in order to comply with the Liberty Union High School District ("District") policy for participation of disabled veteran business enterprises (School District projects funded in whole or in part by the State of California pursuant to the Leroy F. Greene School Facilities Act of 1998. (Education Code §17070.10, *et seq.*)

Project Name: Portable, Shade Structures & Landscape Improvements at the Gateway Program Project

Bid No.: 26-27-02

DSA No.: 01-122796

The undersigned, on behalf of the Contractor named below, certifies that the Contractor has made reasonable efforts to secure participation by DVBE in the Contract to be awarded for the above-referenced Bid No., including participation by DVBE subcontractors and/or material suppliers. **Check only one of the following:**

- ☐ The Contractor was unable after reasonable efforts to secure DVBE participation in the Contract for the above-referenced Project/Bid No. However, the Contractor will use DVBE services if the opportunity arises at any time during construction of the Project. Upon completion of the Project, the Contractor will report to the District the total dollar amount of DVBE participation in any Contract awarded to Contractor, and in any change orders, for the above-referenced Project.
- ☐ The Contractor has secured DVBE participation in the Contract for the above referenced Project/Bid No., and anticipates that such DVBE participation will equal approximately _____dollars (\$_____), which represents approximately _____percent (___%) of the total Contract for such Project. Upon completion of the Project, Contractor will report to the District the actual total dollar amount of DVBE participation in the Contract awarded to Contractor, and in any change orders, for such Project

Company: _____

Name: _____

Title: _____

Signature: _____

Date: _____

CONTRACTOR'S CERTIFICATE REGARDING DRUG-FREE WORKPLACE

This Drug-Free Workplace Certification form is required from all successful bidders pursuant to the requirements mandated by Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any State agency must certify that it will provide a drug-free workplace by performing certain specified acts. In addition, the Act provides that each contract or grant awarded by a State agency may be subject to suspension of payments or termination of the contract or grant, and the Contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

Pursuant to Government Code section 8355, every person or organization awarded a contract or grant from a State agency shall certify that it will provide a drug-free workplace by doing all of the following:

1. Publishing a statement, notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace, and specifying actions which will be taken against employees for violations of the prohibition.
2. Establishing a drug-free awareness program to inform employees about all of the following:
 - a. The dangers of drug abuse in the workplace;
 - b. The person's or organization's policy of maintaining a drug-free workplace;
 - c. The availability of drug counseling, rehabilitation and employee-assistance programs; and
 - d. The penalties that may be imposed upon employees for drug abuse violations;
3. Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required by subdivision (a) and that, as a condition of employment on the contract or grant, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code section 8355 listed above and will (a) publish a statement notifying employees concerning the prohibition of controlled substance at the workplace, (b) establish a drug-free awareness program, and (c) require each employee engaged in the performance of the contract be given a copy of the statement required by section 8355(a) and require such employee agree to abide by the terms of that statement.

I also understand that if the Liberty Union High School District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of Section 8355, that the contract awarded herein is subject to termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of Section 8350 et seq.

I acknowledge that I am aware of the provisions of Government Code section 8350 et seq. and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

DATE: _____

CONTRACTOR

By: _____
Signature

**CONTRACTOR'S CERTIFICATE REGARDING ALCOHOLIC BEVERAGE AND
TOBACCO-FREE CAMPUS POLICY**

The Contractor agrees that it will abide by and implement the District's Alcoholic Beverage and Tobacco-Free Campus Policy, which prohibits the use of alcoholic beverages and tobacco products, of any kind and at any time, in District-owned or leased buildings, on District property and in District vehicles. The Contractor shall procure signs stating "ALCOHOLIC BEVERAGE AND TOBACCO USE IS PROHIBITED" and shall ensure that these signs are prominently displayed in all entrances to school property at all times.

DATE: _____

CONTRACTOR

By: _____
Signature

**IRAN CONTRACTING ACT CERTIFICATION
OF ELIGIBILITY TO PROPOSAL FOR
CONTRACTS OF \$ 1 MILLION OR MORE
(Public Contract Code sections 2202-2208)**

Pursuant to Public Contract Code 2204. (a) A public entity shall require a person that submits a proposal or proposal to, or otherwise proposes to enter into or renew a contract with, a public entity with respect to a contract for goods or services of one million dollars (\$1,000,000) or more to certify, at the time the proposal is submitted or the contract is renewed, that the person is not identified on a list created pursuant to subdivision (b) of Section 2203 as a person engaging in investment activities in Iran described in subdivision (a) of Section 2202.5, or as a person described in subdivision (b) of Section 2202.5, as applicable. A state agency shall submit the certification information to the Department of General Services.

To comply with this requirement, please insert your Contractor or financial institution name and Federal ID Number (if available) and complete **one** of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to proposal on contracts. (Public Contract Code section 2205.)

OPTION #1 – CERTIFICATION

I, the official named below, certify I am duly authorized to execute this certification on behalf of the Contractor/financial institution identified below, and the Contractor/financial institution identified below is not on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

<i>Contractor Name/Financial Institution</i>	<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>	
<i>Printed Name and Title of Person Signing</i>	
<i>Date Executed</i>	<i>Executed in</i>

OPTION #2 – EXEMPTION

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a contractor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to proposal on, submit a proposal for, or enters into or renews, a contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

<i>Contractor Name/Financial Institution</i>	<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>	
<i>Printed Name and Title of Person Signing</i>	<i>Date Executed</i>

FLEET COMPLIANCE CERTIFICATION

Bidder hereby acknowledges that they have reviewed the California Air Resources Board's policies, rules and regulations and are familiar with the requirements of Title 13, California Code of Regulations, Division 3, Chapter 9, effective on January 1, 2024 (the "Regulation"). Bidder hereby certifies, subject to penalty for perjury, that the option checked below relating to the Bidder's fleet, and/or that of their subcontractor(s) ("Fleet") is true and correct:

- ☐ The Fleet is subject to the requirements of the Regulation, and the appropriate Certificate(s) of Reported Compliance have been attached hereto.
- ☐ The Fleet is exempt from the Regulation under section 2449.1(f)(2), and a signed description of the subject vehicles, and reasoning for exemption has been attached hereto.
- ☐ Bidder and/or their subcontractor is unable to procure R99 or R100 renewable diesel fuel as defined in the Regulation pursuant to section 2449.1(f)(3). Bidder shall keep detailed records describing the normal refueling methods, their attempts to procure renewable diesel fuel and proof that shows they were not able to procure renewable diesel (i.e. third party correspondence or vendor bids).
- ☐ The Fleet is exempt from the requirements of the Regulation pursuant to section 2449(i)(4) because this Project has been deemed an Emergency, as defined under section 2449(c)(18). Bidder shall only operate the exempted vehicles in the emergency situation and records of the exempted vehicles must be maintained, pursuant to section 2449(i)(4).
- ☐ The Fleet does not fall under the Regulation or are otherwise exempted and a detailed reasoning is attached hereto.

Name of Bidder: _____

Signature: _____

Name: _____

Title: _____

Date: _____

[End of Bid Documents to be Submitted with Bid]

AGREEMENT FORM

THIS AGREEMENT, entered into on the “**TBD**” in the County of Contra Costa, State of California, by and between the Liberty Union High School District, hereinafter called the “District”, and “**TBD**”, hereinafter called the “Contractor”.

WITNESSETH that the District and the Contractor for the consideration stated herein agree as follows:

ARTICLE 1 - SCOPE OF WORK: The Contractor shall furnish all labor, materials, equipment, tools, and utility and transportation services, and perform and complete all work required in connection with the **Portable, Shade Structures & Landscape Improvements at the Gateway Program Project** (“Project”) in strict accordance with the Contract Documents enumerated in Article 7 below. The Contractor shall be liable to the District for any damages arising as a result of a failure to comply with that obligation, and the Contractor shall not be excused with respect to any failure to so comply by an act or omission of the Architect, Engineer, Inspector, Division of the State Architect (DSA), or representative of any of them, unless such act or omission actually prevents the Contractor from fully complying with the Contract Documents and the Contractor protests, in accordance with the Contract Documents, that the act or omission is preventing the Contractor from fully complying with the Contract Documents. Such protest shall not be effective unless reduced to writing and filed with the District office within seven (7) days of the date of occurrence of such act or omission preventing the Contractor from fully complying with the Contract Documents.

ARTICLE 2 - TIME OF COMPLETION: The District may give notice to proceed within ninety (90) days of the award of the bid by the District. Once the Contractor has received a notice to proceed, the Contractor shall reach Substantial Completion (See Article 1.1.46) of the Work within **Five (5) Months** from receipt of the Notice to Proceed. This shall be called Contract Time. (See Article 8.1.1). It is expressly understood that time is of the essence.

Contractor has thoroughly studied the Project, the labor market, and the supply chain market for materials and equipment that are necessary to complete the Project, and has satisfied itself that the time period for this Project was adequate for the timely and proper completion of the Project within each milestone and within the Contract time. Further, Contractor has included in the analysis of the time required for this Project, items set forth in General Conditions Article 8.3.2.1, Submittal Schedules, Rain Day Float, and Governmental Delay Float.

In the event that the District desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that with reasonable notice to the Contractor, giving the notice to proceed may be postponed by the District. It is further expressly understood by the Contractor, that the Contractor shall not be entitled to any claim of additional compensation as a result of the District’s postponement of giving the notice to proceed.

If the Contractor believes that a postponement will cause hardship to it, the Contractor may terminate the Contract with written notice to the District within ten (10) days after receipt by the Contractor of the District’s notice of postponement. It is further understood by the Contractor that in the event that the Contractor terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay the Contractor for the work performed by the Contractor at the time of notification of postponement. Should the Contractor terminate the Contract as a result of a notice of postponement, the District shall have the authority to award the Contract to the next lowest responsible bidder.

ARTICLE 3 - LIQUIDATED DAMAGES: It being impracticable and infeasible to determine the amount of actual damage, it is agreed that the Contractor will pay the District the sum of **two thousand dollars (\$2,000)** per calendar day for each and every day of delay beyond the Contract Time set forth in Article 2 of this Agreement (inclusive of Milestones that are critical on the critical path or noted as critical to the District) as liquidated damages and not as a penalty or forfeiture. In the event Liquidated Damages are not paid, the Contractor further agrees that the District may deduct such amount thereof from any money due or that may become due the Contractor under the Contract (See Article 9.6 and 2.2 of the General Conditions).

ARTICLE 4 - CONTRACT PRICE: The District shall pay to the Contractor as full consideration for the faithful performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, the sum of **"TBD" DOLLARS (\$"TBD")**, said sum being the total amount stipulated in the Bid Contractor submitted. Payment shall be made as set forth in the General Conditions.

Should any Change Order result in an increase in the Contract Price, the cost of such Change Order shall be agreed to in advance by the Contractor and the District, subject to the monetary limitations set forth in Public Contract Code section 20118.4. In the event that the Contractor proceeds with a Change in work without an agreement between the District and Contractor regarding the cost of a Change Order, the Contractor waives any Claim of additional compensation for such additional work. In no event shall the Contractor be entitled to increase the Contract Price set forth above on account of any external factors including, but not limited to, inflation, labor shortages, and/or supply chain issues/shortages.

ARTICLE 5 - HOLD HARMLESS AGREEMENT: Contractor shall defend, indemnify and hold harmless District, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from any and all liabilities, claims, actions, liens, judgments, demands, damages, losses, costs or expenses of any kind arising from death, personal injury, property damage or other cause based or asserted upon any act, omission, or breach connected with or arising from the progress of Work or performance of service under this Agreement or the Contract Documents. As part of this indemnity, Contractor shall protect and defend, at its own expense, District, Architect, Construction Manager, Inspector, the State of California and their officers, employees, agents and independent contractors from any legal action including attorney's fees or other proceeding based upon such act, omission, breach or as otherwise required by this Article.

Furthermore, Contractor agrees to and does hereby defend, indemnify and hold harmless District, Architect, Construction Manager, Inspector, the State of California and their officers, employees, agents and independent contractors from every claim or demand made, and every liability, loss, damage, expense or attorney's fees of any nature whatsoever, which may be incurred by reason of:

(a) Liability for (1) death or bodily injury to persons; (2) damage or injury to, loss (including theft), or loss of use of, any property; (3) any failure or alleged failure to comply with any provision of law or the Contract Documents; or (4) any other loss, damage or expense, sustained by any person, firm or corporation or in connection with the Work called for in this Agreement or the Contract Documents, except for liability resulting from the sole or active negligence, or the willful misconduct of the District.

(b) Any bodily injury to or death of persons or damage to property caused by any act, omission or breach of Contractor or any person, firm or corporation employed by Contractor, either directly or by independent contract, including all damages or injury to or death of persons, loss (including theft) or loss of use of any property, sustained by any person, firm or corporation, including the District, arising out of

or in any way connected with Work covered by this Agreement or the Contract Documents, whether said injury or damage occurs either on or off District property, but not for any loss, injury, death or damages caused by the sole or active negligence or willful misconduct of the District.

(c) Any dispute between Contractor and Contractor's subcontractors/suppliers/Sureties, including, but not limited to, any failure or alleged failure of the Contractor (or any person hired or employed directly or indirectly by the Contractor) to pay any Subcontractor or Materialman of any tier or any other person employed in connection with the Work and/or filing of any stop notice or mechanic's lien claims.

(d) Any claims, allegations, penalties, assessments, or liabilities to the extent caused by the Contractor's failure or the failure of any Subcontractor of any tier, to fully comply with the DIR registration requirements under Labor Code section 1725.5 at all times during the performance of any Work on the Project and shall reimburse the District for any penalties assessed against the District arising from any failure by the Contractor or any Subcontractor of any tier from complying with Labor Code sections 1725.5 and 1771.1. Nothing in this paragraph, however, shall require the Contractor or any Subcontractor to be liable to the District or indemnify the District for any penalties caused by the District in accordance with Labor Code section 1773.3 (g).

Contractor, at its own expense, cost, and risk, shall defend, with counsel of the District's choosing, any and all claims, actions, suits, or other proceedings that may be brought or instituted against the District, its officers, agents or employees, on account of or founded upon any cause, damage, or injury identified herein Article 5 and shall pay or satisfy any judgment that may be rendered against the District, its officers, agents or employees in any action, suit or other proceedings as a result thereof.

The Contractor's and Subcontractors' obligation to defend, indemnify and hold harmless the Owner, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors hereunder shall include, without limitation, any and all claims, damages, and costs for the following: (1) any damages or injury to or death of any person, and damage or injury to, loss (including theft), or loss of use of, any property; (2) breach of any warranty, express or implied; (3) failure of the Contractor or Subcontractors to comply with any applicable governmental law, rule, regulation, or other requirement; (4) products installed in or used in connection with the Work; and (5) any claims of violation of the Americans with Disabilities Act ("ADA").

Contractor shall reimburse Owner, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. The only limitations on this provision shall be those imposed by Civil Code Section 2782. Such indemnification shall extend to all claims, demands, or liabilities occurring after completion of the Project as well as during the progress of the Work.

This Hold Harmless Agreement shall survive termination of this Agreement, for any reason whatsoever, and binds each party's legal representatives, successors, and assigns.

ARTICLE 6 - PROVISIONS REQUIRED BY LAW: Each and every provision of law and clause required to be inserted in this Contract shall be deemed to be inserted herein, and this Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted or is not inserted correctly, then upon application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

ARTICLE 7 - COMPONENT PARTS OF THE CONTRACT: The Contract entered into by this Agreement consists of the following Contract Documents, all of which are component parts of the Contract as if herein set out in full or attached hereto.

Notice Inviting Bids
Instructions to Bidders
Designation of Subcontractors
Non-Collusion Declaration
Bid Guarantee Form
Bid Bond
Bid Form
Contractor's Certificate Regarding Worker's Compensation
Acknowledgment of Bidding Practices Regarding Indemnity
DVBE Participation Statement and Close-Out Forms
Agreement Form
Payment Bond
Performance Bond
Guarantee
Escrow Agreement for Security Deposit In Lieu of Retention
Workers' Compensation/Employers Liability Endorsement
General Liability Endorsement
Automobile Liability Endorsement
Contractor's Certificate Regarding Drug-Free Workplace
Contractor's Certificate Regarding Alcohol and Tobacco
Iran Contracting Act Certification Form
Fleet Compliance Certification Form
Contractor's Certificate Regarding Background Checks
General Conditions
Supplementary and Special Conditions
Specifications
All Addenda as Issued Drawings/Plans
Substitution Request Form
Requirements, Reports and/or any other Documents in the Project Manual or Other Documents Issued to Bidders

All of the above named Contract Documents are intended to be complementary. Work required by one of the above named Contract Documents and not by others shall be done as if required by all.

ARTICLE 8 - PREVAILING WAGES: Wage rates for this Project shall be in accordance with the general prevailing rate of holiday and overtime work in the locality in which the work is to be performed for each craft, classification, or type of work needed to execute the Contract as determined by the Director of the Department of Industrial Relations. Copies of schedules of rates so determined by the Director of the Department of Industrial Relations are on file at the administrative office of the District and are also available from the Director of the Department of Industrial Relations. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

The following are hereby referenced and made a part of this Agreement and Contractor stipulates to the provisions contained therein.

1. Chapter 1 of Part 7 of Division 2 of the Labor Code (Section 1720 et seq.)
2. California Code of Regulations, Title 8, Chapter 8, Subchapters 3 through 6 (Section 16000 et seq.)

ARTICLE 9 - RECORD AUDIT: In accordance with Government Code section 8546.7 (and Davis Bacon, if applicable) and Article 13.11 of the General Conditions, records of both the District and the Contractor shall be subject to examination and audit for a period of five (5) years after a Final Retention Payment or the Recording of a Notice of Completion, whichever occurs first.

ARTICLE 10 - CONTRACTOR'S LICENSE: The Contractor must possess throughout the Project a *Class "A" and/or Class "B"* Contractor's License, issued by the State of California, which must be current and in good standing.

IN WITNESS WHEREOF, this Agreement has been duly executed by the above named parties,
on the day and year first above written.

DISTRICT:

CONTRACTOR:

Typed or Printed Name

Typed or Printed Name

Title

Title

Signature

Signature

Dated:

Dated:

Type or Printed Name

Title (Authorized Officers or Agents)

Signature

(CORPORATE SEAL)

PAYMENT BOND
(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the LIBERTY UNION HIGH SCHOOL DISTRICT (sometimes referred to hereinafter as "Obligee") has awarded to **TBD** (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: Portable, Shade Structures & Landscape Improvements at the Gateway Program Project (hereinafter referred to as the "Public Work"); and

WHEREAS, said Contractor is required to furnish a bond in connection with said Contract, and pursuant to California Civil Code section 9550;

NOW, THEREFORE, We, **TBD**, the undersigned Contractor, as Principal; and _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the LIBERTY UNION HIGH SCHOOL DISTRICT and to any and all persons, companies, or corporations entitled by law to file stop notices under California Civil Code section 9100, or any person, company, or corporation entitled to make a claim on this bond, in the sum of **TBD** (\$**TBD**), such sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which payment will and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, its heirs, executors, administrators, successors, or assigns, or subcontractor, shall fail to pay any person or persons named in Civil Code section 9100; or fail to pay for any materials, provisions, or other supplies, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code, with respect to work or labor thereon of any kind; or shall fail to deduct, withhold, and pay over to the Employment Development Department, any amounts required to be deducted, withheld, and paid over by Unemployment Insurance Code section 13020 with respect to work and labor thereon of any kind, then said Surety will pay for the same, in an amount not exceeding the amount herein above set forth, and in the event suit is brought upon this bond, also will pay such reasonable attorneys' fees as shall be fixed by the court, awarded and taxed as provided in California Civil Code section 9550 et seq.

This bond shall inure to the benefit of any person named in Civil Code section 9100 giving such person or his/her assigns a right of action in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, or specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described; or pertaining or relating to the furnishing of labor, materials, or equipment therefor; nor by any change or modification of any terms of payment or extension of time for payment pertaining or relating to any scheme or work of improvement herein above described; nor by any rescission or attempted rescission of the contract, agreement or bond; nor by any conditions

precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond; nor by any fraud practiced by any person other than the claimant seeking to recover on the bond; and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given; and under no circumstances shall the Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the Obligee and the Contractor or on the part of any obligee named in such bond; that the sole condition of recovery shall be that the claimant is a person described in California Civil Code section 9100, and who has not been paid the full amount of his or her claim; and that the Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

IN WITNESS WHEREOF this instrument has been duly executed by the Principal and Surety above named, on the _____ day of _____, 20__.

PRINCIPAL/CONTRACTOR:

By: _____

SURETY:

By: _____

Attorney-in-Fact

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for
service for service of process in California)

Telephone: _____ Telephone: _____

A notary public or other office completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On _____, before me, _____,
personally appeared _____, who proved on the basis of satisfactory
evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged
to me that he/she/they executed the same in his/her/their authorized capacity(ies) as the Attorney-in-Fact of
_____(Surety) and acknowledged to me that by his/her/their signature(s)
on the instrument the person(s), or the entity upon behalf of which the person(s) executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public in and for said State

(SEAL)

Commission expires: _____

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be
attached hereto.

PERFORMANCE BOND
(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the LIBERTY UNION HIGH SCHOOL DISTRICT (sometimes referred to hereinafter as "Obligee") has awarded to "**TBD**" (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: Portable, Shade Structures & Landscape Improvements at the Gateway Program Project (hereinafter referred to as the "Public Work"); and

WHEREAS, the work to be performed by the Contractor is more particularly set forth in that certain contract for said Public Work dated "**TBD**" (hereinafter referred to as the "Contract"), which Contract is incorporated herein by this reference; and

WHEREAS, the Contractor is required by said Contract to perform the terms thereof and to provide a bond both for the performance and guaranty thereof.

NOW, THEREFORE, we, "**TBD**" the undersigned Contractor, as Principal, and _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the LIBERTY UNION HIGH SCHOOL DISTRICT in the sum of **TBD** Dollars (\$**TBD**), said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the bounded Contractor, his or her heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in said Contract and any alteration thereof made as therein provided, on his or her part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill guarantees of all materials and workmanship; and indemnify, defend and save harmless the Obligee, its officers and agents, as stipulated in said Contract, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any change, extension of time, alteration in or addition to the terms of the contract or to the work to be performed there under or the specifications accompanying the same, nor by any change or modification to any terms of payment or extension of time for any payment pertaining or relating to any scheme of work of improvement under the contract. Surety also stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any overpayment or underpayment by the Obligee that is based upon estimates approved by the Architect. The Surety stipulates and agrees that none of the aforementioned changes, modifications, alterations, additions, extension of time or actions shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, modifications,

alterations, additions or extension of time to the terms of the contract, or to the work, or the specifications as well notice of any other actions that result in the foregoing.

Whenever Principal shall be, and is declared by the Obligees to be, in default under the Contract, the Surety shall promptly either remedy the default, or shall promptly take over and complete the Contract through its agents or independent contractors, subject to acceptance and approval of such agents or independent contractors by Obligees as hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of Liquidated Damages; or, at Obligees' sole discretion and election, Surety shall obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Obligees of the lowest responsible bidder, arrange for a contract between such bidder and the Obligees and make available as Work progresses (even though there should be a default or succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the "balance of the Contract Price" (as hereinafter defined), and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of Liquidated Damages. The term "balance of the Contract Price," as used in this paragraph, shall mean the total amount payable to Principal by the Obligees under the Contract and any modifications thereto, less the amount previously paid by the Obligees to the Principal, less any withholdings by the Obligees allowed under the Contract. Obligees shall not be required or obligated to accept a tender of a completion contractor from the Surety.

Surety expressly agrees that the Obligees may reject any agent or contractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal. Unless otherwise agreed by Obligees, in its sole discretion, Surety shall not utilize Principal in completing the Contract nor shall Surety accept a bid from Principal for completion of the work in the event of default by the Principal.

No final settlement between the Obligees and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

The Surety shall remain responsible and liable for all patent and latent defects that arise out of or relate to the Contractor's failure and/or inability to properly complete the Public Work as required by the Contract and the Contract Documents. The obligation of the Surety hereunder shall continue so long as any obligation of the Contractor remains.

Contractor and Surety agree that if the Obligees is required to engage the services of an attorney in connection with enforcement of the bond, Contractor and Surety shall pay Obligees' reasonable attorneys' fees incurred, with or without suit, in addition to the above sum.

In the event suit is brought upon this bond by the Obligees and judgment is recovered, the Surety shall pay all costs incurred by the Obligees in such suit, including reasonable attorneys' fees to be fixed by the Court.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this ____ day of _____, 20__.

PRINCIPAL/CONTRACTOR:

By: _____

SURETY:

By: _____

Attorney-in-Fact

The rate of premium on this bond is _____ per thousand.

The total amount of premium charged: \$ _____ (This must be filled in by a corporate surety).

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for
service for service of process in California)

Telephone: _____ Telephone: _____

GUARANTEE

Guarantee for _____ . We hereby guarantee that the _____, which we have installed in _____ has been done in accordance with the Contract Documents, including without limitation, the drawings and specifications, and that the work as installed will fulfill the requirements included in the bid documents. The undersigned and its surety agrees to repair or replace any or all such work, together with any other adjacent work, which may be displaced in connection with such replacement, that may prove to be defective in workmanship or material within a period of one (1) year from the date of the Notice of Completion of the above-mentioned structure by the Liberty Union High School District, ordinary wear and tear and unusual abuse or neglect excepted.

In the event the undersigned or its surety fails to comply with the above-mentioned conditions within a reasonable period of time, as determined by the District, but not later than ten (10) days after being notified in writing by the District or within forty eight (48) hours in the case of an emergency or urgent matter, the undersigned and its surety authorizes the District to proceed to have said defects repaired and made good at the expense of the undersigned and its surety, who will pay the costs and charges therefor upon demand. The undersigned and its surety shall be jointly and severally liable for any costs arising from the District's enforcement of this Guarantee.

Countersigned

(Proper Name)

(Proper Name)

By: _____ By: _____

(Signature of Subcontractor or Contractor)

(Signature of General Contractor if for Subcontractor)

Representatives to be contacted for service:

Name: _____

Address: _____

Phone Number: _____

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between the Liberty Union High School District, 20 Oak Street, Brentwood, CA 94513 hereinafter called "Owner", and _____ whose address is _____, hereinafter called "Contractor", and _____ whose address is _____, hereinafter called "Escrow Agent".

For the consideration hereinafter set forth, the Owner, Contractor and Escrow Agent agree as follows:

1. Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for Retention earnings required to be withheld by Owner pursuant to the Construction Contract entered into between the Owner and Contractor for Gateway Program Portables in the amount of _____ dated _____ (hereinafter referred to as the "Contract"). Alternatively, on written request of the Contractor, the Owner shall make payments of the Retention earnings directly to the escrow agent. When Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the Owner within ten (10) days of deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as Retention under the terms of the Contract between the Owner and Contractor. Securities shall be held in the name of the Owner, and shall designate the Contractor as beneficial owner.
2. The Owner shall make progress payments to the Contractor for such funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.
3. When the Owner makes payments of Retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until such time as the escrow created under this Contract is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the Owner pays the Escrow Agent directly.
4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the Owner. These expenses and payment terms shall be determined by the Owner, Contractor, and Escrow Agent.
5. The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the Owner.
6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the Owner to the Escrow Agent that Owner consents to the withdrawal of the amount sought to be withdrawn by Contractor.
7. The Owner shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven (7) days' written notice to the Escrow Agent from the Owner of the notice of default under Article 2.2, Article 9.6 or Article 14, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the Owner.

8. Upon receipt of written notification from the Owner certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payment of fees and charges.

9. Escrow Agent shall rely on the written notifications from the Owner and the Contractor pursuant to Sections (5) to (8), inclusive, of this Agreement and the Owner and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

10. The names of the persons who are authorized to give written notice or to receive written notice on behalf of the Owner and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of Owner:

Title

Name

Signature

Address

On behalf of Contractor:

Title

Name

Signature

Address

On behalf of Agent:

Title

Name

Signature

Address

At the time the Escrow Account is opened, the Owner and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date set forth above.

OWNER

CONTRACTOR

Title

Title

Name

Name

Signature

Signature

INSURANCE DOCUMENTS & ENDORSEMENTS

The OCIP insurance endorsements and documents must be provided to the Liberty Union High School District within five (5) calendar days after receipt of notification of award. If the apparent low bidder fails to provide the documents required below, the District may award the Contract to the next lowest responsible and responsive bidder or release all bidders, and the bidder's bid security will be forfeited. All insurance provided by the bidder shall fully comply with the requirements set forth in Article 11 of the General Conditions.

**DISABLED VETERAN BUSINESS ENTERPRISE (DVBE) CONTRACTOR CLOSE-
OUT STATEMENT**

The Contractor shall complete this form, as a condition to Final Payment, for purposes of reporting participation by Disabled Veteran Business Enterprises (DVBE) in the Contract for the Project/Bid No. specified below.

Project Name: Portable, Shade Structures & Landscape Improvements at
the Gateway Program

Bid No.: 26-27-02

DSA No.: 01-122796

Name	Address/Phone	Category of Work*	\$ Amount of Contract

* Categories of work include: (1) construction services (specify services that DVBE will provide); (2) architecture and engineering services; (3) procurement of materials, supplies and equipment; and (4) information technology.

The undersigned, on behalf of the Contractor, certifies that DVBE participation on the Contract for Bid No. _____ equaled _____ dollars (\$_____), which represents approximately _____ percent (___%) of the total Contract price including change orders for the Project.

Company: _____

Name: _____

Title: _____

Signature: _____

Date: _____

CONTRACTOR CERTIFICATION REGARDING BACKGROUND CHECKS

(Modernization Projects)

_____ certifies that it has performed one of the following:
[Name of contractor/consultant]

- ☐ Pursuant to Education Code section 45125.1, Contractor has conducted criminal background checks, through the California Department of Justice, of all employees providing services to the Liberty Union High School District, pursuant to the Contract/Purchase Order dated _____, and Contractor hereby certifies that none of the employees have been convicted of, or have an arrest pending final adjudication for, any serious or violent felonies, as specified in Penal Code sections 1192.7(c) and 667.5(c), respectively.

As further required by Education Code section 45125.1, attached hereto as Attachment "A" is a list of the names of the employees of the undersigned who may come in contact with pupils.

OR

- ☐ Pursuant to Education Code section 45125.2, Contractor will ensure the safety of pupils by one or more of the following methods:
- ☐ 1. The installation of a physical barrier at the worksite to limit contact with pupils.
 - ☐ 2. Continual supervision and monitoring of all employees of the entity by an employee of the entity whom the Department of Justice has ascertained has not been convicted of a violent or serious felony.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Date _____, 20____

[Name of Contractor/Consultant]

By its: _____

ATTACHMENT A:

CONTRACTOR CERTIFICATION REGARDING BACKGROUND CHECKS

(INSERT NAMES OF EMPLOYEES WHO MAY COME IN CONTACT WITH PUPILS)

GENERAL CONDITIONS

ARTICLE 1 DEFINITIONS

1.1 BASIC DEFINITIONS

NOTE: The following shall not be construed as a comprehensive list of all definitions in the Contract Documents and there may be other definitions set forth in the Contract Documents. Additionally, any references to any DSA forms, documents or requirements shall be construed to incorporate any updates, supplements, or additions. The Contractor shall be required to meet the latest DSA requirements applicable to the Project.

1.1.1 Action of the Governing Board is a vote of a majority of the District's Governing Board.

1.1.2 Approval means written authorization through action of the Governing Board.

1.1.3 Architect means the architect, engineer, or other design professional engaged by the District to design and perform general observation of the work of construction and interpret the Drawings and Specifications for the Project. (See ARTICLE 4)

1.1.4 As-Builts are a set of Plans and Specifications maintained by the Contractor clearly showing all changes, revisions, substitutions, field changes, final locations, and other significant features of the Project. The As-Builts shall be maintained continuously throughout the Work for the Project and is both a prerequisite to the issuance of Payment Application and a requirement for Contract Close-Out. (See Article 3.17)

1.1.5 Beneficial Occupancy is the point in time when a building (or buildings) is fit for occupancy and its intended use. Basic requirements are that the building is safe, at or near Substantial Completion, and all fire/life safety items are approved and operational. The fact that a building is occupied does not mean that the building is ready for Beneficial Occupancy if there are elements that are unsafe or if fire/life safety items are not approved and operational. Taking occupancy on a structure that is under a fire watch is not considered beneficial occupancy. Further, taking of Beneficial Occupancy is not a point in time when retention is due unless the entire Project has obtained a Certificate of Substantial Completion that meets the definition of 1.1.46.

1.1.6 Claims. A Claim is a request for payment, supported by back-up documentation which includes, invoices time sheets, or other documents substantiating legitimacy or entitlement that is submitted during the Project or immediately following the Project made prior to the Final Retention Payment Application and prior to Final Completion of the Project. A "Claim" means a separate demand by the Contractor for (1) time extension, (2) payment of money or damages arising from Work done by or on behalf of the Contractor pursuant to the CONTRACT and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (3) and amount the payment of which is disputed by the District. (See Article 4.6)

1.1.7 Change Order (CO). A CO is a written instrument prepared by the Architect and signed by the District (as authorized by the District's Governing Board), the Contractor, and the Architect, stating their agreement upon (1) A description of a change in the Work, (2) The amount of the adjustment in the Contract Sum, if any; and (3) The extent of the adjustment in the Contract Time, if any. (See Article 7.2)

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1.1.8 Change Order Request (COR). A COR is a written request supported by backup documentation prepared by the Contractor requesting that the District and the Architect issue a CO based upon a proposed change, or a change that results in an adjustment in cost, time or both, or arising from an RFP, CCD or ICD. (See Article 7.6)

1.1.9 Close-Out means the process for Final Completion of the Project, but also includes the requirements for the DSA Certification that the Project is Complete (See DSA Certification Guide). (See Article 9.9)

1.1.10 Construction Change Document (CCD). A Construction Change Document is a DSA term that is utilized to address changes to the DSA approved Plans and Specifications. There are two types of Construction Change Documents. (1) DSA approved CCD Category A for work affecting structural, access or fire/ life safety of the Project which will require a DSA approval; and, (2) CCD Category B for work NOT affecting structural safety, access compliance or fire/ life safety that will not require a DSA approval (except to confirm that no approval is required). Both CCD Category A and Category B shall be set forth in DSA Form 140 and submitted to DSA as required. (See Article 7.3)

1.1.11 Complete/ Completion/ Final Completion means that all Work in the Contract Documents is finished, the requirements of the Contract Documents have been met, the Project has been Closed Out, and all Work has ceased on the Project. This may also be referred to as Final Completion. In most cases, the recording of a Notice of Completion shall represent Completion of the Project. Beneficial Occupancy does not mean the Work is Complete.

1.1.12 Completion Date is the date when all Work for the Project shall be Substantially Complete and is the date assigned at the end of the Contract Time for the Project. (See Article 1.1.46)

1.1.13 Construction Manager. The Construction Manager is a consultant to the District contracted to assist in Project planning, management and construction of the Project. If there is a Construction Manager, they may assist in various aspects of the Project including, but not limited to Monitoring the progress of the construction, reviewing and monitoring the schedule, progress of work, monitoring pay requests, facilitating communications, advising the District and its Board of Education on various aspects of the construction process, monitoring the RFI, COR, CCD, ICD, RFP, Claims, Disputes and other Project related processes.

1.1.14 Contract or Agreement when the terms are used in these General Conditions shall be references to the Contract Documents as defined herein.

1.1.15 Contract Documents (sometimes referred to as Construction Documents) consist of the Agreement between District and Contractor (hereinafter the Agreement or Contract), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to bid, instructions to bidders, notice to bidders, and the requirements contained in the Bid Documents, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is a written amendment to the Contract signed by parties, a Change Order, a Construction Change Document, or a written order for a minor change in the Work issued by the Architect. The Contract Documents collectively form the Contract. The Contract represents the entire and integrated Agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Architect and Contractor, between the District and any Subcontractor or Sub-subcontractor, or between any

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persons or entities other than the District and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

1.1.16 Contract Time is the time period specified in the Contract Documents in which the Project shall be completed. This is sometimes referred to a Contract Duration, or "time in which the Contractor has to complete the Project". (See Article 8.1.1)

1.1.17 Contractor, District, and Architect are those mentioned as such in the Agreement. They are treated throughout the Contract Documents as if they are of singular number and neuter gender. Any reference to "Owner" shall mean "District" or Liberty Union High School District.

1.1.18 Cure is the act of remedying a material failure to perform under the terms of the Contract Documents during the time provided to correct Contractor's Default. Specific time periods are provided to Cure and Correct a Contractor Default under Article 14 and for a Partial Default under Article 2.2 as well as elsewhere in the Contract Documents.

1.1.19 Days mean calendar days unless otherwise specifically stated.

1.1.20 Default is a material breach of Contract. A Termination for Cause under Article 14 is a declaration of Default of the Contract and shall act as a demand upon the Surety to perform under the terms of the Performance Bond. Partial Defaults may also be tendered to the Surety at District's discretion. (See Article 2.2)

1.1.21 Dispute. A dispute is a disagreement on terms or conditions of the Project where the Contractor's opinion of the Project, Payment, Change Order or Request for Proposal differs from that of the District or Architect. A dispute only rises to the level of a claim once the dispute is assembled with back-up documentation and presented for evaluation. (See Article 4.6)

1.1.22 District Representative is the person designated by the District to represent the District during the Construction for the Project. This District Representative shall have the delegated authority as further defined in Article 1.1.2. This District Representative may be an employee of the District who may have the delegated authority as set forth in Article 1.1.3, and may also include Construction Managers. In some cases, the District and its Board may be assisted by a Construction Manager. When a Construction Manager is assisting the District, the Contractor, Architect, and Inspector shall have a primary contact with the District's Construction Manager who will advise the District.

1.1.23 Drawings/Plans are graphic and pictorial portions of the Contract Documents prepared for the Project and approved changes thereto, wherever located and whenever issued, showing the design, location, and scope of the Work, generally including Plans, elevations, sections, details, schedules, and diagrams as drawn or approved by the Architect. Sometimes Drawings will also be included in Addenda, Change Orders, and Specifications.

1.1.24 DSA is the Division of State Architect. DSA is the agency that provides design and construction oversight for K-12 Schools, Community Colleges, and State Funded Charter School Projects. DSA is the responsible agency for this Project and Contractor has submitted a bid for the Project since Contractor is familiar with Contractor's responsibilities under the DSA requirements more thoroughly set forth at Title 24 of the California Code of Regulations. Contractor agrees to abide by the jurisdiction of DSA and shall construct the Project to conform with the approved Plans, Specifications, Addenda

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Addenda, and Change Orders (inclusive of approved CCD's and ICD's issued by the District pending CCD approval). See DSA website.

1.1.25 Emergency shall be defined as a sudden, unexpected occurrence, involving a clear and imminent threat to the continuation of school classes, a critical path delay that will result in not being able to occupy the school when students arrive to use the facility, danger from the facility or from outside the facility, Act of God, or other action which requires immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.

1.1.26 Float the total number of days an activity may be extended or delayed without delaying the Completion Date shown in the schedule. Float will fall into three categories: (1) Rain Days; (2) Governmental Delays; and, (3) Project Float. (See Article 8.1.4)

1.1.27 Immediate Change Directive. (ICD) A written order prepared by the Architect and signed by the District and the Architect, directing a change in the Work where the Work must proceed immediately and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. (See Article 7.3)

1.1.28 Inspector of Record (IOR)/ Project Inspector (PI) is the individual retained by the District in accordance with Title 24 of the California Code of Regulations and who will be assigned to the Project

1.1.29 Notice of Non-Compliance (DSA Form 154) is a document issued by the Inspector if there is a deviation from the DSA approved Plans, Specifications, and Change Orders. (See Article 7.1.2)

1.1.30 Payment Application or Certificate of Payment is the Contractor's certified representation of the actual level of Work performed on the Project. Payment Applications are sometimes also called "Certificate of Payment", "Request for Payment", "Payment Application", or similar terms, and shall follow the Schedule of Values that are approved by the Architect, Inspector and District. (See Article 9.3)

1.1.31 Project is the complete construction of the Work performed in accordance with the Contract Documents.

1.1.32 Project Manual is the volume assembled for the Work which may include, without limitation, the bidding requirements, sample forms, Conditions of the Contract, and Specifications.

1.1.33 Provide shall include "provide complete in place," that is "furnish and install complete."

1.1.34 Punch List/ Punch Item/ Incomplete Punch Item is a list of minor repair items, prepared after the issuance of a Certificate of Substantial Completion, by the Inspector and Architect of Work required in order to complete the Contract Documents and ensure compliance with the DSA Approved Plans so the Project may be Closed Out. Issuance of the Retention Payment is dependent of the proper completion of the Punch List. (See Article 9.9)

1.1.34.1 *Contractor's List of Punch Items* is a list of minor repair items the Contractor submits when the Contractor considers the Work Substantially Complete. Submission of this List of Incomplete Punch Items is the Contractor's representation that the Project is Substantially Complete. (See Article 9.9.1.1)

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1.1.35 Request for Information (RFI) is a written request prepared by the Contractor requesting the Architect to provide additional information necessary to clarify or amplify an item which the Contractor believes is not clearly shown or called for in the Drawings or Specifications, or to address problems which have arisen under field conditions. (See Article 7.4)

1.1.36 Request for Proposal (RFP) is a written request prepared by the Architect (and/or CM) requesting the Contractor to submit to an estimate of the effect of a proposed change on the Contract Price and (if applicable) the Contract Time. (See Article 7.5)

1.1.37 Safety Orders are those issued by any city, county, state or federal agency having jurisdiction over the Project.

1.1.38 Schedule is the Contractor's view of the practical way in which the Work will be accomplished. In this Agreement there is a requirement for a Baseline Schedule and regular Schedule Updates that show all Work to be completed during the Contract Time and shall include all items listed under Article 8.3.2.9. See Article 8 of the General Conditions.

1.1.39 Schedule of Values is a detailed breakdown of the Contract Price for each Project, building, Phase of Work or Site as determined by the District. This Schedule of Values shall adequately detail the price for the Work so Progress Payments Applications can be meaningfully reviewed by the Inspector, Architect of Record, Engineer of Record, and District. (See Article 9.2)

1.1.40 Separate Contracts are Contracts that the District may have with other Contractors, vendors, suppliers, or entities to perform Work on the Project. This may include, but is not limited to Multi-Prime Trade Contractors, furniture installers, testing agencies, clean-up contractors, or network or low voltage contractors. Contractor shall plan for certain other contractors that may also be working on the Project site and address these other contractors in Contractor's Schedule. (See Article 6)

1.1.41 Site refers to the grounds of the Project as defined in the Contract Documents and such adjacent lands as may be directly affected by the performance of the Work.

1.1.42 Specifications are that portion of the Contract Documents consisting of the written requirements for material, equipment, construction systems, instructions, quality assurance standards, workmanship, and performance of related services.

1.1.43 Standards, Rules, and Regulations referred to are recognized printed standards and shall be considered as one and a part of these Specifications within limits specified. Federal, state and local regulations are incorporated into the Contract Documents by reference.

1.1.44 Stop Work Order, or an Order to Comply, is issued when either (1) the Work proceeds without DSA approval; (2) the Work proceeds without a DSA Inspector of Record, or (3) where DSA determines that the Work is not being performed in accordance with applicable rules and regulations, and would compromise the structural integrity of the Project or would endanger lives. If a Stop Work Order is issued, the Work in the affected area shall cease until DSA withdraws the Stop Work Order. Pursuant to Education Code section 17307.5(b), the District shall not be held liable in any action filed against the District for any delays caused by compliance with the Stop Work Order

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1.1.45 Subcontractor, as used herein, includes those having direct or indirect contracts with Contractor and ones who furnished labor, material or services for a special design according to Plans, Drawings, and Specifications of this Work.

1.1.46 Substantial Completion/ Substantially Complete(d) is not reached unless and until each of the following four (4) conditions have been met: (1) all contractually required items have been installed with the exception of only minor and Incomplete Punch List Items (See Article 9.9.1.2); (2) All Fire/Life Safety Systems have been installed, and are working and signed off on the DSA Form 152 Inspection Card, and all building systems including mechanical, electrical and plumbing are all functioning; (3) all other items in the DSA Form 152 Inspection Card for the Project have been approved and signed off; and (4) the Project is fit for occupancy and its intended use. For the purposes of this Contract, any references to Completion Date means Substantial Completion Date.

1.1.47 Substitution is a change in product, material, equipment, or method of construction from those required by the Construction Documents proposed by the Contractor. For this Project, a Substitution is subject to the filing of a Construction Substitution Request Form at the time of bid and meeting the requirements of Article 3.10.

1.1.48 Supplementary Conditions/ Supplementary General Conditions/ Special Conditions are terms that are sometimes used interchangeably and refer to any additional requirements or changes to the General Conditions as noted.

1.1.49 Surety is the person, firm, or corporation that executes as a bid bond, Payment Bond or Performance Bond guarantor on the Contractor's Bid, Contractor's Performance on the Contract and Payment of the Contractor's Subcontractors, material suppliers, vendors and labor on the Project. The Surety is bound to the same extent as the Contractor is bound once a Default occurs. A default includes a Termination for Substantial Failure to Perform under Article 14, but also includes any breach of Contract and is subject to the requirements and responsibilities as set forth in the Performance Bond.

1.1.50 Work shall include all labor, materials, services and equipment necessary for the Contractor to fulfill all of its obligations pursuant to the Contract Documents. It shall include the initial obligation of any Contractor or Subcontractor who performs any portion of the Work, to visit the Site of the proposed Work (a continuing obligation after the commencement of the Work), to fully acquaint and familiarize itself with the conditions as they exist and the character of the operations to be carried out under the Contract Documents, and make such investigation as it may see fit so that it shall fully understand the facilities, physical conditions, and restrictions attending the Work under the Contract Documents. Each such Contractor and its Subcontractors shall also thoroughly examine and become familiar with the Drawings, Specifications, and associated Contract Documents and bid documents before preparing and submitting any bid.

1.1.51 Workers include laborers, workers, and mechanics.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 Correlation and Intent

1.2.1.1 *Documents Complementary and Inclusive.* The Contract Documents are complementary and are intended to include all items required for the proper execution and completion of the Work. All Contract Documents form the Contractor's Contract with the District. Any item of Work

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mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be provided by Contractor as if shown or mentioned in both. The Contractor is bound to provide the Work complete and is under a legal duty to carefully study Plans and schedule operations well ahead of time and identify inconsistencies with the Plans and Specifications and call such inconsistencies to the attention of the Architect or Registered Engineer through the Inspector under Section 4-343(b) of Title 24.

1.2.1.2 *Work to be Complete.* Contractor has thoroughly studied the Contract Documents and understands that the District contracted with Contractor to provide a complete Project which means complete systems and buildings. The entire set of Contract Documents shows a complete Project and Contractor agrees that there are multiple disciplines putting together a set of Contract Documents. Thus, if portions of a system are shown on some Drawings and not others, this does not mean the Contractor is to only provide part of a system. For example, if an air conditioning unit is shown on the mechanical Drawings, the plumbing for the air conditioning is shown on another Drawing, and the electrical shown on the electrical Drawings, the Contractor is to provide a complete and working air conditioning system. The only time when an item is supplied incomplete is if the system is shown specifically as incomplete since others will be completing the system. Work includes, but is not limited to materials, workmanship, and manufacture of fabrication of components for the Project.

1.2.1.3 *Coverage of the Drawings and Specifications.* The Drawings and Specifications generally describe the Work to be performed by Contractor. Generally, the Specifications describe Work which cannot be readily indicated on the Drawings and indicate types, qualities, and methods of installation of the various materials and equipment required for the Work. It is not intended to mention every item of Work in the Specifications, which can be adequately shown on the Drawings, or to show on the Drawings all items of Work described or required by the Specifications even if they are of such nature that they could have been shown. All materials or labor for Work, which is shown on either the Drawings or the Specifications (or is reasonably inferable therefrom as being necessary to complete the Work), shall be provided by the Contractor. The Contractor is responsible for the whole Project as contractually set forth as the Contract Documents. It is intended that the Work be of sound, quality construction, and the Contractor shall be responsible for the inclusion of adequate amounts to cover installation of all items indicated, described, or implied in the portion of the Work to be performed by them.

1.2.1.4 *Conflicts.* In the event there is a discrepancy between the various Contract Documents, it is intended that the more stringent, higher quality, and greater quantity of Work shall apply.

1.2.1.5 *Conformance with Laws.* Each and every provision of law required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein, even if through mistake or otherwise any such provision is not inserted, or is not correctly inserted. Contractor, all Subcontractors and any and all workers performing Work on this Project shall fully comply with all laws, ordinances, codes, rules and regulations of all governmental authorities and public and municipal utilities affecting the construction and operation of the physical plant of the Project, all quasi-governmental and other regulations affecting the construction and operation of the physical plant of the Project, and other special requirements, if any, designated in the Contract Documents including, but not limited to, any existing and future order, regulations, guidelines or other requirements issued by any federal, state or local authority applicable to the Project. All workers shall comply with current recommendations and requirements related to COVID-19. All workers must fully comply with any current and future orders and recommendations issued by the County where the District is located including, but not limited to, the County Public Health Department, as well as other applicable guidelines and

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recommendations issued by OSHA and CDC. If there are any inconsistencies or conflicts with any guidelines or recommendations, the stricter and more stringent provisions shall apply and prevail.

Before commencing any portion of the Work, Contractor shall check and review the Drawings and Specifications for such portion for conformance and compliance with all laws, ordinances, codes, rules and regulations of all governmental authorities and public and municipal utilities affecting the construction and operation of the physical plant of the Project, all quasi-governmental and other regulations affecting the construction and operation of the physical plant of the Project, and other special requirements, if any, designated in the Contract Documents. Such checking shall include review of Title 24 of the California Code of Regulations, California Building Code, local utility, local water connection, local grading and all other applicable agencies. In the event Contractor observes any violation of any law, ordinance, code, rule or regulation, or inconsistency with the Contract Documents, Contractor shall, within five (5) days, notify the Inspector, Architect and District in writing of same and shall ensure that any such violation or inconsistency shall be corrected in the manner provided hereunder prior to the construction of that portion of the Project. (See Title 24 Section 4-343)

The Contractor shall bear all expenses of correcting Work done contrary to said laws, ordinances, rules, and regulations if the Contractor performed same (1) without first consulting the Architect for further instructions regarding said Work or (2) disregarded the Architect's instructions regarding said Work.

1.2.1.6 *Ambiguity and Inconsistency.* Before commencing any portion of the Work, Contractor shall carefully examine all Drawings and Specifications and other information given to Contractor as to materials and methods of construction and other Project requirements. Prior to commencing any portion of the Work, Contractor shall notify Architect and District in writing of any perceived or alleged error, inconsistency, conflict, ambiguity, or lack of detail or explanation in the Drawings and Specifications in the manner provided herein. If the Contractor or its Subcontractors, material or equipment suppliers, or any of their officers, agents, and employees performs, permits, or causes the performance of any Work under the Contract Documents, which it knows or should have known to be in error, inconsistent, or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all costs arising therefrom including, without limitation, the cost of correction thereof without increase or adjustment to the Contract Price or the time for performance. Contractor shall maintain an adequate inspection system and perform personal observations and review work and pre-plan the project to ensure the Work performed under the Contract conforms to Contract requirements. Contractor shall maintain records of such review and observation to ensure strict compliance with the terms of the Contract.

1.2.1.7 *Typical Parts and Sections.* Whenever typical parts or sections of the Work are completely detailed on the Drawings, and other parts or sections which are of the same construction are shown in outline only, the complete or more detailed shall apply to the Work which is shown in outline.

1.2.1.8 *Dimensions.* Dimensions of Work shall not be determined by scale or rule. Figured dimensions shall be followed at all times. If figured dimensions are lacking on Drawings, Architect shall supply them on request. The Architect's decisions on matters relating to aesthetic effect will be final.

1.2.2 Addenda and Deferred Approvals

1.2.2.1 *Addenda* are the changes in Specifications, Drawings, Contract Documents, and Plans which have been authorized in writing by the District or Architect, and which alter, explain, or clarify the Contract Documents. Addenda shall govern over all

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other Contract Documents. Subsequent addenda issued shall govern over prior addenda unless otherwise specified in the addenda.

1.2.2.2 *Deferred Approvals.* Deferred Approvals are Submittals that are reviewed by the Architect (or Engineer of Record) and submitted to DSA for approval based on thorough detailing of manufacturer and Project specific design. See Article 3.9.1 and 3.9.3. The Deferred Approval item cannot be fully detailed on the originally approved Drawings or Specifications because of variations in product design and manufacture. Contract Documents which require Deferred Approval items are meant to be for illustration purposes only. Approval of Plans for such a portion of the Work may be deferred until the material suppliers and Subcontractors are selected. All Deferred Approvals are noted in the Plans and Specifications. Contractor is responsible for all Deferred Approval requirements set forth in the Contract Documents. Contractor is responsible to comply with all laws, building codes, Title 24 and regulations necessary to obtain all necessary approvals, including those required from the Division of the State Architect ("DSA") and the State Fire Marshall. Contractor shall not be granted an extension of time for failure to plan, schedule for and obtain necessary approvals. Contractor shall Schedule all Deferred Approval items in the Baseline Schedule and Schedule Updates under Article 3.9.6

1.2.3 Specification Interpretation

1.2.3.1 *Titles.* The Specifications are separated into titled sections for convenience only and not to dictate or determine the trade or craft involved.

1.2.3.2 *As Shown, Etc.* Where "as shown," "as indicated," "as detailed," or words of similar import are used, reference is made to the Drawings accompanying the Specifications unless otherwise stated. Where "as directed," "as required," "as permitted," "as authorized," "as accepted," "as selected," or words of similar import are used, the direction, requirement, permission, authorization, approval, acceptance, or selection by Architect is intended unless otherwise stated.

1.2.3.3 *General Conditions.* The General Conditions and Supplementary General Conditions are a part of the Contract Documents which further defines and refines the Contract entered between the Contractor and District.

1.2.3.4 *Abbreviations.* In the interest of brevity, the Specifications are written in an abbreviated form and may not include complete sentences. Omission of words or phrases such as "Contractor shall," "shall be," etc., are intentional. Nevertheless, the requirements of the Specifications are mandatory. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings. In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

1.2.3.5 *Plural.* Words in the singular shall include the plural whenever applicable or the context so indicates.

1.2.3.6 *Metric.* The Specifications may indicate metric units of measurement as a supplement to U.S. customary units. When indicated thus: 1" (25 mm), the U. S. customary unit is specific, and the metric unit is nonspecific. When not shown with parentheses, the unit is specific. The metric units correspond to the "International System of Units" (SI) and generally follow ASTM E 380, "Standard for Metric Practice."

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1.2.3.7 *Standard Specifications.* Any reference to standard specifications of any society, institute, association, or governmental authority is a reference to the organization's standard specifications, which are in effect at the date of the Contractor's proposal unless directed otherwise. If applicable specifications are revised prior to completion of any part of the Work, the Contractor may, if acceptable to Architect, perform such Work in accordance with the revised specifications. The standard specifications, except as modified in the Specifications for the Project, shall have full force and effect as though printed in the Specifications. Architect will furnish, upon request, information as to how copies of the standard specifications referred to may be obtained.

1.2.4 Rules of Document Interpretation

1.2.4.1 In the event of conflict within the Drawings, the following rules shall apply:

- a. General Notes, when identified as such, shall be incorporated into other portions of Drawings.
- b. Schedules, when identified as such, are complementary with other notes and other portions of Drawings including those identified as General Notes.
- c. Larger scale Drawings shall take precedence over smaller scale Drawings.
- d. At no time shall the Contractor base construction on scaled Drawings.

1.2.4.2 Specifications shall govern as to materials, workmanship, and installation procedures.

1.2.4.3 If Contractor observes that Drawings and Specifications are in conflict, Contractor shall, prior to commencing work, notify the Architect in writing for the purposes of obtaining an interpretation of the Contract Documents.

1.2.4.4 In the case of conflict or inconsistencies, the order of precedence shall be as follows:

- a. General Conditions take precedence over Drawings and Specifications.
- b. Supplemental Conditions take precedence over General Conditions.
- c. The Agreement Form shall take precedence over the Supplemental Conditions.
- d. In the case of disagreement or conflict between or within Specifications, and Drawings, the more stringent, higher quality, and greater quantity of Work shall apply.
- e. Addenda shall take precedence over Drawings and Specifications.
- f. General Conditions shall take precedence over Addenda.

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- g. Drawings and Specifications take precedence over the Soils Report.

1.3 OWNERSHIP AND USE OF ARCHITECT'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

The Drawings, Specifications, and other Contract Documents for the Project are the property of the District and/or Architect pursuant Contract requirements between the District and Architect. The Contractor may retain one Contract record set. Neither the Contractor nor any Subcontractor, or material or equipment supplier shall own or claim a Copyright in the Drawings, Specifications, and other documents prepared by the Architect. All copies except the Contractor's record set, shall be returned or properly accounted for upon completion of the Work. The Drawings, Specifications, and other documents prepared by the Architect, and copies thereof furnished to the Contractor are not to be used by the Contractor or any Subcontractor, Sub-subcontractor, or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work. The District and/or Architect hereby grants the Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers a limited license to use applicable portions of the Drawings, Specifications, and other documents prepared for the Project in the execution of their Work under the Contract Documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the District's property interest or other reserved right.

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ARTICLE 2 DISTRICT

2.1 INFORMATION AND SERVICES REQUIRED OF THE DISTRICT

2.1.1 Site Survey

The District will furnish, at its expense, a legal description of the Site and a land survey showing the boundaries of the Site. Contractor shall be responsible for all surveys regarding location of construction, grading and site work.

2.1.2 Soils

When required by the scope of the Project, the District will furnish, at its expense, the services of geotechnical engineers or consultants when reasonably required and deemed necessary by the Architect or as required by local or state codes. Such services, with written reports and appropriate written professional recommendations, may include test boring, test pits, soil bearing values, percolation tests, air and water pollution tests, and ground corrosion and resistivity tests, including necessary operations for determining subsoil, air, and water conditions.

2.1.3 Soils Report Part of the Contract Documents: Contractor Reliance

A soils investigation report has been obtained from test holes at the Site, and such report is incorporated into this Contract and made available for the Contractor's use in preparing its bid and Work under this Contract. Where the Plans and Specifications are more specific and provide more significant structure, systems, reinforcing, thicknesses, or construction methods, the Drawings shall control over the soils report. The soils report is available at the Architect's office for review and it is Contractor's responsibility to ensure that Contractor has reviewed the soils investigation report. Any information obtained from such report or any other information given on Drawings as to subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only. If, during the course of Work under this Contract, Contractor encounters subsurface conditions which differ materially from those indicated in the soils report, then Contractor shall notify the District within five (5) calendar days of discovery of the condition, and changes to the Contract Price may be made in accordance with Article 7 entitled "Changes in the Work." Contractor agrees that no claim against District will be made by Contractor for damages and hereby waives any rights to damages in the event the Contractor fails to notify District within the five-day period mentioned above.

WARNING: DISTRICT DOES NOT WARRANT THE SOILS AT THE PROJECT SITE. CONTRACTOR HAS REVIEWED AND IS FAMILIAR WITH THE REQUIREMENTS OF THE SOILS INVESTIGATION REPORT. CONTRACTOR UNDERSTANDS THAT PLANS, DRAWINGS AND SPECIFICATIONS SUPERSEDE THE SOILS REPORT IF THERE ARE CONFLICTS. FURTHER, IN ADDITION TO THE INFORMATION IN THE SOILS REPORT, CONTRACTOR HAS CONDUCTED AN INDEPENDENT INVESTIGATION OF THE PROJECT SITE AND THE SOILS CONDITIONS OF THE SITE. DISTRICT DOES NOT WARRANT THE SOILS CONDITIONS OF THE SITE AND CONTRACTOR IS FULLY RESPONSIBLE TO ASCERTAIN SITE CONDITIONS

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FOR THE PURPOSES OF DETERMINING CONSTRUCTION MEANS AND METHODS PRIOR TO COMMENCING CONSTRUCTION.

2.1.4 Utilities

2.1.4.1 *Location of Point of Connection.* The locations shown for the point of connection are approximate. It shall be the responsibility of the Contractor to determine the exact location of all service connections.

2.1.4.2 *Regional Notification Center.* Contractor, except in an emergency, shall contact the appropriate regional notification center at least two (2) business days prior to commencing any excavation if the excavation will be conducted in an area or in a private easement which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the District, and obtain an inquiry identification number from that notification center. See Government Code section 4216.3. No excavation shall be commenced and carried out by the Contractor unless such an inquiry identification number has been assigned to the Contractor or any Subcontractor of the Contractor and the District has been given the identification number by the Contractor. Any damages arising from failure to make appropriate regional notification shall be at the sole risk of Contractor. Contractor shall solely be responsible for any fines, penalties or damages for violation of this Article and Government Code section 4216.6 or 4216.7. Any delays caused by failure to make appropriate regional notification shall be at the sole risk of Contractor and shall not be considered for extension of time pursuant to Article 8.4.

2.1.4.3 *Utilities - Removal and Restoration.* The District has endeavored to determine the existence of utilities at the Site of the Work from the records of the District of known utilities in the vicinity of the Work. The positions of these utilities as derived from such records are shown in the Contract Documents. Thus, the locations of the main or trunklines located on the Drawings are approximate locations and not exact.

No excavations were made to verify the locations shown for underground utilities. Other than the main or trunkline, which the District has endeavored to locate on the Plans, service connections or laterals to these utilities may not be shown on the Plans. It shall be the responsibility of the Contractor to determine the exact location of all service connections. The Contractor shall make its own investigations, including exploratory excavations, to determine the locations and type of service connections, prior to commencing work which could result in damage to such utilities. The Contractor shall immediately notify the District's representative as to any utility main or trunkline discovered by Contractor in a different position than provided by the Regional Notification Center. With respect to main or trunklines, Contractor is to immediately notify District if the location is substantially different than as shown in the Contract Documents.

Contractor shall coordinate its Work with all utilities, including, but not limited to electricity, water, gas and telephone and meet with said utilities prior to the start of any work. Contractor shall show timing of all utility coordination activities under the Scheduling requirements of Article 8.

2.1.4.4 *Other Utilities.* In case it should be necessary to remove, relocate, or temporarily maintain a utility because of interference with the Work, the work on the utility shall be performed and paid for as follows:

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When it is necessary to remove, relocate or temporarily maintain a service connection, the cost of which is not required to be borne by the owner of the service connection, the Contractor shall bear all expenses incidental to the work on the service connection. The work on the service connection shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the service connection has the option of doing such work with his own forces or permitting the work to be done by the Contractor.

When it is necessary to remove, relocate, or temporarily maintain a utility which is in the position shown on the Plans, the cost of which is not required to be borne by the owner thereof, the Contractor shall bear all expenses incidental to the work on the utility. The work on the utility shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the utility has the option of doing such work with his own forces or permitting the work to be done by the Contractor.

When it is necessary to remove, relocate, or temporarily maintain a utility which is not shown on the Plans or is in a position different from that shown on the Plans and were it in the position shown on the Plans would not need to be removed, relocated, or temporarily maintained, and the cost of which is not required to be borne by the owner thereof, the District will make arrangements with the owner of the utility for such work to be done at no cost to the Contractor, or will require the Contractor to do such work in accordance with Article 7 or will make changes in the alignment and grade of the Work to obviate the necessity to remove, relocate, or temporarily maintain the utility. Changes in alignment and grade will be ordered in accordance with Article 7 herein.

No representations are made that the obligations to move or temporarily maintain any utility and to pay the cost thereof is or is not required to be borne by the owner of such utility, and it shall be the responsibility of the Contractor to investigate to find out whether said cost is required to be borne by the owner of the utility.

The right is reserved to governmental agencies and to owners of utilities to enter at any time upon any street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work and for the purpose of maintaining and making repairs to their property.

2.1.5 Existing Utility Lines; Removal, Relocation

2.1.5.1 *Main or Trunkline Facilities.* If the Contractor while performing the Contract discovers utility facilities not identified in the Contract Documents, Contractor shall notify the District and utility in writing prior to commencing work.

The owner of the public utility shall have the sole discretion to perform repairs or relocation work or permit the Contractor to do such repairs or relocation work at a reasonable price.

The Contractor shall exercise reasonable care and shall be compensated by the District for the actual verified field costs of locating, and removing, relocating, protecting or temporarily maintaining such main or trunkline utility facilities located in a substantially different location than in the Plans and Specifications, and for equipment in use on the project necessarily idled during such work. This Work shall be performed in accordance with Article 7 of these General Conditions.

2.1.5.2 *Assessment.* Nothing in these subparagraphs shall be deemed to require the District to indicate the presence of existing service laterals or appurtenances whenever the presence of such

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utilities on the Site can be inferred from the presence of other visible facilities, such as buildings, or meter junction boxes on or adjacent to the Site and could be inferred from the Main or Trunkline shown on the Drawings.

2.1.5.3 *Notification.* If the Contractor, while performing Work under this Contract, discovers utility facilities not identified by the District in the Contract Documents. Contractor shall, within five (5) days, notify the District and the utility in writing. If Contractor fails to notify the District within forty eight hours after discovery of any utility facilities not identified by District in the Contract Documents, Contractor waives all rights to be compensated for any extra Work or damages resulting from such discovered utilities.

2.1.6 Easements

District shall secure and pay for easements for permanent structures or permanent changes in existing facilities, if any, unless otherwise specified in the Contract Documents.

2.2 DISTRICT'S RIGHT TO CARRY OUT THE WORK DUE TO PARTIAL DEFAULT IN A SPECIFIC SEGREGATED AREA OF WORK (48 HOUR NOTICE TO CURE AND CORRECT)

If the Contractor Defaults or neglects to carry out the Work in accordance with the Contract Documents, the District may provide forty-eight (48) hour written notice to cure (a shorter period of time in the case of Emergency or a critical path delay as defined in Article 2.2.1) Contractor's Partial Default in a specific segregated area of work. The District's right to issue a Partial Default of the Contractor's Work and take over that segregated area of Work includes, but is not limited to:

1. Failure to supply adequate workers on the entire Project or any part thereof;
2. Failure to supply a sufficient quantity of materials;
3. Failure to perform any provision of this Contract;
4. Failure to comply with safety requirements, or due to Contractor is creation of an unsafe condition;
5. Cases of bona fide emergency;
6. Failure to order materials in a timely manner;
7. Failure to prepare Deferred Approval items or Shop Drawings in a timely manner;
8. Failure to comply with Contractor's Baseline or Update Schedule, meet critical Milestones which would result in a delay to the critical path, or delay the Contract Time;
9. Failure to comply with the Subletting and Subcontracting Fair Practices, Public Contract Code section 4100, et seq.
10. Failure to meet the requirements of the Americans with Disabilities Act;
11. Failure to complete Punch List work;

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12. Failure to proceed on an Immediate Change Directive
13. Failure to correct a Notice of Deviation

If during the forty eight (48) hour period, the Contractor fails to Cure and correct the deficiency noted in the 48 hour notice of Partial Default with diligence and promptness, the District may correct such deficiencies without prejudice to other remedies the District may have, including a Termination for Cause as set forth in Article 14. If there are inadequate funds remaining the Project balance or in the Retention Escrow to address at least 150% of the costs set forth in the Article 2.2 notice, the District may copy the Surety on the written notice of Partial Default. If a notice to the Surety is provided, except in the cases of emergency or critical path delay, the Surety has the option to take over and complete the Work described in the written notice if Surety personally delivers notice to District that it intends to perform such work. In the case where written notice has been provided, the District shall allow Surety seven (7) days to perform the Work.

2.2.1 Service of Notice of Partial Default with Right to Cure

A written notice of Partial Default and right to cure under Article 2.2 (“Article 2.2 Notice” or “Notice of Partial Default”) shall be served by e-mail (with a copy provided by regular mail) to the e-mail address provided on the Bid submitted and copied to the Project Superintendent.

2.2.2 Shortened Time for Partial Default in the Case of Emergencies.

In an Emergency situation, the District may correct any of the deficiencies described in Article 2.2 without prejudice to other remedies by providing service of written notice of Emergency requiring a shortened time for Partial Default specifying the time given to cure, if any.

2.2.3 Shortened Time for Partial Default in the Case of Critical Path Delay

In the case of critical path delay, the District may correct any of the deficiencies described in Article 2.2 without prejudice to other remedies providing service of written notice of critical path delay to the Contractor with a specific description of the critical path delay items noting the line item or area of Work that is on the critical path and prescribe the length of shortened time to cure, if any.

2.2.4 Written Notice of Partial Default to be Deducted by Deductive Change Order

The District shall have the right to determine the reasonable value of the Article 2.2 Partial Default Work, or if there is an actual value for the Work, shall use that value and issue a Deductive Change Orders under Article 7.7.4

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ARTICLE 3 THE CONTRACTOR

3.1 SUPERVISION AND CONSTRUCTION PROCEDURES

3.1.1 Contractor

The Contractor shall continually supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, procedures; and shall coordinate all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. The Contractor shall not perform the Work without utilizing the Contract Documents or, where required, approved Submittals, Shop Drawings, or samples for any such portion of the Work. If any of the Work is performed by contractors retained directly by the District, Contractor shall be responsible for the coordination and sequencing of the work of those other contractors so as to avoid any impact on the Project Schedule pursuant to the requirements of Article 6 and Article 8. Specific duties of the Contractor shall include those set out in Section 43 of Title 21 of the California Code of Regulations and Section 4-343 of Title 24 of the California Code of Regulations. These duties include, but are not limited to the following:

3.1.1.1 *Responsibilities.* It is the duty of the Contractor to complete the Work covered by his or her Contract in accordance with the approved Plans and Specifications. The Contractor in no way is relieved of any responsibility by the activities of the Architect, Engineer, Inspector or DSA in the performance of their duties.

3.1.1.2 *Performance of the Work.* The Contractor shall carefully study the approved Plans and Specifications and shall plan its schedule of operations well ahead of time. If at any time it is discovered that work is being done which is not in accordance with the approved Plans and Specifications, the Contractor shall correct the Work immediately.

3.1.2 Contractor Responsibility to Study the Plans and Specifications

All inconsistencies or timing or sequences which appear to be in error in the Plans and Specifications shall promptly be called to the attention of the Architect or, Engineer, for interpretation or correction. Local conditions which may affect the structure shall be brought to the Architect's attention at once. In no case, shall the instruction of the Architect be construed to cause work to be done which is not in conformity with the approved Plans, Specifications, change orders, construction change documents, and as required by law. (See Title 24, Section 4-343)

3.1.3 All Work Under the Direction of Inspector

Pursuant to Title 24 requirements, the Contractor shall not carry on Work except with the knowledge of the Inspector. (See Title 24 generally)

3.1.4 Contractor to Establish Timing and Protocol with Inspector

Contractor shall establish a protocol for requesting inspection with Inspector so as to not delay the Work and provide adequate time for the Inspector to perform inspection. If such a protocol is not established ahead of time, Inspector may utilize the time criteria set by Title 24 of 48 hours in advance of submitting form DSA 156 for each new area. DSA requirements under PR 13-01 specifically gives the

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Special Inspector fourteen (14) days to post to the DSA website. Contractor is responsible for delays and for failure to plan.

For some Projects, there may be a need to incrementally install certain assemblies. It is up to Contractor to identify areas and assemblies that may be constructed incrementally. Contractor must identify and establish incremental areas of construction and establish protocols with Inspector for DSA 152 approvals so they may be presented to DSA. (See PR-13 item 1.17 for further discussion)

3.1.5 Verified Reports

The Contractor shall make and submit to the office from time to time, verified reports as required in Title 24 Section 4-366. As part of the Close-Out of the Project (see Article 9.9), Contractor shall be required to execute a Form 6-C as required under Title 24 Sections 4-343.

Contractor shall fully comply with any and all reporting requirements of Education Code sections 17315, et seq., in the manner prescribed by Title 24, as applicable.

3.1.6 Contractor Responsibility

The Contractor shall be responsible to the District for acts and omissions of the Contractor's employees, Subcontractors, material and equipment suppliers, and their agents, employees, invitees, and other persons performing portions of the Work under direct or indirect contract with the Contractor or any of its Subcontractors.

3.1.7 Obligations not Changed by Architect's Actions

The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract or by tests, inspections, or approvals required or performed by persons other than the Contractor.

3.1.8 Acceptance/Approval of Work

The Contractor shall be responsible to determine when any completed portions of the Work already performed under this Contract or provided pursuant to Article 6 are suitable to receive subsequent Work thereon.

3.2 SUPERVISION

3.2.1 Full Time Supervision

Unless personally present on the Project site where the Work is being performed, the Contractor shall keep on the Work at all times during its progress a competent, English speaking construction Superintendent satisfactory to the District. The Superintendent shall be present on a full-time basis, shall be dedicated exclusively to the Project and shall not share superintendency duties with another project or job. The Superintendent shall not be replaced except with written consent of the District. The Superintendent shall represent the Contractor in its absence and shall be fully authorized to receive and fulfill any instruction from the Architect, the Inspector, the District or any other District Representative (including CM in the cases where the District has a CM representative). All Requests for Information shall be originated by the Superintendent and responses thereto shall be given to the Superintendent. No Work

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shall begin on any day by any Subcontractor or other person on the Project site until the Superintendent has arrived, or shall any Work continue during the day after the Superintendent has departed from the Project site. The Superintendent shall have authority to bind Contractor through the Superintendent's acts. The Superintendent shall represent the Contractor, and communications given to the Superintendent shall be binding on the Contractor. Before commencing the Work, Contractor shall give written notice to District (and CM representative) and Architect of the name and a Statement of Qualifications of such superintendent. Superintendent shall not be changed except with written consent of District, unless a superintendent proves to be unsatisfactory to Contractor and ceases to be in its employ, in which case, Contractor shall notify District and Architect in writing. Contractor shall provide a replacement superintendent approved by the District prior to performing additional work.

3.2.2 Staff

Notwithstanding other requirements of the Contract Documents, the Contractor and each Subcontractor shall: (1) furnish a competent and adequate staff as necessary for the proper administration, coordination, supervision, and superintendence of its portion of the Work; (2) organize the procurement of all materials and equipment so that the materials and equipment will be available at the time they are needed for the Work; and (3) keep an adequate force of skilled and fit workers on the job to complete the Work in accordance with all requirements of the Contract Documents.

3.2.3 Right to Remove

District shall have the right, but not the obligation, to require the removal from the Project of any superintendent, staff member, agent, or employee of any Contractor, Subcontractor, material or equipment supplier.

3.3 LABOR AND MATERIALS

3.3.1 Contractor to Provide

Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, material, equipment, tools, construction equipment and machinery, water, heat, air conditioning, utilities, transportation, and other facilities, services and permits necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

3.3.2 Quality

Unless otherwise specified, all materials and equipment to be permanently installed in the Project shall be new and shall be of the highest quality or as specifically stated in the Contract Documents. The Contractor shall, if requested, furnish satisfactory evidence as to kind and quality of all materials and equipment within ten (10) days of a written request by the District, including furnishing the District with bona fide copies of invoices for materials or services provided on the Project. All labor shall be performed by workers skilled in their respective trades, and shall be of the same or higher quality as with the standards of other school construction.

3.3.3 Replacement

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Any work, materials, or equipment, which do not conform to these requirements or the standards set forth in the Contract Documents, may be disapproved by the District, in which case, they shall be removed and replaced by the Contractor at no additional cost or extension of time to the District.

3.3.4 Discipline

The Contractor shall enforce strict discipline and good order among the Contractor's and Subcontractor's employees, and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. As used in this subsection, "unfit" includes any person who the District concludes is improperly skilled for the task assigned to that person, who fails to comply with the requirements of this article, or who creates safety hazards which jeopardize other persons and/or property.

3.3.5 Fingerprinting (Applicable at the time Project is Occupied and on all Projects where Workers will come in Contact with Pupils, such as Modernization Projects)

If applicable, Contractor shall comply with the applicable provisions of Education Code section 45125.1 in a method as determined by the District. Pursuant to Education Code section 45125.1, Contractor shall either conduct criminal background checks of all employees of Contractor assigned to the Project site, and shall certify that no employees who have been convicted of or who have an arrest pending final adjudication for any serious or violent felonies, as specified in Education Code section 45125.1, will have contact with pupils, by utilizing the Contractor Certification Regarding Background Checks and the corresponding Attachment "A" as found in the Contract Documents or shall be separated by a physical barrier from students.

If it is determined that Contractor must provide certification of employees, as part of such certification, Contractor must provide the District with a list of all employees providing services pursuant to this Agreement, and designate which sites such employees will be assigned. In performing the services set forth in this Agreement, Contractor shall not utilize any employees who are not included on the above-referenced list.

Contractor's failure to comply with this law shall be considered a material breach of this Agreement upon where this Agreement may be terminated, at District's sole discretion, without any further compensation to Contractor.

In the case of new construction Projects where there are no students, if the Project Schedule provides for Beneficial Occupancy or portions of the Project or if the Project should be delayed, then Contractor, at no additional costs, shall meet the requirements of either fingerprinting or providing a physical barrier as required by the District.

3.3.6 Noise, Drugs, Tobacco, and Alcohol

Contractor shall take all steps necessary to insure that employees of Contractor or any of its Subcontractors' employees do not use, consume, or work under the influence of any alcohol, tobacco or illegal drugs while on the Project. Contractor shall further prevent any of its employees or its Subcontractor employees from playing any recorded music devices or radios or wearing any radio headphone devices for entertainment while working on the Project. Likewise, Contractor shall prevent its employees or Subcontractor's employees from bringing any animal onto the Project. Contractors shall not violate any written school policies.

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3.3.7 Delivery of Material

Contractor shall place orders for materials or equipment so that the Work may be completed in accordance with the Construction schedule for the Work as set forth in Article 8 of this Agreement. Contractor shall, upon demand from the Architect, furnish to the Architect documentary evidence including, but not limited to purchase orders, invoices, bills of materials, work orders and bills of lading, showing that orders have been placed. Contractor shall have a system to receive materials and to ensure that the proper materials are being delivered, including in the case of critical materials to the Project, checking the delivery against Shop Drawings and ensuring that the materials meet the requirements of not only the Plans and Specifications, but also the approved Shop Drawings and Submittals and in conformance with Contractor's plan for delivery of materials (including but not limited to Contractor's representations in the Schedules for the Project and Contractor's equipment and materials schedule under Article 3.7.2.2). Contractor shall be responsible for all costs of accepting non-conforming materials delivered to the Project given Contractor's responsibilities and system for acceptance of deliveries. Contractor shall notify Inspector and District Representative (including CM) as early as possible, in writing, of the delivery of materials for the Project. The deliveries shall include documentation identifying the shipment sufficiently so that the Inspector, Architect or District Representative (including CM) may review the materials that are received. Under no circumstances shall materials be delivered to the Project site that are meant for another Project.

3.3.8 Liens and Other Security Interests of Subcontractors and Material Suppliers

No material, supplies, or equipment for the Work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver premises, together with all improvements and appurtenances constructed or placed thereon by it, to District free from any claims, security interests, liens, or charges. Contractor further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any Work covered by this Contract shall have any right to place a lien upon the premises or any improvement or appurtenance thereof, except that Contractor may install metering devices or other equipment of a utility company or political subdivision, title to which is commonly retained by the utility company or political subdivision. In event of installation of any such metering device or equipment, Contractor shall advise District as to its owner within five (5) days of such installation in writing, prior to making the installation.

Contractor agrees to indemnify, defend and hold the District harmless from any liens, stop notices, or assertion of security interests, including judgments and levies. If after written notice Contractor fails to address the lien, stop notice, or other security interest, the District may proceed to address the lien, stop notice or claim and seek reimbursement from Contractor.

3.3.9 Title to Materials

The title to new materials or equipment for the Work of this Contract shall remain with Contractor until incorporated in the Work of this Contract until final acceptance of the Project; no part of said materials shall be removed from its place of storage, and Contractor shall keep an accurate inventory of all said materials and equipment in a manner satisfactory to the District or its authorized representative. Responsibility for materials remains with Contractor and Contractor shall replace materials in case of loss. District similarly may pay for materials stored off site, but Contractor shall remain responsible for the materials that are stored off site.

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3.3.10 Assemblies

For all material and equipment specified or indicated in the Drawings, the Contractor shall provide all labor, materials, equipment, and services necessary, (including engineering as specifically required with Shop Drawings or Deferred Approvals) for complete assemblies and complete working systems. Incidental items not indicated on the Drawings, nor mentioned in the Specifications, that can legitimately and reasonably be inferred to belong to the Work described, or be necessary in good practice to provide a complete assembly or system, shall be furnished as though itemized in the Contract Documents in every detail. In all instances, material and equipment shall be installed in strict accordance with each manufacturer's most recent published recommendations and Specifications.

3.3.11 Noise Control

The Contractor shall be responsible for the installation of noise reducing devices on construction equipment. Contractor shall comply with the requirements of the city and county having jurisdiction with regard to noise ordinances governing construction sites and activities. Construction equipment noise is subject to the control of the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations). If school is in session at any point during the progress of the Project, and, in the District's reasonable discretion, the noise from such Work disrupts or disturbs the students or faculty or the normal operation of the school, at the District's request, the Contractor shall schedule the performance of all such Work around normal school hours or make other arrangements so that the Work does not cause such disruption or disturbance. There are specific periods of testing at operational schools and it is critical that Contractor control noise during periods of testing. In no event shall Contractor have a right to receive additional compensation or an extension to the Contract time as a result of any such rescheduling or the making of such arrangements. These controls shall be implemented during site preparation and construction. All noise related issues, including school operations, and noise during testing should be detailed in the Schedule provided pursuant to Article 8.

3.3.12 Prevention and Reporting of Workplace Violence

3.3.12.1 *Statutory Requirements.* Each employer required by Labor Code Section 6401.7 to have in effect an Injury and Illness Prevention Plan ("IIPP") must also establish, implement and maintain a written Workplace Violence Prevention Plan in accordance with Labor Code Section 6401.9 ("WVPP"). The WVPP may be incorporated as a stand-alone section of the IIPP, or may be a separate document. As described in Subdivision (b)(2) of Section 6401.9, certain employers, employees, and places of employment may be exempt from the WVPP requirements. However, in accordance with Subdivision (b)(3) of Section 6401.9, and notwithstanding an applicable exemption, the California Department of Industrial Relations, Division of Occupational Safety and Health ("Cal OSHA") may issue special orders requiring compliance with WVPP requirements.

3.3.12.2 *Project WVPP.* Not later than five (5) days following receipt of the Notice of Award, and as a condition precedent to commencing any work or services on or at the Project Site, the Contractor shall provide to the District: (i) a complete and accurate copy of the Contractor's WVPP applicable to the Project ("Project WVPP"); and (ii) the name, position, and telephone number of each person having responsibility for implementing the Project WVPP and receiving reports of workplace violence, if and to the extent that information is not conspicuously specified in the Project WVPP. Notwithstanding the District's receipt of the Project WVPP and related information, and subject to coordination requirements specified in Section 3.3.12.3 herein, the Contractor shall at all times retain sole responsibility for: (i) implementing and maintaining the Project WVPP; and (ii) ensuring compliance with Project WVPP requirements by each subcontractor, consultant, supplier, and other entity under contract

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with or otherwise subject to the Contractor's control that, for any length of time, will be present on or at the Project Site (each an "Other Employer").

3.3.12.3 *Coordination Requirements.* The Contractor shall implement procedures to effectively coordinate the Project WVPP with the District and all Other Employers, to ensure that they and their employees understand their respective roles in connection with the Project WVPP. Such procedures shall ensure that: (i) all employees are trained in regard to workplace violence prevention; (ii) each workplace violence incident involving any employee is reported, investigated, and recorded; and (iii) if any employee experiences a workplace violence incident, the Contractor shall record the information in a violent incident log and shall provide a copy of that log to the District upon request. In addition, and without limiting the foregoing, the Contractor, during weekly safety meetings conducted at the Project Site, shall reiterate the requirements of the Project WVPP and the procedures for reporting and logging workplace violent incidents, and for otherwise complying with requirements of the Project WVPP. The Contractor shall require that all employees who will be on or at the Project Site in connection with the Project (whether employed by the Contractor or any Other Employer) attend (and sign an attendance sheet for) the weekly safety meetings. If attendance at any weekly safety meeting reasonably is not possible with respect to any particular Other Employer (e.g., a supplier whose employee(s) will only temporarily be at the Project Site), the Contractor shall provide and describe directly to each such Other Employer and its applicable employee(s) the requirements of the Project WVPP and the procedures for reporting and logging workplace violent incidents, and for otherwise complying with requirements of the Project WVPP.

3.3.12.4 *Compliance and Indemnification.* In connection with the Project, and without limiting anything else in the Contract, the Contractor shall: (i) fully comply with all applicable requirements of the Project WVPP, Labor Code Section 6401.7, and Labor Code Section 6401.9 (collectively, the "IIPP and WVPP Requirements"); and (ii) ensure that all Other Employers fully comply with all applicable IIPP and WVPP Requirements. With respect to any and each failure by the Contractor or any of the Other Employers to fully comply with all applicable IIPP and WVPP Requirements, and in accordance with Section 3.3.12 of these General Conditions, the Contractor shall indemnify, defend, and hold-harmless the District, the District's governing board and each individual member thereof, and the District's other officers, employees, agents and representatives, and each of them.

3.3.13 California Air Resources Board ("CARB")

3.3.13.1 Contractor shall comply, and shall ensure all subcontractors comply, with all applicable requirements of the most current version of the regulations imposed by the California Air Resources Board ("CARB") including, without limitation, all applicable terms of Title 13, California Code of Regulations Division 3, Chapter 9 and all pending amendments ("Fleet Regulation").

3.3.13.2 Throughout the Project, and for three (3) years thereafter, Contractor shall make available for inspection and copying any and all documents or information associated with Contractor's and its subcontractors' fleets including, without limitation, the Certificates of Reported Compliance ("CRCs"), fuel/refueling records, maintenance records, emissions records, and any other information the Contractor is required to produce, keep or maintain pursuant to the Fleet Regulation upon two (2) calendar days' notice from the District.

3.3.13.3 Contractor shall be solely liable for any and all costs associated with compliance with the Fleet Regulation as well as for any and all penalties, fines, damages, or costs associated with any and all violations, or failures to comply with the Fleet Regulation. Contractor shall defend, indemnify and hold harmless the District, its officials, officers, employees and agents free and harmless

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from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Fleet Regulation.

3.4 WARRANTY

The Contractor warrants to the District and Architect that material and equipment furnished under the Contract will be of the highest quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. Contractor's warranty to District includes, but is not limited to, the following representations:

3.4.1 In addition to any other warranties provided elsewhere, Contractor shall, and hereby does, warrant all Work after the date of Notice of Completion of Work by District and shall repair or replace any or all such Work, together with any other Work, which may be displaced in so doing that may prove defective in workmanship or materials within a one (1) year period from date of Final Completion which shall be no later than the final date of Punch List as noted at Article 9.11) without expense whatsoever to District, ordinary wear and tear, unusual abuse or neglect excepted. District will give notice of observed defects with reasonable promptness. Contractor shall notify District upon completion of repairs.

3.4.2 In the event of failure of Contractor to comply with above mentioned conditions within one week after being notified in writing, District is hereby authorized to proceed to have defects repaired and made good at expense of Contractor who hereby agrees to pay costs and charges therefore immediately on demand.

3.4.3 If, in the opinion of the District, defective Work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the District, the District will attempt to give the notice required by this Article. If the Contractor cannot be contacted or does not comply with the District's requirements for correction within a reasonable time as determined by the District, the District may, notwithstanding the provisions of this article, proceed to make such correction or attention which shall be charged against Contractor. Such action by the District will not relieve the Contractor of the guarantee provided in this Article or elsewhere in this Contract.

3.4.4 This Article does not in any way limit the guarantee on any items for which a longer warranty is specified or on any items for which a manufacturer gives a guarantee for a longer period. Contractor shall furnish District all appropriate guarantee or warranty certificates upon completion of the project.

3.5 TAXES

Contractor will pay all applicable Federal, State, and local taxes on all materials, labor, or services furnished by it, and all taxes arising out of its operations under the Contract Documents. District is exempt from Federal Excise Tax, and a Certificate of Exemption shall be provided upon request.

3.6 PERMITS, FEES AND NOTICES

3.6.1 Payment

The Contractor shall secure and pay for all permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work which are necessary after execution

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of the Contract and are legally required by any authority having jurisdiction over the Project, except those required by the Division of the State Architect (DSA). District shall be responsible for all testing and inspection as required by the DSA on-site or within the distance limitations set forth in Article 13.5.2, unless a different mileage range is specified in the Supplemental Conditions.

3.6.1.1 *DSA Fees.* DSA policy is to charge CCD review fees for processing and approval of changes in the Plans and Specifications through the Construction Change Document process. Contractor is specifically directed to the current DSA IR A-30 which provides fee structure and charges that will be incurred for proceeding with respect to the CCD process, a process that must be followed for each change in the Plans and Specifications.

3.6.2 Compliance

The Contractor shall comply with and give notices required by any law, ordinance, rule, regulation, and lawful order of public authorities bearing on performance of the Work. Specifically, the Division of State Architect provides State oversight of the Project and enforcement of Title 24 rules and regulations. Contractor is directed to the DSA website. There will be local governmental oversight from City, County or both. Finally, Regional Water Quality Control Board, State Fire Marshall, local fire marshal, Department of Industrial Relations, Department of Labor Standards Enforcement, and Air Quality Management District (Local and State) are some of the agencies that provide oversight and may require specific permits, fees, or provide oversight over the Project. Contractor represents understanding and specialized knowledge of the rules governing school districts and Contractor shall maintain compliance over the applicable rules and will file all documents required in order to ensure compliance with State, local, and other rules that apply to the Project.

3.6.3 Responsibility

The Contractor shall perform all Work in conformance with every law, statute, ordinance, building code, rule, regulation or order. The Contractor shall assume full responsibility for such Work and shall bear the attributable cost of correction or project delay.

Pursuant to Title 24 Section 4-343(b):

“Contractor shall carefully study the approved Plans and Specifications and shall plan a schedule of operations well ahead of time..... All inconsistencies or items which appear to be in error in the Plans and Specifications shall be promptly called to the attention of the architect or registered engineer, through the inspector, for interpretation or correction.”

To help Contractor plan its operations, Contractor is directed to study the current version of the DSA 152 Inspection Card Manual identifying the exact steps the Inspector is to follow in the review and sign off process for the DSA 152. The DSA 152 Inspection Card Manual provides specific detail as to the order of operations, review items and compliance items beyond the Specifications and Plans which are reviewed for DSA compliance. The most current version of this manual is located on DSA’s website.

Contractor is also specifically directed to the time periods for posting of Special Inspection Reports and Inspector Notifications under DSA PR 13-01 since the timing of Inspection is not a Governmental Entity related delay.

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3.7 SUBMITTALS REQUIRED AT THE COMMENCEMENT OF THE PROJECT

3.7.1 Requirements Within Ten (10) Calendar Days

Within ten (10) calendar days after Notice to Proceed, Contractor shall submit the following:

- 3.7.1.1 Detailed Schedule of Values (See Article 9.2)
- 3.7.1.2 Submittal Listing and Schedule for Submittals
- 3.7.1.3 Critical Path Baseline Schedule (See Article 8)

3.7.2 Requirements Within Thirty-Five (35) Calendar Days

Within thirty-five (35) calendar days after Notice to Proceed, Contractor shall submit the following:

3.7.2.1 *All Submittals for the Project* except those specifically agreed upon by District and Architect, in writing, and shall be specifically incorporated into the Submittal section of the Schedule so as to not delay the Work. The agreement to allow a later Submittal does not mean that Article 3.3.7 is waived. Contractor shall order materials and ensure prices are honored and secured for the Project.

- a. Structural Steel may be included as a later Submittal than 35 days if Structural Steel is a significant portion of the Work, at least one or some of the Project is a structural steel structural system, or as specifically agreed upon by the Architect or District.
- b. It is specifically agreed that submissions of structural steel Submittals shall not be piecemeal (unless some portion is requested separately by the District or Architect), shall provide complete designs, shall be stamped by the structural steel Subcontractor, Contractor, and structural steel Subcontractor's structural engineer at time of submission and as further addressed in Article 3.9.
- c. In no case shall the submission of structural steel Drawings delay the critical path for the schedule. If a Milestone is provided for submission of complete structural steel Shop Drawings then the date shall be no later than as set forth in the Milestone

3.7.2.2 *Exceptions to Submittal Within Thirty-Five (35) Days by Written Agreement.* A written request detailing the specific reasons for a submission later than 35 days due to complexity of design or non-critical path status of the Submittal shall be submitted at the time the Baseline Schedule is submitted. The Baseline Schedule shall not include a delayed Submittal until written agreement is provided. In addition to the request for providing a Submittal after the thirty-five (35) day period, a copy of the Contract with the Subcontractor who shall be performing the Submittal, a written statement from the Subcontractor verifying that work has commenced on the Submittal and providing Subcontractor's own schedule of Milestones and completion dates, and a corresponding Submittal designation in the Schedule as required under Article 8. Approval of a delayed Submittal shall not result in any increase in the Contract Price or result in an extension of time for the completion of the Project.

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3.7.2.3 *Piecemeal Submissions of Submittals.* Piecemeal Submittals mean providing portions of Shop Drawings or Submittals as they are being completed. The submission of piecemeal Submittals results in the appearance of a submission when there is inadequate information for the Architect or Engineer to adequately review a submission. Piecemeal differs from submission of complete buildings or phases of buildings or complete assemblies. The Architect may agree to allow submission of single buildings or areas as long as the Submittals are complete. .

3.8 DOCUMENTS, SAMPLES, AND COMPUTER AT THE SITE

The Contractor shall maintain at the Site for the District one current copy of the California Building Code, Titles 19 and 24 of the California Code of Regulations, any other document required by DSA, and one record copy of the Drawings, Specifications, *Bid Clarifications Addenda*, Change Orders, and other Modifications, in good order and marked currently to record changes and selections made during construction. In addition, the Contractor shall maintain at the Site approved Shop Drawings, Product Data, Samples, and similar required Submittals. These documents shall be available to the Architect and shall be delivered to the Architect for delivery to the District upon completion of the Work.

Contractor shall have an operational computer with internet access so Contractor can review and post documents as required for the Project, including but not limited to the filing and posting of DSA required documents for the Project.

Contractor shall be prepared to review documents posted to the DSA Project website.

3.9 SUBMITTALS INCLUDING SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

3.9.1 Definitions

3.9.1.1 *Deferred Approvals.* Approval of certain aspects of the construction may be deferred until the construction Contract has been awarded. To facilitate the design process, DSA grants Deferred Approval to the design and detailing of certain elements of the Project at the request of the Architect or Engineer of Record. Design elements that may be deferred may include, but are not limited to access floors, bleachers, elevator guide rails and related elevator systems, exterior wall systems - precast concrete, glass fiber reinforced concrete, etc., skylights, window wall systems, storefronts, stage rigging, and other systems as noted in the Contract Documents. (Also see Article 1.2.2.2 and 3.9.3)

3.9.1.2 *Shop Drawings.* The term “Shop Drawings” as used herein means Drawings, diagrams, equipment or product schedules, and other data, which are prepared by Contractor, Subcontractors, manufacturers, suppliers, or distributors illustrating some portion of the Work, and includes: illustrations; fabrication, erection, layout and setting Drawings; manufacturer’s standard Drawings; schedules; descriptive literature, instructions, catalogs, and brochures; performance and test data including charts; wiring and control diagrams; and all other Drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment, or systems and their position conform to the requirements of the Contract Documents.

3.9.1.3 *Manufactured* applies to standard units usually mass-produced, and “Fabricated” means items specifically assembled or made out of selected materials to meet individual design requirements. Shop Drawings shall: establish the actual detail of all manufactured or Fabricated items, indicate proper relation to adjoining work, amplify design details of mechanical and electrical

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systems and equipment in proper relation to physical spaces in the structure, and incorporate minor changes of design or construction to suit actual conditions.

3.9.1.4 *Submittals* is a term used interchangeably and sometimes refers to Shop Drawings, Product Data, and samples since all Subcontractor submissions are tracked in a Submittal Log and may include any of the noted items. However, generally, a Submittal is a manufacturer's product information and Product Data including description, characteristics, size, physical characteristics, and requirements to prepare the jobsite for receiving of the particular manufactured item.

3.9.1.5 *Samples*. The term "samples" as used herein are physical examples furnished by Contractor to illustrate materials, equipment, or quality and includes natural materials, Fabricated items, equipment, devices, appliances, or parts thereof as called for in the Specifications, and any other samples as may be required by the Architect to determine whether the kind, quality, construction, finish, color, and other characteristics of the materials, etc., proposed by the Contractor conform to the required characteristics of the various parts of the Work. All Work shall be in accordance with the approved samples.

3.9.2 Shop Drawings.

3.9.2.1 *When Shop Drawings Are Required*. Shop Drawings are required for prefabricated components and for installation and coordination of these prefabricated components into the Project. In addition, Shop Drawings, are prepared to address the actual size and installation of components from various Subcontractors and provides an opportunity for the Contractor to coordinate and address conflicts between the subcontracting trades. In some cases, each Subcontractor or trade will provide Shop Drawings in a BIM format or other format as agreed by District.

3.9.2.2 *Purpose for Shop Drawings*. Shop Drawings are the Contractor's manufacturer, Subcontractor, supplier, vendor or the Contractor's detailed drawings showing particularized method for assembly, specifics to a manufacturer, manufacturer component installation requirements, specifics as to a manufactured item, alterations to a manufactured, a custom created item, or drawn version of more detailed information expanding on the Architect's design shown in the Contract Documents. The Shop Drawings address the appearance, performance, size, weight, characteristics and prescriptive descriptions associated with the Contractor or Contractor's Subcontractor's plan for installation or assembly based on the design in the Specifications and Contract Documents. The Shop Drawing often is more detailed than the information shown in the Contract Documents to give the Architect and Engineer the opportunity to review the fabricator's version of the product (along with particulars specific to that particular product), prior to fabrication. References to the Contract Documents, Construction Documents, Drawings, Plans, and Specifications assist the Architect and Engineer in their review of the Shop Drawings. Attachment of manufacturer's material Specifications, "catalog cut sheets," and other manufacturer's information may be provided to accompany Shop Drawings. Because Shop Drawings facilitate the Architect's and Engineer's approval of the system, they should be as clear and complete as possible so they may be reviewed by Architect or Engineer for the Project.

3.9.2.3 *Shop Drawing Requirements*. The Contractor shall obtain and submit with Shop Drawings all seismic and other calculations and all Product Data from equipment manufacturers. "Product Data" as used herein are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work.

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3.9.2.4 *Not a Reproduction of Architectural or Engineering Drawings.* The Shop Drawings are not a reproduction of the architectural or engineering Drawings. Instead, they must show more detail than the Construction Documents and details the fabrication and/or installation of the items to the manufacturer's production crew or Contractor's installation crews.

3.9.2.5 *Shop Drawings Engineering Requirements:* Some Shop Drawings require an engineer stamp to be affixed on the Drawings and calculations. In such cases, a current and valid engineering stamp shall be affixed by a California registered engineer. No out of State engineers shall stamp Shop Drawings. (See DSA IR A-18). In most cases, an engineer means California registered mechanical, structural, electrical or plumbing engineer. California Registered Civil Engineers will not be accepted for structural details unless specifically approved by DSA.

3.9.2.6 *DSA Approvals Required Prior to Work.* No work on a Shop Drawing that requires DSA approval may proceed until DSA approval is received. Contractor has provided DSA approval time and allowed adequate time for corrections in Contractor's Schedule as required pursuant to Article 8.

3.9.2.7 *Shop Drawing Identification.* All Shop Drawings must be properly identified with the name of the Project and dated, and accompanied by a letter of transmittal referring to the name of the Project and to the Specification section number for identification of each item clearly stating in narrative form, as well as "clouding" all qualifications, departures, or deviations from the Contract Documents. Shop Drawings, for each section of the Work shall be numbered consecutively and the numbering system shall be retained throughout all revisions. All Subcontractor submissions shall be made through the Contractor. Each drawing shall have a clear space for the stamps of Architect and Contractor.

3.9.3 Deferred Approvals

Deferred approvals shall be submitted and processed to ensure all DSA and other governmental approvals are secured so as to not delay the Project. There may be additional requirements for Deferred Approvals at Division 1 of the Specifications. All Deferred Approvals shall be prepared by Contractor or Contractor's agent early enough so as to not delay the Project. Contractor is aware that Title 24 California Code of Regulations Section 4-317 have specific requirements for Deferred Approval as to governing agencies and as to the Architect and Engineer for the Project. As a result, any delay associated with the time for approval by applicable agencies or by the Architect or Architect's consultants shall be Contractor's. Contractor is required to comply with inclusion of Deferred Approvals in the Schedule as required under Article 3.9.6 *DSA Approvals Required Prior to Work.* No work on a Deferred Approval item may proceed on the components until DSA approval is received. Contractor has provided DSA approval time and allowed adequate time for any DSA revisions in Contractor's Schedule as required pursuant to Article 8.

3.9.4 Submittals and Samples

3.9.4.1 *Information Required With Submittals:* Manufacturer, trade name, model or type number and quantities: Information provided must be of sufficient detail to allow Architect and Engineer to compare the submitted item with the specified products and acceptable products listed, in the Specifications and ***bid clarifications addenda***.

3.9.4.2 *Description of Use and Performance Characteristics:* Information should be furnished describing the normal use and expected performance of the product. The Architect and Contractor review this information to confirm that the product is appropriate for the intended use.

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3.9.4.3 *Size and Physical Characteristics:* The size and physical characteristics, such as adjustment capabilities, which is reviewed by both the Contractor and Architect. The Contractor has the most available information for comparing adjoining materials and equipment. The Contractor also needs to know the size and weight of the equipment for lifting and handling considerations.

3.9.4.4 *Finish Characteristics:* The Architect reviews the available finishes and selects the appropriate finish, if the finish was not previously specified in the documents. The Contractor should confirm that finish requirements in the Specifications are being met by the product.

3.9.4.5 *Contractor Responsible for Jobsite Dimensions:* Some material is custom-fabricated to job conditions, requiring dimensions from the jobsite. These jobsite dimensions are provided by the Contractor as part of the Contractor's responsibilities for the Project and shall be provided prior to release of the product for manufacture. Contractor shall not rely on Architect or Engineers to provide jobsite dimensions.

3.9.4.6 *Full Range of Samples Required (When Specific Items Not Specified).* Except in cases where the exact color and type of item is specified since the District is utilizing items Standardized or pre-selected by District, the full range of color, graining, texture, or other characteristics are anticipated for review in finished products, a sufficient number of samples of the specified materials shall be furnished by the Contractor to indicate the full range of characteristics which will be present in the finished products. Products delivered or erected without Submittal and approval without providing a full range of samples shall be subject to rejection. Except for range samples, and unless otherwise called for in the various sections of the Specifications or Specification Section 1, samples shall be submitted in duplicate.

3.9.4.7 *Labeling of Samples.* All samples shall be marked, tagged, or otherwise properly identified with the name of the submitting party, the name of the Project, the purpose for which the samples are submitted and the date.

3.9.4.8 *Transmittal letter.* All samples shall be accompanied by a letter of transmittal containing similar information, together with the Specification section number.

3.9.4.9 *Labels and Instructions.* All samples of materials shall be supplied with the manufacturer's descriptive labels and application instructions. Each tag or sticker shall have clear space for the review stamps of Contractor and Architect.

3.9.4.10 *Architect's Review.* The Architect will review and, if appropriate, approve submissions and will return them to the Contractor with the Architect's stamp and signature applied thereto, indicating the timing for review and appropriate action in compliance with the Architect's (or District's) standard procedures. In the cases where a CM is hired by the District, CM may be the party that receives and performance logging and initial processing of the Samples. CM may, in some cases, reject samples that are not in conformance with Contract requirements.

3.9.5 Submittal Submission Procedure

3.9.5.1 *Transmittal Letter and Other Requirements.* All Submittals must be properly identified with the name of the Project and dated, and each lot submitted must be accompanied by a letter of transmittal referring to the name of the Project and to the Specification section number for identification of each item clearly stating in narrative form, as well as "clouding" on the submissions, all qualifications, departures, or deviations from the Contract Documents. Shop Drawings, for each section of the Work shall be numbered consecutively and the numbering system shall be retained throughout all

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revisions. All Subcontractor submissions shall be made through the Contractor. Each drawing shall have a clear space for the stamps of Architect and Contractor. Refer to Division 1. In the case where a CM is hired on the Project, the CM may be designated to receive the Submittals for the Project, log the Submittals, and in some cases reject Submittals that do not conform to Contract requirements. Submittal Procedures for further information.

3.9.5.2 *Copies Required.* Each Submittal shall include one (1) legible, reproducible (if electronic is available, electronic copies shall also be provided) and five (5) legible prints of each drawing or schedule, table, cut sheet, etc., including fabrication, erection, layout and setting drawings, and such other drawings as required under the various sections of the Specifications, until final acceptance thereof is obtained. Subcontractor shall submit copies, in an amount as requested by the Contractor, of: (1) manufacturers' descriptive data for materials, equipment, and fixtures, including catalog sheets showing dimensions, performance, characteristics, and capacities; (2) wiring diagrams and controls; (3) schedules; (4) all seismic calculations and other calculations; and (5) other pertinent information as required by the District or Architect. (See also Division 1)

3.9.5.3 *Corrections.* The Contractor shall make all corrections required by Architect, District or CM and shall resubmit, as required by Architect or CM, corrected copies of Shop Drawings or new samples until approved. Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections required by the Architect on previous submissions. Professional services required for more than one (1) re-review of required Submittals of Shop Drawings, Product Data, or samples are subject to charge to the Contractor pursuant to Article 4.5.

3.9.5.4 *Approval Prior to Commencement of Work.* No portion of the Work requiring a Shop Drawing or sample submission or other Submittal shall be commenced until the submission has been reviewed by Contractor and Architect (and CM, if applicable) and approved by Architect (and CM where applicable) unless specifically directed in writing by the Architect. All such portions of the Work shall be in accordance with approved Shop Drawings and samples.

3.9.5.5 *District's Property.* All Submittals, Shop Drawings, computer disks, BIM modeling information, clash checks, schedules, annotated Specifications, samples and other Submittals shall become the District's property upon receipt by the District or Architect.

3.9.6 Schedule Requirements for Submittals

Contractor shall obtain and shall submit all required Submittals (i.e. Shop Drawings, Deferred Approvals, Samples, etc.), in accordance with Contractor's "Schedule for Submission of Shop Drawings and Samples" as required in the scheduling portion of the General Conditions at Articles 8 and the Specifications (as long as the Specifications do not conflict with General Conditions. In the case of conflict, the conflicting provision shall be controlled by the General Conditions and the remaining Specifications sections shall be interpreted as if the general conditions language is inserted) with such promptness as to cause no delay in its own Work or in that of any other contractor or subcontractor but in no event later than thirty five (35) days after the Notice to Proceed is issued except in the specific cases noted as an exception under Article 3.7.2.1. No extensions of time will be granted to Contractor or any Subcontractor because of its failure to have Shop Drawings and samples submitted in accordance with Division 1 and the Schedule. Each Subcontractor shall submit all Shop Drawings, samples, and manufacturer's descriptive data for the review of the District, the Contractor, and the Architect through the Contractor.

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3.9.6.1 *Consideration of Schedule.* Contractor has considered lead times, DSA or other agency governmental review times, Architect or Engineer review times, manufacturing seasons, and specific long lead procurement concerns for all submittals for the Project.

3.9.7 General Submittal Requirements

3.9.7.1 *Contractor Submittal Representations and Coordination.* By submitting Shop Drawings, Product Data, samples, etc., the Contractor represents that it has determined and verified all materials, field measurements, catalog numbers, related field construction criteria, and other relevant data in connection with each such submission, and that it has checked, verified, and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents, including the construction schedule.

3.9.7.2 *Contractor Coordination.* Contractor shall stamp, sign, and date each Submittal indicating its representation that the Submittal meets all of the requirements of the Contract Documents and evidence Contractor's review through execution of the following stamp to be placed on each Shop Drawings:

“[Contractor] has reviewed and approved the field dimensions and the construction criteria, and has also made written notation regarding any information in the Shop Drawings and Submittals that does not conform to the Contract Documents. This Shop Drawing or Submittal has been coordinated with all other Shop Drawings and Submittals received to date by me as Contractor and this duty of coordination has not been delegated to Subcontractors, material suppliers, the Architect, or the Engineers on this Project.

Signature of Contractor and date

3.9.7.3 *No Deviation from Contract Documents.* The submission of the Shop Drawings, Product Data, samples, etc., shall not deviate from the *requirements* of the Contract Documents including detailing and design intent which is specifically outlined in Contract Documents except as specifically authorized by the Architect or through an accepted substitution pursuant to Article 3.10.4. All deviations from the Contract Documents shall be narratively described in a transmittal accompanying the Shop Drawings. However, Shop Drawings shall not be used as a means of requesting a substitution, the procedure for which is defined in Article 3.10.4, “Substitutions.”

3.9.7.4 *Contractor Responsibility for Shop Drawings Conformance to Contract Documents.* Review by District and Architect shall not relieve the Contractor or any Subcontractor from its responsibility in preparing and submitting proper Shop Drawings in accordance with the Contract Documents.

3.9.7.5 *Incomplete Submittals.* Any submission, which in Architect's opinion is incomplete, contains errors, or has been checked superficially, will be returned not reviewed by the Architect for resubmission by the Contractor. Refer to Submittal Procedures of the Specifications for additional information. The Contractor shall be responsible for any related delays and shall not be the basis for any Claim.

3.9.7.6 *Shop Drawings and Submittals Shall Not Be Used as a Method to Make a Substitution.* Shop Drawings and Submittals shall not be used as a means of requesting a substitution or to make changes in the Contract Documents. If changes are made to the Contract Documents through the

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Shop Drawings, the Architect shall have the right to reject the Submittal. If the Architect does not note the deviation from the approved Plans and Specifications, the Contractor is still responsible for the change and the Architect or the District may require the Shop Drawings be revised to properly reflect the approved Contract Documents. The Architect or District may also require that the Contractor bear all costs under Article 4.5 and consequential damages associated with a CCD to revise Plans and Specifications to accommodate the deviation from approved Plans and Specifications.

3.9.7.7 Extent of Review. In reviewing Shop Drawings, the Architect will not verify dimensions and field conditions. The Architect will review and approve Shop Drawings, Product Data, samples, etc., for aesthetics and for conformance with the design concept of the Work and the information in the Contract Documents. The Architect's review shall neither be construed as a complete check which relieves the Contractor, Subcontractor, manufacturer, fabricator, or supplier from responsibility for any deficiency that may exist or from any departures or deviations from the requirements of the Contract Documents unless the Contractor has, in writing, called the Architect's attention to the deviations at the time of submission. The Architect's review shall not relieve the Contractor or Subcontractors from responsibility for errors of any sort in Shop Drawings or schedules, for proper fitting of the Work, coordination of the differing Subcontractor trades and Shop Drawings and Work which is not indicated on the Shop Drawings at the time of submission of Shop Drawings. Contractor and Subcontractors shall be solely responsible for any quantities which may be shown on the Submittals or Contract Documents.

3.10 SUBSTITUTIONS

3.10.1 Definition

A Substitution is a change in product, material, equipment, or method of construction from those required by the Construction Documents proposed by the Contractor. For this Project, a Substitution is subject to the filing of a Construction Substitution Request Form at the time of bid and meeting the requirements of this Article.

3.10.2 One Product Specified

Unless the Specifications state that no substitution is permitted, whenever the Contract Documents indicate any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction or any specific name, make, trade name, or catalog number, with or without the words "or equal," such specification shall be deemed to be used for the purpose of facilitating description of the material, process, or article desired and shall be deemed to be followed by the words "or equal." Subject to the requirements of properly submitting a Substitution Request for as Addressed in Article 3.10.4, the Contractor may, unless otherwise stated, offer any material, process, article, etc., which shall be materially equal or better in every respect to that so indicated or specified ("Specified Item") and will completely accomplish the purpose of the Contract Documents.

3.10.3 Products Specified Which Are Commercially Unavailable

If the Contractor fails to make a request for substitutions for products, prior to the submission of its bid, and such products subsequently become commercially unavailable, the Contractor may request a substitution for such commercially unavailable item. The decision to grant this request is solely at the District's discretion. The written approval of the District, consistent with the procedure for Change Orders, shall be required for the use of a proposed substitute material. The District may condition its approval of the substitution upon the delivery to District of an extended warranty or other assurances of adequate performance of the substitution as well as an equitable deduction in the Contract Price should the

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substituted item cost less than the Specified Item. All risks of delay due the approval of a requested substitution by the DSA, or any other governmental agency having jurisdiction, shall be on the requesting party. All additional costs, DSA review costs, all procurement and construction delays, and all costs for review by the Architect or its consultants shall be the responsibility of the Contractor and will be deducted from Contractor's pay request.

3.10.4 Substitution Request Form

Requests for substitutions of products, materials, or processes in place of a Specified Item must be in writing on the District's Substitution Request Form ("Request Form") at the time of submitting bids to the District, except as provided for in Article 3.10.3.

The Request Form must be accompanied by evidence as to whether the proposed substitution:

- a. Is equal in quality/service/ability to the Specified Item;
- b. Will entail no changes in detail, construction, and scheduling of related work;
- c. Will be acceptable in consideration of the required design and artistic effect;
- d. Will provide no cost disadvantage to the District;
- e. Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and
- f. Will required no change of the construction schedule.

In completing the Request Form, the bidder must state, with respect to each requested substitution, whether the bidder will agree to provide the Specified Item in the event that the District denies the bidder's request for such requested substitution. In the event that the bidder has agreed in the Request Form to provide the Specified Item and the District denies the bidder's requested substitution for a Specified Item, the bidder shall provide the Specified Item without any additional cost or charge to the District.

After bids are opened, the apparent lowest bidder shall provide, within five (5) days of opening such bids, any and all Drawing, Specifications, samples, performance data, calculations, and other information, as may be required to assist the Architect, CM and the District in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

After the District's receipt of such evidence by the bidder, the District will make its final decision as to whether the bidder's request for substitution for any Specified Items will be granted. The decision as to whether a proposed request for substitution is equal to a Specified Item shall be at the sole discretion of the District. Any request for substitution that is granted by the District shall be documented and processed though a Change Order. Contractor must submit a complete Submittal of the requested substitution and a Shop Drawing showing configuration, dimensions, and other critical information associated with the substitution that meets the requirements of Article 3.9. The District may condition its approval of any substitution upon delivery to the District of an extended warranty or other assurances of adequate performance of the substitution. Any and all risks of delay due to approval by the DSA or any other governmental agency having jurisdiction shall be on the bidder.

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If the Architect and District accept a proposed substitution, the Contractor agrees to pay for all DSA review costs, engineering and design services, including, without limitation, compensation to the Architect and affected engineers for their required time to process such substitution through the Division of the State Architect, if required, and to make all changes and adjustments in materials or the work of all trades directly or indirectly affected by the substituted item or items at no cost to the District.

3.10.5 Substitution Requests After Bid

The District, in its sole discretion, may accept a request for substitution by the Contractor or may request Contractor substitute a specified item. Any substitutions requested after bids are opened shall be subject to the same conditions and requirements set forth in Article 3.10.4 above. If any substitutions, that in the District or Architect's determination, results in a credit to the District, the credit amount shall be agreed upon in writing, otherwise, the request for substitution shall be deemed denied.

3.11 INTEGRATION OF WORK

3.11.1 Scope

The Contractor shall be responsible for cutting, fitting, or patching to complete the Work and to make all parts fit together properly. Contractor shall be responsible for ensuring that all trades are coordinated and scheduled so as to ensure the timely and proper execution of the work. When modifying existing work or installing new Work adjacent to existing work, Contractor shall match, as closely as conditions of Site and materials will allow, the finishes, textures, and colors of the original work, refinishing existing work at no additional cost to District. All cost caused by defective or ill-timed work shall be borne by Contractor. Contractor shall be solely responsible for protecting existing work on adjacent properties and shall obtain all required permits for shoring and excavations near property lines.

3.11.2 Structural Members

New or existing structural members and elements, including reinforcing bars and seismic bracing, shall not be cut, bored, or drilled except by written authority of the Architect. Work done contrary to such authority is at the Contractor's risk and subject to replacement at its own expense without reimbursement under the Contract. Schedule delays resulting from Agency approvals for unauthorized work shall be the Contractor's responsibility.

3.11.3 Subsequent Removal

Permission to patch any areas or items of the Work shall not constitute a waiver of the District's or the Architect's right to require complete removal and replacement of the areas or items of the Work if, in the opinion of the Architect or the District, the patching does not satisfactorily restore quality and appearance of the Work or does not otherwise conform to the Contract Documents.

3.12 CLEANING UP

3.12.1 Contractor's Responsibility to Clean Up

Contractor at all times shall keep premises free from debris such as waste, dust, excess water, storm water runoffs, rubbish, and excess materials and equipment. Contractor shall not leave debris under, in, or about the premises, but shall promptly remove same from the premises and dispose of it in a

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lawful manner. Disposal receipts or dump tickets shall be furnished to the Architect within five (5) days of request.

Contractor shall remove rubbish and debris resulting from the Work on a daily basis. Contractor shall maintain the structures and Site in a clean and orderly condition at all times until acceptance of the Project by the District. Contractor shall keep its access driveways and adjacent streets, sidewalks, gutters and drains free of rubbish, debris and excess water by cleaning and removal each day. All concrete, sidewalks, and paths of travel shall be broom cleaned daily.

3.12.2 General Final Clean-Up

Upon completion of Work, Contractor shall employ experience workers or professional cleaners for final cleaning. Contractor shall clean each surface to the condition expected in a normal, commercial, building cleaning and maintenance program including, but not limited to, the performance of the following:

- a. Clean interior and exterior of buildings, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected, so surfaces are free from foreign material or discoloration;
- b. Clean the Project site. The grounds should be cleared of any Contractor equipment, raked clean of debris and trash removed. Sweep paved areas broom clean;
- c. Repair or replace any damaged materials. Replace any chipped or broken glass;
- d. Remove any and all stains;
- e. Remove labels that aren't permanent labels;
- f. Clean and polish all glass, plumbing fixtures, equipment, finish hardware and similar finish surfaces. Remove any glazing compounds;
- g. Remove temporary utilities, fencing, barricades, planking, sanitary facilities and similar temporary facilities from Site;
- h. Remove temporary film that remains on any hardware, doors or other surfaces; and
- i. Seal the bottom and tops of all doors.

3.12.3 Special Clean-Up.

In addition to the general cleaning, the following special cleaning shall be done at the completion of the Work in accordance with the Specifications including, but not limited to:

- a. Remove putty stains from glazing, then wash and polish glazing;
- b. Remove marks, stains, fingerprints and other soil or dirt from painted, stained or decorated work;

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- c. Remove temporary protection and clean and polish floors and waxed surfaces;
- d. Clean and polish hardware and plumbing trim; remove stains, dust, dirt, plaster and paint;
- e. Wipe surfaces of mechanical and electrical equipment;
- f. Remove spots, soil, plaster and paint from tile work, and wash tile;
- g. Clean all fixtures and equipment, remove excess lubrication, clean light fixtures and lamps, polish metal surfaces;
- h. Vacuum-clean carpeted surfaces; and
- i. Remove debris from roofs, down spout and drainage system.

3.12.4 Failure to Cleanup

If the Contractor fails to clean up as provided in the Contract Documents, the District may do so, and the cost thereof shall be the responsibility of the Contractor pursuant to Article 2.2 and seek a Deductive Change Order.

3.13 ACCESS TO WORK

The Contractor shall provide the District, the Architect, Engineers and the Inspector of Record, access to the Work in preparation and progress wherever located. Contractor shall provide safe and proper facilities for such access so that District's representatives may perform their functions.

CONTRACTOR IS AWARE THAT THIS CONTRACT MAY BE SPLIT INTO SEVERAL PHASES AS ADDRESSED IN ARTICLE 6.

3.13.1 Special Inspection, Inspections or Tests Out of State, Out of Country or Remote from Project

If Contractor has a Subcontractor or supplier that requires in plant or special inspections or inspections or tests that are out of the country, out of the state, or a distance of more than 200 miles from the Project site, the Special Inspector or Inspector shall be provided access so the special inspection or inspection may occur in the remote location. In some cases, the DSA Inspector may also require access in addition to Special Inspectors and individuals performing tests. Inspections/tests shall occur during normal work hours. (See also Article 4.3.6)

3.14 ROYALTIES AND PATENTS

3.14.1 Payment and Indemnity for Infringement

Contractor shall hold and save the District and its officers, agents, and employees, the Construction Manager, the Architect, and the Architect's consultants harmless from liability of any nature or kind, including cost and expense, for or on account of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the District, unless otherwise specifically provided in the Contract Documents, and unless such liability arises

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from the sole negligence, or active negligence, or willful misconduct of the District, the Architect, or the Architect's consultants.

3.14.2 Review

The review by the Architect of any method of construction, invention, appliance, process, article, device, or material of any kind shall be for its adequacy for the Work and shall not be an approval for the use by the Contractor in violation of any patent or other rights of any person or entity.

3.15 INDEMNIFICATION

3.15.1 Contractor

See Agreement Form. Contractor shall ensure that its contract with each of its Subcontractors contains provisions requiring the Subcontractors to defend, indemnify and hold harmless the District, Architect, Inspector, the State of California to a minimum level as set forth in this Article and consistent with the indemnity and hold harmless language in the Agreement Form.

3.16 SUBMISSION OF DAILY REPORTS

3.16.1 General

By 10:00 a.m. on the following business day, the Contractor shall submit a Daily Report to the Inspector and copy the Architect for the previous day's Work. If there is a Construction Manager, the original Daily Report is to be provided to the Construction Manager and copies sent to the Architect and the Inspector. Daily Reports shall be prepared on forms approved by the District, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day. The District reserves the right to note inconsistencies or inaccuracies in the Daily Reports. In such cases, pertinent notes shall be entered by each party to explain points which cannot be resolved that day. Each party shall retain a signed copy of the report. Daily Reports by Subcontractors or others shall be submitted through the Contractor.

3.16.2 Labor

The Daily Report shall show names of workers, classifications, hours worked and hourly rate. The locations where work occurred shall also be identified in the Daily Report. Project superintendent expenses are not allowed.

3.16.3 Materials

The Daily Report required shall describe and list quantities of materials used and unit costs.

3.16.4 Equipment

The Daily Report required shall show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable, and hourly/daily cost. Move-on and move-off fees shall be noted.

3.16.5 Other Services and Expenditures

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Other services and expenditures shall be described in the Daily Report in detail as the District requires.

3.16.6 Failure to Submit Daily Report

If Contractor does not submit its Daily Report by 10 am the next business day, the Inspector of Record shall prepare a Daily Report addressing each of the above items. The cost for the Inspector's services to prepare the Daily Report shall be addressed through a Deductive Change Order under Article 7.7.4.

3.17 AS-BUILT DRAWINGS AND ANNOTATED SPECIFICATIONS

Throughout the duration of the Project, Contractor shall maintain on a current basis an accurate and complete set of As-Built Drawings (and Annotated Specifications) clearly showing all changes, revisions to Specifications and substitutions during construction, including, without limitation, field changes and the final location of all electrical and mechanical equipment, utility lines, ducts, outlets, structural members, walls, partitions, and other significant features. In case a Specification allows Contractor to elect one of several brands, makes, or types of material or equipment, the annotations shall show which of the allowable items the Contractor has furnished. The Contractor will update the As-Built Drawings and Annotated Specifications as often as necessary to keep them current, but no less often than weekly.

Contractor shall update As-Built Drawings with complete information on an area of Work at or near the time when the Work is being performed and prior to any DSA 152 sign off and prior to any Work being covered.

The As-Built Drawings and Annotated Specifications shall be kept at the Site and available for review and inspection by the District and the Architect. Failure to maintain and update the As-Built Drawings is a basis to withhold Progress Payments pursuant to Article 9.6.

3.17.1 Upon Beneficial Occupancy

Contractor shall obtain and pay for reproducible Plans upon Beneficial Occupancy. Contractor shall deliver Plans to District Representative (Construction Manager if one is hired for the Project).

3.17.2 As-Built at Completion of Work

Upon completion of the Work and prior to and as a condition precedent to Application for Retention Payment, the Contractor will provide one neatly prepared and complete set of As-Built Drawings and Annotated Specifications to the District. Contractor shall certify the As-Built as a complete and accurate reflection of the actual construction conditions of the Work by affixing a stamp indicating the Drawings are As-Built and certifying accuracy on the final set of As-Built. Failure to deliver a complete As-Built set of Drawings may result in significant withholdings to ensure Work is properly documented. (See Article 9.9.2)

3.17.3 Log of Control and Survey Documentation

Contractor shall complete and maintain an accurate log or all control and survey documentation for the Project as the Work progresses. All reference and control points shall be recorded

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on the As-Built Drawings. The basis of elevations shall be one of the established benchmarks that must be maintained on the As-Built.

3.17.4 Record Coordinates for Key Items

Contractor shall record, by coordinates, all utilities on-site with top of pipe elevations, major grade and alignment changes, rim, grate or top of curb and flow line elevations of all drainage structures and sewer manholes. Contractor shall update record information at or near the time when work is occurring in an area and prior to DSA 152 sign off on any category of Work and prior to covering the Work.

3.17.5 BIM As-Built Drawings

If BIM is utilized for the Project, then an electronic version of such As-Built Drawings and Annotated Specifications will be delivered to District (in an acceptable format to District).

3.18 EQUIPMENT MANUALS

Contractor shall obtain and furnish three (3) complete sets of manuals containing the manufacturers' instructions for maintenance and operation of each item of equipment and apparatus furnished under the Contract Documents and any additional data specifically requested under the various sections of the Specifications for each division of the Work. The manuals shall be arranged in logical, sequential order, labeled, indexed, and placed in three-ring binders. At the completion of its Work, the Contractor shall certify, by endorsement thereon, that each of the manuals is complete, accurate, and covers all of its Work. Prior to submittal of Contractor's Application for Retention Payment, and as a further condition to its approval by the Architect, each Subcontractor shall deliver the manuals, arranged in logical, sequential order, labeled, indexed, endorsed, and placed in three-ring binders, to the Contractor, who shall assemble these manuals for all divisions of the Work, review them for completeness, and submit them to the District through the Architect.

3.19 DIR REGISTRATION

Strict compliance with all DIR registration requirements in accordance with Labor Code sections 1725.5 and 1771.1 is a material obligation of the Contractor and all of its subcontractors (of any tier) under the Contract Documents. The foregoing includes, without limitation, compliance with DIR registration requirements at all times during performance of the Work by the Contractor and all of its subcontractors of any tier. The failure of the Contractor and all subcontractors of any tier to be properly registered with DIR at all times during performance of the Work is a material breach of the Contract and subject to termination for cause.

An affirmative and ongoing obligation of the Contractor under the Contract Documents is the verification that all subcontractors of any tier are at all times during performance of the Work are in full and strict compliance with the DIR registration requirements. The Contractor shall not permit or allow any subcontractor of any tier to perform any Work without the Contractor's verification that all subcontractors are in full and strict compliance with the DIR registration requirements. Any subcontractors of any tier not properly registered with DIR shall be substituted in accordance with Labor Code section 1771.1. Contractor or its subcontractors of any tier shall not be entitled to any additional costs or time arising from or in any way related to compliance with the DIR registration requirements.

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ARTICLE 4 ADMINISTRATION OF THE CONTRACT AND CLAIMS

4.1 ARCHITECT

4.1.1 Replacement of Architect

In the case of the termination of the Architect, the District may appoint an Architect or another construction professional or may perform such functions with its own licensed professional personnel. The status of the replacement Architect under the Contract Documents shall be the same as that of the former Architect.

4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

4.2.1 Status

Pursuant to Titles 2 of the California Code of Regulations and as required pursuant to the Field Act, Education Code 17280 et seq., the Architect will provide administration of the Contract Documents and the Work, and will be the District's representative during construction, as well as during the one (1) year period following the commencement of any warranties. The Architect will have authority to act on behalf of the District only to the extent provided in the Contract Documents.

4.2.2 Site Visits

The Architect will visit the Site at intervals necessary in the judgment of the Architect to become generally familiar with the progress and quality of the Work and to determine in general if the Work is being performed in accordance with the Contract Documents and as otherwise required by DSA.

4.2.3 Limitations of Construction Responsibility

The Architect, District and CM shall not have control over, charge of, or be responsible for construction means, methods, techniques, schedules, sequences or procedures, fabrication, procurement, shipment, delivery, receipt, installation, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility under the Contract Documents. The Architect, District and CM shall not be responsible for the Contractor's, Subcontractors', material or equipment suppliers', or any other person's schedules or failure to carry out the Work in accordance with the Contract Documents. The Architect, District and CM shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, their agents or employees, or any other persons or entities performing or supplying portions of the Work. The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect, District or CM in the Architect, District or CM's administration of the Contract Documents, or by tests, inspections, or approvals required or performed by persons other than the Contractor.

4.2.4 Communications Facilitating Contract Administration

Except where a CM is on the Project, or as otherwise provided in the Contract Documents or when direct communications are warranted by special circumstances, the District and the Contractor shall communicate through the Architect. In the cases where a CM is hired for the Project, all

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communication shall be through the CM (unless otherwise directed) with copies to the District, Architect and Inspector. Where direct communication is necessary between the District and the Contractor, the District's communication shall be through the District's authorized designated person. The Architect and CM shall be promptly informed, and shall receive copies of all written communications. Contractor shall not rely upon any communications from the District that is not from the District's Representative. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material or equipment suppliers shall be through the Contractor. In the case where a CM is hired for the Project, the CM shall be the main point of contact for communication of information. Copies should be sent to the Architect, District Representative and Inspector.

4.2.5 Payment Applications

The Architect will review and make recommendations to the District regarding the amounts due the Contractor on the Certificates for Payment pursuant to Article 9.3.4 and subject to the Inspector's review, (CM review, if applicable) and Architect's observation. This review of Payment Applications is sometimes called a "Pencil Draft." Return of a Pencil Draft shall constitute the District's dispute of the Payment Application that has been submitted. Contractor shall promptly respond to Pencil Drafts or Contractor's Payment Applications may be delayed. Contractor's failure to promptly respond to a Pencil Draft shall qualify as a delay in the Prompt Payment of a Request for Payment or Request for Retention.

4.2.6 Rejection of Work

In addition to the rights, duties, and obligations of the Inspector under this Article, the Architect may recommend to the District that the District reject Work which does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable to achieve the intent of the Contract Documents, the Architect (and/or CM) may recommend to the District that the District require additional inspection or testing of the Work in accordance with Article 13.5, whether or not such Work is Fabricated, installed, or completed. District may have Non-conforming Work removed and replaced pursuant to Article 9.7. However, neither this authority of the Architect (or CM) nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect (or CM) to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

Contractor shall, without charge, replace or correct Work found by the District to not be in conformance to Contract requirements. Contractor shall promptly segregate and remove rejected materials from the Project site.

This section is does not address a Notice of Non-Compliance and the remedies associated with a Notice of Non-Compliance which are addressed at Article 7.1.2

4.2.7 Warranties upon Completion

The Architect (and where applicable CM), in conjunction with the Inspector will conduct field reviews of the Work to determine the date of Substantial Completion and of Final Completion, shall receive and forward to the District for the District's review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment when the Architect believes the Work has been completed in compliance with the requirements of the Contract Documents (See Article 9.11 for Close-Out). The handling by the Architect (or where applicable CM) of such warranties, maintenance manuals, or similar documents shall not diminish or transfer to the

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Architect any responsibilities or liabilities required by the Contract Documents of the Contractor or other entities, parties, or persons performing or supplying the Work.

On some Projects, the District will take a phased occupancy of the Project. In those cases, the District may commence the running of warranties on the buildings, or phases that are accepted after Punch List is completed and the District has accepted Completion of the separate phase. A separate Notice of Completion may be filed for the separate building or phase of work and warranties shall commence for the separate phase only to the extent that warranties do not require coordination or connection to other buildings or other parts of the site and only if the warranted item is completed to its entirety in the segregated building or phased area.

If written warranties are not provided at the time the Punch List is nearing completion, Architect (with recommendations from the CM and Inspector) shall determine the dollar value of the warranties and shall make recommendation for withholdings necessary to effectuate the transfer of such warranties to the District for future use as part of the Punch List for the Project pursuant to Article 9.6.

Warranties are not commenced through utilizing of equipment for testing and operation as necessary to acclimate buildings or where necessary to test systems.

4.2.8 Interpretation

The Architect will interpret and decide matters concerning performance and requirements of the Contract Documents. Architect shall make clarifications as necessary to interpret the Contract Documents.

4.3 PROJECT INSPECTOR

4.3.1 General

One or more Project Inspectors employed by the District and approved by the Division of the State Architect will be assigned to the Work in accordance with the requirements of Title 24 of the California Code of Regulations. The Inspector(s) duties are as specifically defined in Title 24 Section 4-333 and 4-342 and in DSA IR A-8.

4.3.2 Inspector's Duties and DSA Noted Timelines for Inspection

All Work shall be under the observation of the Inspector. Contractor shall establish a protocol for requesting inspection with Inspector so as to not delay the Work and provide adequate time for the Inspector to perform inspection. If such a protocol is not established ahead of time, Inspector may utilize the time criteria set by Title 24 of 48 hours in advance of submitting form DSA 156 for each new area. The Inspector shall have free access to any or all parts of the Work at any time. The Contractor shall furnish the Inspector such information as may be necessary to keep the Inspector fully informed regarding progress and manner of Work and character of materials. Such observations shall not, in any way, relieve the Contractor from responsibility for full compliance with all terms and conditions of the Contract, or be construed to lessen to any degree the Contractor's responsibility for providing efficient and capable superintendence. The Inspector is not authorized to make changes in the Drawings or Specifications nor shall the Inspector's approval of the Work and methods relieve the Contractor of responsibility for the correction of subsequently discovered defects, or from its obligation to comply with the Contract Documents.

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Inspector shall electronically post DSA required documents on the DSA electronic posting website. It is the Contractor's responsibility to determine the status of posting and determine if all the criteria for sign off of a category of Work on the Project Inspection Card (Form DSA 152) as defined more thoroughly in the most current version of the DSA 152 manual posted on the DSA website.

Inspector may collaborate with Contractor about approval of areas that may be constructed and approved incrementally under the DSA 152 card pursuant to the guidelines of PR-13 at Article 1.17. Inspector shall work with Contractor to present incremental approval proposals to DSA.

4.3.3 Inspector's Authority to Reject or Stop Work

The Inspector shall have the authority to reject Work whenever provisions of the Contract Documents are not being complied with, and Contractor shall instruct its Subcontractors and employees accordingly. In addition, the Inspector may stop any Work that poses a probable risk of harm to persons or property. The Contractor shall instruct its employees, Subcontractors, material and equipment suppliers, etc., accordingly. The absence of any Stop Work Order or rejection of any portion of the Work shall not relieve the Contractor from any of its obligations pursuant to the Contract Documents.

4.3.4 Inspector's Facilities

Within seven (7) days after the notice to proceed, the Contractor shall provide the Inspector with the temporary facilities as required. More specific requirements for the Inspector facilities may be further described under Division 1 of the Specifications.

4.3.5 Testing Times

The District will provide inspection and testing at its cost during the normal eight (8) hour day Monday through Friday (except holidays). Work by the Contractor outside of the normal eight (8) hour day shall constitute an authorization from the Contractor to the District to provide inspection and testing as required outside of the normal eight (8) hour day. Contractor shall provide adequate time for inspections so as to not delay the Work. An advanced timing protocol may be established pursuant to Article 4.3.2. If the Contractor is behind Schedule then it is incumbent on the Contractor to provide advance forecast through look ahead of the anticipated date for inspection so the Inspector may plan their activities so as to not delay the Project. Contractor shall reimburse District for any additional costs associated with inspection and testing (including re-inspection and re-testing) outside the normal eight-hour day and for any retests caused by the Contractor.

It is the Contractor's responsibility to request special inspections with sufficient time so all testing may be timely completed and posted so work may proceed and the Inspector's signature is attached to the Project Inspection Card (Form 152). Specifically, timely request for special inspection under the DSA Verified Report Forms 291 (laboratory), DSA Verified Report Form 292 (Special Inspection), and DSA Verified Report 293 (geotechnical) since DSA requirements under PR 13-01 specifically gives the Special Inspections 14 days to post to the DSA website. Failure to plan and pay (if applicable) for quicker delivery of Special Inspections may be counted as Float, but is not considered Governmental Delay Float under Article 8.1.4.

4.3.6 Special Inspections, Inspections or Tests Out of State, Out of Country or Remote from Project

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If Contractor has a Subcontractor or supplier that requires in plant or special inspections, inspections or tests that are out of the country, out of the state or a distance of more than 200 miles from the Project Site, the District shall provide the Special Inspector or individual performing tests time for inspection and testing during normal work hours. Contractor, however, is responsible for the cost of travel, housing, food, out of area premiums that may be in the Inspector/Testing Agreement with District, or other expenses necessary to ensure proper inspection, special inspection or testing is provided by a DSA Certified Inspector, Special Inspector, or individual performing tests. In some cases all three (DSA Inspector, Special Inspector, and Tester) may be required. In addition, if the DSA Certified Inspector, Special Inspector, or individual performing test has contractual travel clauses or special rates for out of town inspection, Contractor is responsible for all costs associated with the contractual travel costs in addition to all other costs. Arrangements for inspection and/or testing shall be made far enough in advance so as to not delay the Work.

4.4 STOP WORK ORDER

DSA may issue a Stop Work Order, or an Order to Comply, when either (1) the Work proceeds without DSA approval; (2) the Work proceeds without a DSA Inspector of Record, or (3) where DSA determines that the Work is not being performed in accordance with applicable rules and regulations, and would compromise the structural integrity of the Project or would endanger lives. If a Stop Work Order is issued, the Work in the affected area shall cease until DSA withdraws the Stop Work Order. Pursuant to Education Code section 17307.5(b), the District shall not be held liable in any action filed against the District for any delays caused by compliance with the Stop Work Order, except to the extent that an error or omission by the District is the basis for the issuance of the Stop Work Order.

Examples of Stop Work Orders that may be issued by DSA include DSA Bulletin 07-04 and Policy 10-01, the installation of automatic fire sprinkler systems without approved Plans, covering Work that has not been approved by Inspector on DSA Project Inspection Card (Form 152).

4.5 RESPONSIBILITY FOR ADDITIONAL CHARGES INCURRED BY THE DISTRICT FOR PROFESSIONAL SERVICES

If at any time prior to the completion of the requirements under the Contract Documents, the District is required to provide or secure additional professional services (including CM, Inspection, Architect, Engineering and Special Consultant Services) for any reason by any act of the Contractor, the District may seek a Deductive Change Order for any costs incurred for any such additional services, which costs shall be deducted from the next progress payment. A Deductive Change Order shall be independent from any other District remedies and shall not be considered a waiver of any District rights or remedies. If payments then or thereafter due to the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the District. Additional services shall include, but shall not be limited to, the following:

- a. Services made necessary by the default of the Contractor (Article 14 or Article 2.2).
- b. Services made necessary due to the defects or deficiencies in the Work of the Contractor (Article 2.2 and Article 9.6).
- c. Spurious or frivolous RFI's issued that do not conform to the requirements of Article 7.4. Issuance of the same RFI after receiving an answer from the Architect or Engineer

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- d. Review of Schedules that are provided by Contractor that do not Conform with the Requirements of Article 8.
- e. Preparation of a CCD or ICD to correct a Contractor Deficiency, or Contractor Caused Notice of Non-Compliance (See Article 7.3).
- f. Review of Incomplete Shop Drawings or Submittals, including the submission of Piecemeal Shop Drawings or Submittals unless piecemeal Submittals are specifically agreed upon by District (See Article 3.9)
- g. Services required by failure of the Contractor to perform according to any provision of the Contract Documents.
- h. Services in connection with evaluating substitutions of products, materials, equipment, Subcontractors' proposed by the Contractor, and making subsequent revisions to Drawings, Specifications, obtaining DSA approvals, DSA costs for review of CCD's, other governmental agency review costs, and providing other documentation required (except for the situation where the specified item is no longer manufactured or available). (See Article 3.10)
- i. Services for evaluating and processing Claims or Disputes submitted by the Contractor in connection with the Work outside the established Change Order process.
- j. Services required by the failure of the Contractor to prosecute the Work in a timely manner in compliance within the specified time of completion.
- k. Services in conjunction with the testing, adjusting, balancing and start-up of equipment other than the normal amount customarily associated for the type of Work involved.
- l. Services in conjunction with more than one (1) re-review of Submittals of Shop Drawings, Product Data, samples, RFI's etc.

4.6 DISPUTES AND CLAIMS

4.6.1 Decision of Architect

"Disputes" or "Claims" as defined in Article 4.6.9.1 between District and Contractor involving money or time, including those alleging an error or omission by the Architect shall be referred initially to the Architect for action as provided in Article 4.6.2 within ten (10) days after Contractor's Article 7 request for Change is denied. If there is a CM, the CM shall receive the Dispute and may review and also assemble opinions and documents to assist the Architect. A decision by the Architect, as provided in Article 4.6.5, shall be required as a condition precedent to proceeding with remedies set forth in Article 4.6.9 as to all such matters arising prior to the date Retention Payment Application is due, regardless of whether such matters relate to execution and progress of the Work, or the extent to which the Work has reached Final Completion.

The condition precedent of an Architect decision shall be waived if: (1) the position of Architect is vacant; (2) the Architect has failed to take action required under Article 4.6.5 within the time

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periods required therein; or (3) the Dispute or Claim relates to a stop notice claim not arising from any extra Change Order or Immediate Change Directive for which approval has not been provided.

4.6.2 Architect's Review

The Architect (and CM) will review the Dispute and take one or more of the following preliminary actions upon receipt of a Dispute: (1) request additional supporting data from the claimant; (2) submit a schedule to the parties indicating when the Architect expects to take action; (3) reject the Dispute in whole or in part, stating reasons for rejection; (4) recommend approval of the Dispute; or (5) suggest a compromise. The Architect may also, but is not obligated to, notify the Surety, if any, of the nature and amount of the Dispute.

4.6.2.1 *Architectural Immunity.* Architect review of Disputes and Claims shall be impartial and meant to resolve Disputes and Claims. Pursuant to the case, Huber, Hunt & Nichols, Inc. v. Moore (1977) 67 Cal.App.3d 278, the Architect is provided a quasi-judicial immunity for interpreting and deciding Disputes and Claims between the District and Contractor.

4.6.3 Documentation if Resolved

If a Dispute has been resolved, the Architect (and/or CM) will prepare a Change Order or obtain appropriate documentation to document the terms for Board approval.

4.6.4 Actions if Not Resolved

If a Dispute has not been resolved and all documentation requested pursuant to Article 4.6.2 has been provided, the Contractor shall, within ten (10) days after the Architect's initial response, assemble all the documents involved in the Dispute including copies of all back-up documentation of costs and the basis for the Dispute and take one or more of the following actions: (1) modify the initial Dispute; (2) notify the Architect that the initial Dispute stands; or (3) supplement with additional supporting data and re-submit to the Architect under Article 4.6.2.

4.6.5 Architect's Written Decision

If a Dispute has not been resolved after consideration of the foregoing and of other evidence presented by the parties or requested by the Architect, the Architect (or Architect through CM) shall provide a written decision twenty (20) days after compliance with Article 4.6.4. Upon expiration of such time period, the Architect (or Architect through CM) will render to the parties its written decision relative to the Dispute, including any change in the Contract Sum or Contract Time or both. The Architect may also request reasonable additional time to complete Architect's written decision.

If the resolution of the Dispute by the Architect is not satisfactory to the Contractor and copies of all back-up documentation of costs and the basis for the Dispute is fully articulated in a package of material that is complete, the Contractor may then submit a Claim to the District under Article 4.6.9.

4.6.6 Continuing Contract Performance

Pending final resolution of a Dispute or Claim, including, negotiation, mediation, arbitration, or litigation, the Contractor shall proceed diligently with performance of the Contract, and the District shall continue to make any undisputed payments in accordance with the Contract (less any

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withholdings or offsets). If the Claim is not resolved, Contractor agrees it will neither rescind the Contract nor stop the progress of the work, but Contractor's sole remedy shall be to submit such controversy to determination by a court of competent jurisdiction in the county where the Project is located, after the Project has been completed, and not before.

4.6.6.1 *District's Option to Submit Individual Disputes to Arbitration during Claims and Disputes Process.* At the District's sole option, in order to more efficiently resolve Claims during the Project and prior to the completion of the Claims Process, pursuant to Government Code section 9201, the District may submit individual Disputes or Claims for binding arbitration and Contractor agrees to the resolution of for each individual Dispute or Claim by an Arbitrator, including resolution of time and delays. If binding arbitration is utilized for individual Disputes or Claims, such resolution is full and final as to that particular Dispute or Claim. THIS INDIVIDUAL DISPUTE ARBITRATION PROCESS IS NOT AN ARBITRATION CLAUSE AND SHALL NOT BE CONSTRUED AS AN AGREEMENT TO ARBITRATE. THIS INDIVIDUAL DISPUTES ARBITRATION PROCESS IS FOR THE SOLE PURPOSE OF STREAMLINING AND RESOLVING DISPUTES OR CLAIMS DURING CONSTRUCTION AND SHALL BE REQUESTED ON SPECIFIC INDIVIDUAL ITEMS BY THE DISTRICT PRIOR TO RETENTION PAYMENT (EVEN IF THERE ARE DEDUCTIONS MADE FROM RETENTION PAYMENT) WHICH REPRESENTS THE FINAL COMPLETION OF THE PROJECT.

- a. If there is no Retention remaining on the Project, individual Disputes initiated prior to Project Final Completion shall continue until a final disposition of the Arbitration or resolution of the individual Claim or Dispute.
- b. No Tolling. The Arbitration process shall not toll the Disputes or Claims process under Article 4.6 or the requirement to submit Claims to Court under Article 4.6.9.5.

4.6.7 Claims for Concealed Trenches or Excavations Greater Than Four Feet Below the Surface

When any excavation or trenching extends greater than four feet below the surface or if any condition involving hazardous substances are encountered:

- a. Immediately upon discovery, The Contractor shall promptly, and before the following conditions are disturbed, notify the District, by telephone and in writing, of the condition except:
 1. If such condition is a hazardous waste condition, Contractor's bid includes removal or disposal of hazardous substances. Material that the Contractor believes may be a material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law. In such case, the notice bulletin procedures of Article 7 apply.

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2. Subsurface or latent physical conditions at the Site differing from those indicated in the Drawings, Specifications, Soils Report, and from Contractor's own investigation under Article 2.1.
 3. Unknown physical conditions at the Site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract.
- b. The District shall investigate the conditions, and if District finds that the conditions do materially so differ, do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work shall issue a Change Order or Construction Change Document under the procedures described in the Contract.
 - c. In the event that a dispute arises between the public entity or District and the Contractor whether the conditions materially differ, involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled Completion Date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. The Contractor shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

4.6.8 Dispute Concerning Extension of Time.

If Contractor and District cannot agree upon an extension of time, whether compensable or not, then Contractor must have first completed the procedures set forth in Article 8.4. Upon completion of the procedures set forth under Article 8.4, Contractor must then comply with the requirements in this Article including those set forth under Article 4.6.9.

4.6.9 Claims Procedures

Pursuant to the remedies under Public Contract Code section 9201 and Government Code section 930.2, Contractor, through execution of this Agreement, also agrees to comply with the Claims requirements of Article 4.6 to quickly and efficiently resolve Disputes and Claims. Further, to provide a level of accuracy to the records submitted, the District shall have the right to audit books and records pursuant to Article 13.11 based on the actual costs incurred and to reduce the uncertainty in resolving Disputes and Claims with limited information.

4.6.9.1 *Procedure Applicable to All Claims*

- a. Definition of Claim: A "Claim" is where a Dispute between the parties rises to the level where backup documentation is assembled and provided to the District as a separate demand by the Contractor for: (1) a time extension, including, without limitation, for relief from damages or penalties for delay assessed by the District under the Contract; (2) payment by the District of money or damages arising from Work done by, or on behalf of, the Contractor pursuant to the Contract and payment for which is not otherwise expressly provided for or to which the Contractor is not

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otherwise entitled to; or (3) an amount of payment disputed by the District. If the Claim is for damages associated with a DSA Stop Work Order, the Contractor shall not be entitled to a request for Compensation, but shall be entitled to utilize Governmental Delay Float (See Article 8.1.4.1.)

- b. Filing Claim Is Not Basis to Discontinue Work: The Contractor shall promptly comply with Work under the Contract or Work requested by the District even though a written Claim has been filed. The Contractor and the District shall make good faith efforts to resolve any and all Claims that may arise during the performance of the Work covered by this Contract.
- c. Claim Notification: The Contractor shall within seven (7) calendar days after the written decision of the Architect, or if the time period for Architect's decision has passed under Article 4.6.5, submit a notification in writing sent by registered mail or certified mail with return receipt requested, with the District (and the District's CM) stating clearly the basis for the Claim and including all relevant and required documents. If the notification is not submitted within seven (7) days after the written decision of the Architect or the passage of time under Article 4.6.5, the Contractor shall be deemed to have waived all right to assert the Claim, and the Claim shall be denied. Claims submitted after the Retention Payment date shall also be considered null and void by the District. All Claims shall be reviewed pursuant to Articles 4.6.1 through 4.6.5.

The Formal Notification of Claim must be presented as follows:

- (1) The term "Claim" must be at the top of the page in no smaller than 20 point writing.
 - (2) All documentation submitted pursuant to Article 4.6 to the Architect shall be submitted with the "Claim."
 - (3) A stack of documents, copy of all Project documents, or the submission of random documents shall not constitute an adequate reference to supporting documentation.
 - (4) Any additional or supporting documentation that Contractor believes is relevant should be submitted at this time.
- d. Reasonable Documents to Support Claim: The Contractor shall furnish reasonable documentation to support the Claim. The Contractor shall provide all written detailed documentation which supports the Claim, including but not limited to: arguments, justifications, cost, estimates, Schedule analysis and detailed documentation. The format of the required reasonable documentation to support the Claim shall include, without limitation:
 - 1. Cover letter.

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2. Summary of factual basis of Claim and amount of Claim.
3. Summary of the basis of the Claim, including the specific clause and section under the Contract under which the Claim is made.
4. Documents relating to the Claim, including:
 - a. Specifications sections in question.
 - b. Relevant portions of the Drawings
 - c. Applicable Clarifications (RFI's)
 - d. Other relevant information, including responses that were received.
 - e. Contractor Analysis of Claim merit.
 - (a) Contractor's analysis of any Subcontractor vendor Claims that are being passed through.
 - (b) Any analysis performed by outside consultants
 - (c) Any legal analysis that Contractor deems relevant
 - f. Break down of all costs associated with the Claim.
 - g. For Claims relating to time extensions, an analysis and supporting documentation evidencing any effect upon the critical path in conformance with the requirements of Article 8.4 chronology of events and related correspondence.
 - h. Applicable Daily Reports and logs.
 - (a) If the Daily Reports or Logs are not available, lost or destroyed, there shall be a presumption that the lost documentation was unfavorable to the Contractor. See California Civil Jury Instruction 204.
 - i. For Claims involving overhead, cost escalation, acceleration, disruption or increased costs, a full version of job costs reports organized by category of work or Schedule of Values with budget information tracked against actual costs. Any and all supporting back-up data, including the original bid (and associated original unaltered metadata).
 - (a) The metadata and bid information shall be provided confidentially and subject to a protective order to prevent dissemination to other contractors or to the public. However, the bid documentation should remain intact and available for review and inspection in case of this type of increased cost Claim.
 - (b) This data on the bid shall be made available to any District attorneys or experts and shall also be utilized as evidence for any legal proceedings.
 - (c) If the bid documentation is not available, lost or destroyed, there shall be a presumption that the lost bid documentation was unfavorable to the

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Contractor. See California Civil Jury Instruction 204.

- e. Certification: The Contractor (and Subcontractors, if applicable) shall submit with the Claim a certification under penalty of perjury:
 - 1. That the Contractor has reviewed the Claim and that such Claim is made in good faith;
 - 2. Supporting data are accurate and complete to the best of the Contractor's knowledge and belief;
 - 3. The amount requested accurately reflects the amount of compensation for which the Contractor believes the District is liable.
 - 4. That the Contractor is familiar with Government Code sections 12650 et seq. and Penal Code section 72 and that false claims can lead to substantial fines and/or imprisonment.
- f. Signature of Certification: If the Contractor is not an individual, the certification shall be executed by an officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.
- g. Upon receipt of a Claim and all supporting documents as required above, the District shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide the Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Upon receipt of a Claim, the District and Contractor may, by mutual agreement, extend the time period provided in this paragraph.
- h. If the District needs approval from its governing Board to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the Claim, and the governing Board does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a Claim sent by registered mail or certified mail, return receipt requested, the District shall have up to three days following the next duly publicly noticed meeting of the governing Board after the 45-day period, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.
- i. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement. If the District fails to issue a written statement, paragraph o below shall apply.

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- j. If the Contractor disputes the District's written response, or if the District fails to respond to a Claim issued pursuant to this Article 4.6.9 within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the Claim.
- k. Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the District shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the District and the Contractor sharing the associated costs equally. The District and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be subject to applicable procedures in Article 4.6.9.5.
- l. For purposes of this Article 4.6.9, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.
- m. Unless otherwise agreed to by the District and the Contractor in writing, the mediation conducted pursuant to this Article 4.6.9 shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
- n. This Claims process does not preclude the District from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this Article 4.6.9 does not resolve the parties' Claim. This Claims process does not preclude the District from submitting individual Disputes or Claims to binding arbitration pursuant to Article 4.6.9.4 below.
- o. Failure by the District to respond to a Claim from the Contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this Article 4.6.9 shall result in the Claim being deemed

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rejected in its entirety. A Claim that is denied by reason of the District's failure to have responded to a Claim, or its failure to otherwise meet the time requirements of this Article 4.6.9, shall not constitute an adverse finding with regard to the merits of the Claim or the responsibility or qualifications of the Contractor.

- p. If a subcontractor or a lower tier subcontractor lacks legal standing to assert a Claim against a District because privity of contract does not exist, the Contractor may present to the District a Claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a Claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the Claim be presented to the District shall furnish reasonable documentation to support the Claim. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the Claim to the District and, if the Contractor did not present the Claim, provide the subcontractor with a statement of the reasons for not having done so.
- q. Upon receipt of a Claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable.
- r. The Contractor's Claim shall be denied if it fails to follow the requirements of this Article.

4.6.9.2 *District (through CM or District's Agent or Attorney) May Request Additional Information.* Within thirty (30) days of receipt of the Claim and the information under this Article, the District may request in writing any additional documentation supporting the Claim or documentation relating to defenses to the Claim which the District may assert. If additional documents are required, the time in which the Claim is evaluated may be extended by a reasonable time so the Claim and additional documents may be reviewed.

4.6.9.3 *Claims Procedures in Addition to Government Code Claim.* Nothing in the Claims procedures set forth in this Article 4 of the General Conditions shall act to waive or relieve the Contractor from meeting the requirements set forth in Government Code section 900 et seq.

4.6.9.4 *Binding Arbitration of Individual Claim Issues.* To expedite resolution of Claims pursuant to Public Contract Code section 9201, at the District's sole option, the District may submit individual Claims to Arbitration prior to Retention Payment consistent with the requirements of Article 4.6.6.1.

4.6.9.5 *Resolution of Claims in Court of Competent Jurisdiction.* If Claims are not resolved under the procedure set forth and pursuant to Article 4.6.9, such Claim or controversy shall be submitted to a court in the County of the location of the Project after the Project has been completed, and not before.

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4.6.9.6 *Warranties, Guarantees and Obligations.* The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor by the General Conditions and amendments thereto; and all of the rights and remedies available to District and Architect thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by laws or regulations by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this Article will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

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ARTICLE 5 SUBCONTRACTORS

5.1 DEFINITIONS

5.1.1 Subcontractual Relations Bound to Same Contract Terms at General Contractor

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the same obligations and responsibilities, assumed by Contractor pursuant to the Contract Documents. Each subcontract agreement shall preserve and protect the rights of the District and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound. Upon written request of the Subcontractor, the Contractor shall identify to the Subcontractor the terms and conditions of the proposed subcontract agreement, which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

5.1.2 Subcontractor Licenses and DIR Registration

All Subcontractors shall be properly licensed by the California State Licensing Board. All Subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with the California Department of Industrial Relations and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project. No portion of the Work is permitted to be performed by a Subcontractor of any tier unless the subcontractor is properly registered with DIR. Any Subcontractors of any tier not properly registered with DIR shall be substituted in accordance with Labor Code section 1771.1.

5.1.3 Substitution of Subcontractor

Substitution of Subcontractors shall be permitted only as authorized under Public Contract Code §§ 4107 et seq. Any substitutions of Subcontractors shall not result in any increase in the Contract Price or result in the granting of any extension of time for the completion of the Project.

5.1.4 Contingent Assignment of Subcontracts and Other Contracts

Each subcontract, purchase order, vendor contract or agreement for any portion of the Work is hereby assigned by the Contractor to the District provided that:

- a. Such assignment is effective only after Termination of this Contract with the Contractor by the District as provided under Article 14 and only for those subcontracts and other contracts and agreements that the District accepts by notifying the Subcontractor or Materialman (as may be applicable) in writing; and

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- b. Such assignment is subject to the prior rights of the Surety(ies) obligated under the Payment Bond and Performance Bond.
- c. The Contractor shall include adequate provisions for this contingent assignment of subcontracts and other contracts and agreements in each such document.

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ARTICLE 6 CONSTRUCTION BY DISTRICT OR BY SEPARATE CONTRACTORS

6.1 DISTRICT'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 Separate Contracts.

6.1.1.1 District reserves the right to let other contracts in connection with this Work. Contractor shall afford other contractors reasonable opportunity for (1) introduction and storage of their materials; (2) access to the Work; and (3) execution of their work. Contractor shall properly connect and coordinate its work with that of other Contractors.

6.1.1.2 If any part of Contractor's Work depends on proper execution or results of any other contractor, the Contractor shall inspect and within seven (7) days or less, report to Architect, in writing, any defects in such work that render it unsuitable for proper execution of Contractor's Work. Contractor will be held accountable for damages to District for that Work which it failed to inspect or should have inspected. Contractor's failure to inspect and report shall constitute its acceptance of other contractors' Work as fit and proper for reception of its Work, except as to defects which may develop in other contractors' work after execution of Contractor's work.

6.1.1.3 To ensure proper execution of its subsequent Work, Contractor shall measure and inspect Work already in place and shall at once report to the Architect in writing any discrepancy between executed Work as built and the Contract Documents.

6.1.1.4 Contractor shall ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by District in prosecution of the Project and the potential impact of such Work on the Baseline Schedule or Schedule updates.

6.1.1.5 Nothing herein contained shall be interpreted as granting to Contractor the exclusive occupancy at the site of Project. Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the Project Site. If execution of any contract by the District is likely to cause interference with Contractor's performance of this Contract, once Contractor provides District timely written notice and identifies the Schedule Conflict, District shall decide which contractor shall cease work temporarily and which contractor shall continue, or whether Work can be coordinated so that contractors may proceed simultaneously.

6.1.1.6 District shall not be responsible for any damages suffered or extra costs incurred by Contractor resulting directly or indirectly from award or performance or attempted performance of any other contract or contracts at the Project necessary for the performance of the Project (examples include Electrical Utility Contractor, separate offsite contractor, a separate grading contractor, furniture installation etc.)

CONTRACTOR IS AWARE THAT THIS CONTRACT MAY BE SPLIT INTO SEVERAL PHASES BASED ON DOCUMENTATION PROVIDED WITH THIS BID OR DISCUSSED AT THE JOB WALK. CONTRACTOR HAS MADE ALLOWANCE FOR ANY DELAYS OR DAMAGES WHICH MAY ARISE FROM COORDINATION WITH CONTRACTORS REQUIRED FOR OTHER PHASES.

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IF ANY DELAYS SHOULD ARISE FROM ANOTHER CONTRACTOR WORKING ON A DIFFERENT PHASE, CONTRACTOR'S SOLE REMEDY FOR DAMAGES, INCLUDING DELAY DAMAGES, SHALL BE AGAINST THE CONTRACTOR WHO CAUSED SUCH DAMAGE AND NOT THE DISTRICT. CONTRACTOR SHALL PROVIDE ACCESS TO OTHER CONTRACTORS FOR OTHER PHASES AS NECESSARY TO PREVENT DELAYS AND DAMAGES TO OTHER CONTRACTORS WORKING ON OTHER PHASES OF CONSTRUCTION.

6.1.2 District's Right to Carry Out the Work

(See Article 2.2)

6.1.3 Designation as Contractor

When separate contracts are awarded to contractors on the Project Site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate District/Contractor Agreement.

6.1.4 District Notice to the Contractor of Other Contractors

The Contractor shall have overall responsibility to reasonably coordinate and schedule Contractor's activities with the activities of the District's forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the District in reviewing their construction schedules when:

- a. Notice is provided in the Contract Documents of other scope of Work,
- b. In the case where there is known Work to be performed by other Contractors
- c. For outside contractors hired by utilities
- d. Where the Contract Document provides "Work by Others" or "By Others"
- e. Where specifically noted during the Pre-Bid Conference
- f. Where specifically noted in the Mandatory Job Walk
- g. By CO or ICD,
- h. With respect to the installation of :
 - 1. Furniture,
 - 2. Electronics and networking equipment,
 - 3. Cabling,
 - 4. Low voltage,
 - 5. Off-site work,
 - 6. Grading (when by a separate contractor),

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7. Environmental remediation when excluded by the Contract Documents (i.e. asbestos, lead or other hazardous waste removal)
8. Deep cleaning crews,
9. Commissioning and testing,
10. Keying and re-keying,
11. Programming

6.1.4.1 Exception where no Coordination is Required on the Part of the Contractor for Turn Key Operations. If the Contractor has specifically outlined a “Turn Key” or “Complete Delivery” of a final completed operational school in writing as part of the Baseline Schedule..

6.1.4.2 The Contractor shall make any revisions to the Baseline Schedule (or Schedule Update) and Contract Sum deemed necessary after a joint review and mutual agreement. The Baseline Schedule (or Schedule Update) shall then constitute the Schedules to be used by the Contractor, separate contractors, and the District until subsequently revised. Additionally, Contractor shall coordinate with Architect, District, and Inspector to ensure timely and proper progress of Work.

6.2 CONSTRUCTIVE OWNERSHIP OF PROJECT SITE AND MATERIAL

Upon commencement of Work, the Contractor becomes the constructive owner of the entire site, improvements, material and equipment on Project site. Contractor must ensure proper safety and storage of all materials and assumes responsibility as if Contractor was the owner of the Project site. All risk of loss or damage shall be borne by Contractor during the Work until the date of Completion. As constructive owner of the Project site, Contractor must carry adequate insurance in case of calamity and is not entitled to rely on the insurance requirements as set forth in this Agreement as being adequate coverage in case of calamity.

6.3 DISTRICT’S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors, and the District as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Article 3.12, the District may clean up and allocate the cost among those it deems responsible.

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ARTICLE 7 CHANGES IN THE WORK

7.1 CHANGES

7.1.1 No Changes Without Authorization

There shall be no change whatsoever in the Drawings, Specifications, or in the Work without an executed Change Order, Change Order Request, Immediate Change Directive, or order by the Architect for a minor change in the Work as herein provided. District shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the District's Governing Board or designated representative with delegated authority (subject to Board ratification) has authorized the same and the cost thereof approved in writing by Change Order or executed Construction Change Document. No extension of time for performance of the Work shall be allowed hereunder unless claim for such extension is made at the time changes in the Work are ordered, and such time duly adjusted in writing in the Change Order. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications. Notwithstanding anything to the contrary in this Article 7, all Change Orders shall be prepared and issued by the Architect and shall become effective when executed by the District's Governing Board, the Architect, and the Contractor.

Should any Change Order result in an increase in the Contract Price, the cost of such Change Order shall be agreed to, in writing, in advance by Contractor and District and be subject to the monetary limitations set forth in Public Contract Code section 20118.4 (Please check with the District since there are different interpretations of the limitations of Public Contract Code section 20118.4 depending on the County the Project is located). In the event that Contractor proceeds with any change in Work without first notifying District and obtaining the Architect's and District's consent to a Change Order, Contractor waives any Claim of additional compensation for such additional work and Contractor takes the risk that a Notice of Non-Compliance may issue, a critical path Project delay may occur, and the Contractor will also be responsible for the cost of preparation and DSA CCD review fees for a corrective DSA approved Construction Change Document.

CONTRACTOR UNDERSTANDS, ACKNOWLEDGES, AND AGREES THAT THE REASON FOR THIS NOTICE REQUIREMENT IS SO THAT DISTRICT MAY HAVE AN OPPORTUNITY TO ANALYZE THE WORK AND DECIDE WHETHER THE DISTRICT SHALL PROCEED WITH THE CHANGE ORDER OR ALTER THE PROJECT SO THAT SUCH CHANGE IN WORK BECOMES UNNECESSARY AND TO AVOID THE POSSIBLE DELAYS ASSOCIATED WITH THE ISSUANCE OF A NOTICE OF NON-COMPLIANCE.

7.1.2 Notices of Non-Compliance

Contractor deviation or changes from approved Plans and Specifications may result in the issuance of a Notice of Non-Compliance (See DSA Form 154). Contractor is specifically notified that deviations from the Plans and Specifications, whether major or minor, may result in the requirement to obtain a DSA Construction Change Document to correct the Notice of Non-Compliance. (See Article 7.3.1 for Definition of CCD). In some cases, the lack of a DSA approved CCD AND verification from the Inspector that a Notice of Non-Compliance has been corrected may result in a critical path delay to the next

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stage of Work on the Project. Specifically, a deviation from approved Plans and Specifications may prevent approval of the category of Work listed in the DSA 152 Project Inspection Card. Any delays that are caused by the Contractor's deviation from approved Plans and Specifications shall be the Contractor's responsibility.

7.1.3 Architect Authority

The Architect will have authority to order minor changes in the Work that do not involve DSA Approval not involving any adjustment in the Contract Sum, or an extension of the Contract Time.

7.2 CHANGE ORDERS ("CO")

A CO is a written instrument prepared by the Architect and signed by the District (as authorized by the District's Governing Board), the Contractor, and the Architect stating their agreement upon all of the following:

- a. A description of a change in the Work;
- b. The amount of the adjustment in the Contract Sum, if any; and
- c. The extent of the adjustment in the Contract Time, if any.

A CO may be comprised of ICD's, Response to RFP's and COR's

7.3 CONSTRUCTION CHANGE DOCUMENT (CCD Category A, and CCD Category B) and IMMEDIATE CHANGE DIRECTIVE (ICD)

7.3.1 Definitions

7.3.1.1 *Construction Change Document (CCD)*. A Construction Change Document is a DSA term that is utilized to address changes to the DSA approved Plans and Specifications. There are two types of Construction Change Documents. (1) DSA approved CCD Category A for Work affecting structural, access compliance or fire/ life safety of the Project which will require a DSA approval; and, (2) CCD Category B for Work NOT affecting structural safety, access compliance or fire/ life safety that will not require a DSA approval (except to confirm that no approval is required). Both CCD Category A and Category B shall be set forth in DSA Form 140 and submitted to DSA as required.

7.3.1.2 *Immediate Change Directive (ICD)*. An Immediate Change Directive is a written order to the Contractor prepared by the Architect and signed by the District (and CM if there is a CM on the Project) and the Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The District may by ICD, without invalidating the Contract, direct immediate changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions within. If applicable, the Contract Sum and Contract Time will be adjusted accordingly.

In the case of an Immediate Change Directive being issued, Contractor must commence Work immediately or delays from failure to perform the ICD shall be the responsibility of Contractor and the failure to move forward with Work immediately shall also be grounds for Termination under Article 14.

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An ICD does not automatically trigger an Article 7.6 Dispute or Claim. Contractor must timely follow the procedures outlined at Article 7.6 and 4.6 where applicable.

Refer to Division 1 and Supplementary General Conditions for a copy of the proposed Immediate Change Directive form.

7.3.2 Use to Direct Change

An ICD shall be used to move work forward immediately and to avoid delay. In some cases, an ICD shall be issued in the absence of agreement on the terms of a CO, COR, or RFP. A copy of an ICD form is provided in the Supplementary General Conditions and Division 1. The anticipated not to exceed price for the Work will be inserted into the ICD. In the case of an ICD issued to correct Contractor Deficiencies or to correct a Contractor caused Notice of Non-Compliance, the ICD may be issued with \$0 and no additional time. Contractor may prepare a COR associated with the ICD pursuant to Article 7. However, Contractor shall proceed with all Work required under an Approved ICD immediately upon issuance. Failure to proceed with the Work under an ICD shall be grounds for Termination for Cause under Article 14 or take over the Work under Article 2.2.

If adequate time exists, an ICD may be subject of an RFP for pricing and determination if any time that may be required. However, if an RFP is not completed, Contractor shall immediately commence Work when an ICD is issued. If the RFP is incomplete, it may still be completed to be submitted for pricing purposes as long as the RFP is submitted within the timeline provided by the RFP, or within 10 days following issuance of the ICD.

7.3.3 ICD Issued Over a Notice of Non-Compliance or to Cover Work Subject to a DSA 152 Sign Off

In some cases, an ICD shall be for the purpose of proceeding with Work to keep the Project on Schedule and as an acknowledgement by the District that Contractor is proceeding with Work contrary to a Notice of Non-Compliance, prior to issuance of a DSA approved CCD Category A, or to direct the covering of Work which has not yet received a DSA 152 Inspection Approval to move forward.

7.3.3.1 *Contractor Compliance with all Aspects of an ICD.* Contractor is to undertake the ICD and comply with all aspects of the Work outlined in the ICD. Inspector is to inspect the Work pursuant to the ICD. Failure to follow the ICD may result in deduction of the ICD Work under Article 2.2 or Termination of the Contractor pursuant to Article 14.

7.3.3.2 *Exception in the Case of DSA Issued Stop Work Order.* Contractor must proceed with an ICD even if a CCD has not been approved by DSA except in the case of a DSA issued Stop Work Order. If a DSA Stop Work Order is issued, Contractor must stop work and wait further direction from the District.

7.3.3.3 *ICD Due to Contractor Deficiency or Contractor Caused Notice of Non-Compliance.* If an ICD is issued to correct a Contractor Deficiency or a Contractor caused notice of Non-Compliance, Contractor specifically acknowledges responsibility for all consequential damages associated with the Contractor Deficiency or Contractor caused Notice of Non-Compliance and all consequential damages and costs incurred to correct the deficiency under Article 4.5

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7.4 REQUEST FOR INFORMATION ("RFI")

7.4.1 Definition

A RFI is a written request prepared by the Contractor requesting the Architect to provide additional information necessary to clarify or amplify an item which the Contractor believes is not clearly shown or called for in the Drawings or Specifications, or to address problems which have arisen under field conditions.

7.4.1.1 A RFI shall not be used as a vehicle to generate time extensions.

7.4.1.2 Resubmission of the same or similar RFI is not acceptable. RFI's that are similar should be addressed in Project meetings where the requestor (Contractor, Subcontractor or vendor) is able to address the particular issue with the Architect or Engineer and a resolution addressed in the minutes.

7.4.1.3 A RFI response applicable to a specific area cannot be extended to other situations unless specifically addressed in writing within the RFI or in a separate RFI.

7.4.1.4 RFI's should provide a proposed solution and should adequately describe the problem that has arisen.

7.4.2 Scope

The RFI shall reference all the applicable Contract Documents including Specification section, detail, page numbers, Drawing numbers, and sheet numbers, etc. The Contractor shall make suggestions and interpretations of the issue raised by the RFI. An RFI cannot modify the Contract Cost, Contract Time, or the Contract Documents.

7.4.3 Response Time

The Architect must respond to a RFI within a reasonable time after receiving such request. If the Architect's response results in a change in the Work, then such change shall be effected by a written CO, COR RFP or ICD, if appropriate. If the Architect cannot respond to the RFI within a reasonable time, the Architect shall notify the Contractor, with a copy to the Inspector and the District, of the amount of time that will be required to respond.

7.4.4 Costs Incurred

The Contractor shall be responsible for any costs incurred for professional services as more fully set forth in Article 4.5, which shall be subject to a Deductive Change Order, if an RFI requests an interpretation or decision of a matter where the information sought is equally available to the party making such request. District, at its sole discretion, shall issue a Deductive Change Order to Contractor for all such professional services arising from this Article.

7.5 REQUEST FOR PROPOSAL ("RFP")

7.5.1 Definition

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A RFP is a written request prepared by the Architect (and/or CM) requesting the Contractor to submit to the District and the Architect an estimate of the effect of a proposed change on the Contract Price and (if applicable) the Contract Time. If Architect issues a Bulletin, the Changed items in the Bulletin shall be addressed as an RFP and all responses shall be prepared to a Bulletin as addressed in this Article 7.5. A form RFP is included in the Division 1 documents.

7.5.2 Scope

A RFP shall contain adequate information, including any necessary Drawings and Specifications, to enable Contractor to provide the cost breakdowns required by Article 7.7. The Contractor shall not be entitled to any Additional Compensation for preparing a response to an RFP, whether ultimately accepted or not.

7.5.3 Response Time

Contractor shall respond to an RFP within ten (10) days or the time period otherwise set forth in the RFP.

7.6 CHANGE ORDER REQUEST ("COR")

7.6.1 Definition

A COR is a written request prepared by the Contractor supported by backup documentation requesting that the District and the Architect issue a CO based upon a proposed change, cost, time, or cost and time that may be incurred on the Project or arising from an RFP, ICD, or CCD.

7.6.2 Changes in Price

A COR shall include breakdowns per Article 7.7 to validate any change in Contract Price due to proposed change or Claim.

7.6.3 Changes in Time

A COR shall also include any additional time required to complete the Project only if the delay is a critical path delay. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in Article 8. A schedule fragnet showing the time delay must be submitted with the COR. Any changes in time will be granted only if there is an impact to the critical path. If Contractor fails to request a time extension in a COR, then the Contractor is thereafter precluded from requesting or claiming a delay.

7.7 COST OF CHANGE ORDERS

7.7.1 Scope

Within ten (10) days after a request is made for a change that impacts the Contract Sum as defined in Article 9.1, the critical path, or the Contract Time as defined in Article 8.1.1, the Contractor shall provide the District and the Architect, with a written estimate of the effect of the proposed CO upon the Contract Sum and the actual cost of construction, which shall include a complete itemized cost breakdown of all labor and material showing actual quantities, hours, unit prices, and wage rates required for the change, and the effect upon the Contract Time of such CO. Changes may be made by District by an

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appropriate written CO, or, at the District's option, such changes shall be implemented immediately upon the Contractor's receipt of an appropriate written Construction Change Document.

District may, as provided by law and without affecting the validity of this Agreement, order changes, modification, deletions and extra work by issuance of written CO or CCD from time to time during the progress of the Project, Contract Sum being adjusted accordingly. All such Work shall be executed under conditions of the original Agreement except that any extension of time caused thereby shall be adjusted at time of ordering such change. District has discretion to order changes on a "time and material" basis with adjustments to time made after Contractor has justified through documentation the impact on the critical path of the Project.

7.7.1.1 *Time and Material Charges.* If the District orders Work on a "time and material" basis, timesheets shall be signed daily by the Inspector or District Representative at or near the time the Work is actually undertaken and shall show the hours worked, and the Work actually completed. No time sheets shall be signed the next day. A copy shall be provided to the Person signing the document at the time the document is signed, but not before 10 am the following day.

7.7.2 Determination of Cost

The amount of the increase or decrease in the Contract Price from a CO or COR, if any, shall be determined in one or more of the following ways as applicable to a specific situation:

- a. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. If an agreement cannot be reached within fifteen (15) days after submission and negotiation of Contractor's proposal, Contractor may submit pursuant to Article 7.7.3. Submission of sums which have no basis in fact are at the sole risk of Contractor and may be a violation of the False Claims Act set forth under Government Code section 12650 et seq.);
 1. If the District objects to 7.7.2(a) as a method for submission due to inaccuracies in the submitted amount, overstatement of manpower or time required to perform the CO, or unreliability of the data provided, the District may either have the Architect or a professional estimator determine the cost for the CO, and the applicable time extension, or the Contractor shall utilize Article 7.7.2(d) or 7.7.3.
 2. Once the District provides a written objection to use of Article 7.7.2(a) due to unreliability of the estimated price, the Contractor shall no longer utilize mutual acceptance of a lump sum as a method for submission of CO's and shall provide a breakdown of estimated or actual costs pursuant to Article 7.7.2(d) or 7.7.3
- b. By unit prices contained in Contractor's original bid and incorporated in the Project documents or fixed by subsequent agreement between District and Contractor;
- c. Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee. However, in the case of disagreement, Contractor must utilize the procedure under Article 7.7.3; or

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- d. By cost of material and labor and percentage of overhead and profit. If the value is determined by this method the following requirements shall apply:

1. *Basis for Establishing Costs*

- (1) Labor will be the cost for wages prevailing locally for each craft or type of workers at the time the extra Work is done, plus employer payments of payroll taxes and workers compensation insurance (exclude insurance costs as part of the overhead and profit mark-up), health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State, or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. In no case shall the total labor costs exceed the applicable prevailing wage rate for that particular classification. The use of a labor classification which would increase the extra Work cost will not be permitted unless the Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.
- (2) Materials shall be at invoice or lowest current price at which such materials are locally available and delivered to the Site in the quantities involved, plus sales tax, freight, and delivery. The District reserves the right to approve materials and sources of supply or to supply materials to the Contractor if necessary for the progress of the Work. No markup shall be applied to any material provided by the District.
- (3) Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of \$250 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies or distributors at the time the Work is performed. Rates applied shall be appropriate based on actual equipment need and usage. Monthly, weekly or other extended use rates that results in the lowest cost shall be applied if equipment is used on site for extended periods.

The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Necessary loading and transportation costs for equipment used on the extra Work shall be included. If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the District than holding it at the Work Site, it shall be returned unless the Contractor elects to keep it at the Work Site at no expense to the District.

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All equipment shall be acceptable to the Inspector, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and modifications shall be used to classify equipment, and equipment shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

If tool and equipment charges are part of a Dispute or Claim, the District reserves the right to utilize actual costs for tools and equipment or a depreciation rate for equipment based on audit finding under Article 13.11 and deduct any rental charges that exceed actual or depreciated costs.

- e. Other Items. The District may authorize other items which may be required on the extra work. Such items include labor, services, material, and equipment which are different in their nature from those required by the Work, and which are of a type not ordinarily available from the Contractor or any of the Subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.
- f. Invoices. Vendors' invoices for material, equipment rental, and other expenditures shall be submitted with the COR. If the request for payment is not substantiated by invoices or other documentation, the District may establish the cost of the item involved at the lowest price which was current at the time of the Daily Report.
- g. Overhead. Overhead, including direct and indirect costs, shall be submitted with the COR and include: field overhead, home office overhead, off-site supervision, CO preparation/negotiation/research, time delays, Project interference and disruption, additional guaranty and warranty durations, on-site supervision, additional temporary protection, additional temporary utilities, additional material handling costs, liability and property damage insurance, and additional safety equipment costs.

7.7.3 Format for COR or CO's

The following format shall be used as applicable by the District and the Contractor to communicate proposed additions to the Contract. All costs submitted shall be actual costs and labor shall be unburdened labor. Refer to Division 1 for a copy of the Construction Change Order form.

	<u>EXTRA</u>	<u>CREDIT</u>
(a) Material (attach itemized quantity and unit cost plus sales tax)		
(b) Labor Not to Exceed Applicable Prevailing Wage Rates (attach itemized hours and rates)	_____	_____
(c) Equipment (attach invoices)	_____	_____
(d) Subtotal	_____	_____
	_____	_____

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		<u>EXTRA</u>	<u>CREDIT</u>
(e)	If Subcontractor performed work, add Subcontractor's overhead and profit to portions performed by Subcontractor, not to exceed 10% of item (d).		
(f)	Subtotal	_____	_____
(g)	Contractor's Overhead and Profit: Not to exceed 10% of Item (d) if Contractor performed the work. No more than 5% of Item (d) if Subcontractor performed the work. If work was performed by Contractor and Subcontractors, portions performed by Contractor shall not exceed 10% of Item (d), and portions performed by Subcontractor shall not exceed 10% of Item (d).	_____	_____
(h)	Subtotal	_____	_____
(i)	Bond not to exceed one percent (1%) of Item (h)		
(k)	TOTAL	_____	_____
(l)	Time/ Days	_____	_____

The undersigned Contractor approves the foregoing Change Order or Immediate Change Directive as to the changes, if any, and the Contract price specified for each item and as to the extension of time allowed, if any, for completion of the entire Work on account of said Change Order or Immediate Change Directive, and agrees to furnish all labor, materials and service and perform all Work necessary to complete any additional Work specified therein, for the consideration stated herein. It is understood that said Change Order or Immediate Change Directive shall be effective when approved by the Governing Board of the District.

It is expressly understood that the value of such extra Work or changes, as determined by any of the aforementioned methods, expressly includes any and all of the Contractor's costs and expenses, both direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project. Any costs, expenses, damages or time extensions not included are deemed waived.

The Contractor expressly acknowledges and agrees that any change in the Work performed shall not be deemed to constitute a delay or other basis for claiming additional compensation based on theories including, but not limited to, acceleration, suspension or disruption to the Project.

7.7.3.1 *Adjustment for Time and Compensable Delay.* A CO shall also include any additional time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined

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in Article 8 of the General Contract. A schedule fragment showing the time delay must be submitted with the CO. Any changes in time will be granted only if there is an impact to the critical path. If Contractor fails to request a time extension in a CO, then the Contractor is thereafter precluded from requesting or claiming a delay.

7.7.4 Deductive Change Orders

All Deductive Change Order(s) must be prepared utilizing the form under Article 7.7.3 (a) – (d) only, setting forth the actual costs incurred. Except in the case of an Article 2.2 or 9.6 Deductive Change Order where no mark-up shall be allowed, Contractor will be allowed a maximum of 5% total profit and overhead.

For unilateral Deductive Change Orders, or where credits are due from Contractor for Allowances, Deductive Items, Inspection, Damage, DSA CCD review costs, Architect or Inspector costs for after hours or corrective services, Work removed from the Agreement under Article 2.2 or Article 9.6, there shall be no mark-up.

District may, any time after a Deductive Change Order is presented to Contractor by District for items under Article 2.2 or Article 9.6 or if there is disagreement as to the Deductive Change Order, issue a unilateral Deductive Change Order on the Project and deduct the Deductive Change Order from a Progress Payment, Final Payment, or Retention.

7.7.5 Discounts, Rebates, and Refunds

For purposes of determining the cost, if any, of any change, addition, or omission to the Work hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to the Contractor, and the Contractor shall make provisions so that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction of the Contractor's cost in determining the actual cost of construction for purposes of any change, addition, or omissions in the Work as provided herein. All CO's are subject to Audit under Article 13.11 for discounts, rebates and refunds.

7.7.6 Accounting Records

With respect to portions of the Work performed by CO's and CCD's on a time-and-materials, unit-cost, or similar basis, the Contractor shall keep and maintain cost-accounting records in a format consistent with accepted accounting standards and satisfactory to the District, which shall be available to the District on the same terms as any other books and records the Contractor is required to maintain under the Contract Documents.

Any time and material charges shall require Inspector's signature on time and material cards showing the hours worked and the Work actually completed. (See Article 7.7.1.1)

7.7.7 Notice Required

If the Contractor desires to initiate a Dispute or Claim for an increase in the Contract Price, or any extension in the Contract Time for completion, Contractor shall notify the applicable party responsible for addressing the Dispute or Claim pursuant to Article 4.6. No Claim or Dispute shall be considered unless made in accordance with this subparagraph. Contractor shall proceed to execute the

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Work even though the adjustment may not have been agreed upon. Any change in the Contract Price or extension of the Contract Time resulting from such Claim shall be authorized by a CO.

7.7.8 Applicability to Subcontractors

Any requirements under this Article 7 shall be equally applicable to CO's, COR's or ICD's issued to Subcontractors by the Contractor to the same extent required by the Contractor.

7.7.9 Alteration to Change Order Language

Contractor shall not alter or reserve time in COR's, CO's or ICD's. Contractor shall execute finalized CO's and proceed under Article 7.7.7 and Article 4.6 with proper notice. If Contractor intends to reserve time without an approved CPM schedule prepared pursuant to Article 8 or without submitting a fragnet showing delay to critical path, then Contractor may be prosecuted pursuant to the False Claim Act.

7.8 ALLOWANCES

7.8.1: Owner Controlled Allowances

Allowances added to the base bid value are Owner controlled, any use of these funds must be authorized and approved by the District prior to any work that is considered an Allowance expense being performed. All unused Allowance funds remaining at the end of the Project will be returned to the District in the full amount that remains.

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ARTICLE 8 TIME AND SCHEDULE

8.1 DEFINITIONS

8.1.1 Contract Time

Contractor shall perform and reach Substantial Completion (See Article 1.1.46) within the time specified in the Agreement Form. Moreover, Contractor shall perform its Work in strict accordance with the Project Milestones in the Contract Documents and shall proceed on a properly developed and approved Baseline Schedule, which represents the Contractor's view of the practical way in which the Work will be accomplished. Note that Contract Time includes and incorporates all Float and other Baseline inclusions as noted in Article 8.3.2.1 and as otherwise specifically noted in Article 8.

8.1.2 Notice to Proceed

District may give a Notice to Proceed within ninety (90) days of the award of the bid by District. Once Contractor has received the notice to proceed, Contractor shall complete the Work in the period of time referenced in the Contract Documents.

In the event that District desires to postpone the giving of the Notice to Proceed beyond this three-month period, it is expressly understood that with reasonable notice to the Contractor, the giving of the date to proceed may be postponed by District. It is further expressly understood by Contractor, that Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of the giving of the notice to proceed

If the Contractor believes that a postponement will cause a hardship to Contractor, Contractor may terminate the Contract with written notice to District within 10 days after receipt by Contractor of District's notice of postponement. It is further understood by Contractor that in the event that Contractor terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay Contractor for the Work that Contractor had performed at the time of notification of postponement and the grounds for notification and hardship shall be subject to Audit pursuant to Article 13.11. Should Contractor terminate the Contract as a result of a notice of postponement, District may award the Contract to the next lowest responsible bidder.

8.1.3 Computation of Time

The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

8.1.4 Float

Float is time the total number of days an activity may be extended or delayed without delaying the Completion Date shown in the schedule. Float will fall into three categories: (1) Rain Days; (2) Governmental Delays; and, (3) Project Float. Project Float and Rain Days are owned by the Project and may be utilized as necessary for critical path delays once the days become available for consumption (i.e. the Rain Day arrives and is not utilized since rain did not occur or Work was performed on the interior of a building). However, Governmental Delay float shall not be utilized for purposes other than to address critical path delays that arise due to approvals, Inspector approvals or verifications on governmental forms.

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8.1.4.1 *Governmental Delay Float.* It is anticipated that there will be governmental generated delays. Specific to DSA approvals, it is anticipated that no less than twelve (12) days per calendar year shall be set aside as Governmental Float to be utilized on critical path delays. A pro-rated number of days shall be calculated based on length of Contract Time. (For example, a two (2) year Contract Time shall require twenty-four (24) days of Governmental Float. If the Contract Time is 182 days, then the Contract Time shall require six (6) days of Governmental Float) This Governmental Delay float must be incorporated into the schedule and should be incorporated in each critical activity as Contractor deems fit. Specifically, major categories of Work under the DSA 152 (Project Inspection Card) should be allocated Governmental Delay Float at the Contractor's discretion. Governmental Delay Float on the Project may exceed 12 days per one (1) year period, but Contractor is required to include not be less than 12 days of Governmental Delay Float during each one (1) year period.

Contractor's failure to establish a protocol for requesting inspections is not grounds to utilize Governmental Delay Float. As noted in Article 3.1.4, 48 hours advance notice of commencing Work on a new area is required after submitting form DSA 156 and under PR 13-01 Special Inspection reports are not required to be posted until at least 14 days after the Work was inspected. Failure to plan, and pay (if applicable) for quicker delivery of Special Inspections is not Governmental Delay Float under Article 8.1.4.1. If Governmental Delay Float is not utilized, this float is carried through to other DSA 152 categories of inspection and consumed over the course of the Project

Governmental Delay Float may be utilized for a DSA Stop Work Order regardless of fault as defined under Education Code section 17307.5(b).

8.1.4.2 *Inclement Weather (Rain Days).* The Contractor will only be allowed a time extension for unusually severe weather if it results in precipitation or other conditions which in the amount, frequency, or duration is in excess of the norm at the location and time of year in question as established by NOAA weather data. No less than 22 calendar days for each calendar year for Southern California will be allotted for in the Contractor's schedule for each winter weather period or carried at the end of the schedule as Rain Float. Float for weather days in other geographical regions shall be adjusted based on NOAA weather data for the geographical location. Contractor has anticipated all the days it takes to dry out and re-prepare areas that may be affected by weather delays which extend beyond the actual weather days. The weather days shall be shown on the schedule and if not used will become float for the Project's use. The Contractor will not be allowed a day-for-day weather delay for periods noted as float in the Schedule. The Contractor is expected to work seven (7) days per week (if necessary, irrespective of inclement weather), to maintain access, and to protect the Work under construction from the effects of inclement weather. Additional days beyond the NOAA shall be considered under the same criteria that weather days are granted below.

A Rain Day shall be granted by Architect or CM if the weather prevents the Contractor from beginning Work at the usual daily starting time, or prevents the Contractor from proceeding with seventy-five (75%) of the normal labor and equipment force towards completion of the day's current controlling item on the accepted schedule for a period of at least five hours, and the crew is dismissed as a result thereof, the Architect will designate such time as unavoidable delay and grant one (1) critical path activity calendar-day extension if there is no available float for the calendar year.

8.1.4.3 *Project Float.* The Contractor may determine some activities require a lesser duration than allocated and may set aside float in the Project Schedule. There shall be no early completion. Instead, to the extent float is either addressed at the end of the Project or throughout each category of critical path work, Project float may be used as necessary during the course of the Project and allocated on a first,

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come first serve basis. However, the use of float does not extend to Governmental Delay Float, which shall only be used for Governmental Delays.

8.2 HOURS OF WORK

8.2.1 Sufficient Forces

Contractors and Subcontractors shall continuously furnish sufficient forces to ensure the prosecution of the Work in accordance with the Construction Schedule.

8.2.2 Performance During Working Hours

Work shall be performed during regular working hours as permitted by the appropriate governmental agency except that in the event of an emergency, or when required to complete the Work in accordance with job progress, Work may be performed outside of regular working hours with the advance written consent of the District and approval of any required governmental agencies.

8.2.3 Costs for After Hours Inspections

If the Work done after hours is required by the Contract Documents, a Recovery Schedule, or as a result of the Contractor's failure to plan, and inspection must be conducted outside the Inspector's regular working hours, the costs of any after hour inspections, shall be borne by the Contractor.

If the District allows the Contractor to do Work outside regular working hours for the Contractor's convenience, the costs of any inspections required outside regular working hours shall be invoiced to the Contractor by the District and a Deductive Change Order shall be issued from the next Progress Payment.

If the Contractor elects to perform Work outside the Inspector's regular working hours, costs of any inspections required outside regular working hours shall be invoiced to the Contractor by the District and a Deductive Change Order from the next Progress Payment as a Deductive Change Order.

8.3 PROGRESS AND COMPLETION

8.3.1 Time of the Essence

Time limits stated in the Contract Documents are of the essence to the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.3.2 Baseline Schedule Requirements

8.3.2.1 *Timing:* Within ten (10) calendar days after Notice to Proceed, Contractor shall submit a practical schedule showing the order in which the Contractor proposes to perform the Work, and the dates on which the Contractor contemplates starting and completing the salient categories of the Work. This first schedule which outlines the Contractor's view of the practical way in which the Work will be accomplished is the Baseline Schedule. If the Contractor Fails to submit the Baseline Schedule within the ten (10) days noted, then District may withhold processing and approval of progress payments pursuant to Article 9.4 and 9.6.

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8.3.2.2 *District Review and Approval:* District, Architect and CM will review both a paper and electronic copy of Baseline Schedule and may provide comments as noted in this Article and either approve or disapprove the Baseline Schedule. All Schedules shall be prepared using an electronic scheduling program acceptable to District. All Schedules shall be delivered in an electronic format usable by the District. All logic ties and electronic information shall be included in the electronic copy of the Baseline Schedule that is delivered to the District.

8.3.2.3 *Schedule Must Be Within the Given Contract Time.* The Baseline Schedule shall not exceed time limits set forth in the Contract Documents and shall comply with all of the scheduling requirements as set forth in the Specifications and Contract Documents.

8.3.2.4 *Submittals Must Be Incorporated (See Articles 3.7 and 3.9):* Contractor shall include Submittals as line items in the Baseline Schedule as required under Article 3.7.2 and 3.9.6. Submittals shall not delay the Work, Milestones, or the Completion Date. Failure to include Submittals in the Baseline Schedule shall be deemed a material breach by the Contractor.

8.3.2.5 *Float Must Be Incorporated.* The Baseline Schedule must indicate the beginning and completion of all phases of construction and shall use the “critical path method” (commonly called CPM) for the value reporting, planning and scheduling, of all Work required under the Contract Documents. The Baseline Schedule must incorporate all Milestones in the Project and apply Governmental Float at each Milestone in the Contractor’s discretion. The Baseline Schedule shall incorporate any Schedule provided by the District as part of the bid and shall note durations that will not be adequate or should be shortened based on Contractor’s review. These changes shall be identified and incorporated into Contractor’s Baseline Schedule as long as requested changes are made within 10 days after the District chooses to move forward with the Project. Scheduling is necessary for the District’s adequate monitoring of the progress of the Work and shall be prepared in accordance with the time frame described in this Article 8. The Architect may disapprove of any Schedule or require modification to it if, in the opinion of the Architect or District, adherence to the any Schedule prepared by the Contractor will not cause the Work to be completed in accordance with the Agreement.

8.3.2.6 *No Early Completion.* Contractor shall not submit any Schedule showing early completion without indicating float time through the date set for Project completion by District. Contractor’s Baseline Schedule shall account for all days past early completion as float which belongs to the Project. Usage of float shall not entitle Contractor to any delay Claim or damages due to delay.

8.3.2.7 *Use of Schedule Provided in Bid Documents.* In some cases, the bid will include a preliminary schedule indicating Milestones and construction sequences for the Project along with general timing for the Project. The preliminary schedule is not intended to serve as the Baseline Schedule utilized for construction. It is up to the Contractor to study and develop a Baseline Schedule to address the actual durations and sequences of Work that is anticipated while maintaining the Milestones provided by the District. Contractor shall obtain information from Contractor’s Subcontractors and vendors on the planning, progress, delivery of equipment, coordination, and timing of availability of Subcontractors so a practical plan of Work is fully developed and represented in the Baseline Schedule.

8.3.2.8 *Incorrect Logic, Durations, Sequences, or Critical Path.* The District may reject or indicate durations, sequences, critical path or logic are not acceptable and request changes. The electronic copy of the Baseline Schedule shall have adequate information so logic ties, duration, sequences and critical path may be reviewed electronically. Contractor is to diligently rebuild and resubmit the Baseline Schedule to represent the Contractor’s plan to complete the Work and maintain Milestones at the

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next progress meeting, or before the next progress meeting. If Contractor is not able to build a Baseline Schedule that is acceptable to the District or Architect, the District reserves the right to utilize the unapproved originally submitted Baseline Schedule (See Article 8.3.2.12) and the comments submitted to hold Contractor accountable for timely delivery of Work and maintenance of Milestones. Furthermore, Contractor's representations in the Baseline Schedule, if unacceptable, may also be used as a basis for termination of the Contract under Article 14 if Contractor fails to adequately maintain the Schedule and falls significantly behind without undertaking the efforts to either submit and follow a Recovery Schedule or fail to submit a Recovery Schedule and make no effort toward recovery on the Project.

8.3.2.9 *Contractor Responsibility Even if Schedule Issues Are Not Discovered.* Failure on the Part of the District to discover errors or omissions in any Schedules submitted shall not be construed to be an approval of the error or omission and any flawed Schedule is not grounds for a time extension.

8.3.2.9 Inclusions in Baseline Schedule. In addition to scheduling requirements set forth at Article 8.3.2, Contractor is specifically directed to include (broken out separately) in Contractor's Baseline Schedule and all Schedule updates, the following items required pursuant to these General Conditions, including but not limited to:

1. Rain Day Float (excluding inclement weather) as required under Article 8.1.4.2. For example, if the NOAA provides 22 days of Rain Days, all 22 days must be incorporated and noted in the Baseline Schedule. Further, any days required to clean-up or dry out shall be included for operations that are likely to require a clean-up or dry out period. Days that are not utilized shall be considered float owned by the Project.
2. Governmental Delay Float under Article 8.1.4.1. This Governmental Delay Float shall only be utilized for Governmental Delays and shall not be considered available float owned by the Project. This float shall only be distributed to the Project upon the completion of the Project and shall be used to offset Liquidated Damages and shall not generate compensable delays.
3. Submittal and Shop Drawing schedule under Article 3.9.
4. Deferred Approvals under Article 3.9.
5. Time for separate contractors, including furniture installation and start up activities, under Article 6.1.
6. Coordination and timing of any Drawings, approvals, notifications, permitting, connection, and testing for all utilities for the Project. (See Article 2.1.4).
7. Testing, special events, or school activities

8.3.2.10 *Failure to include Mandatory Schedule Items.* District may withhold payment pursuant to Articles 9.3, 9.4 and 9.6. In lieu of withholding payment for failure to include Mandatory Schedule Items, after the District or Architect has notified the Contractor of failure to meet the Baseline

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Schedule or Updated Schedule requirements and provided a written notification of this failure and provided a written notice of Schedule preparation errors, and the Contractor fails to correct the noted deficiencies or the Contractor does not provide an updated Baseline Schedule correcting the deficiencies, then Contractor shall not be granted an extension of time for failure to obtain necessary items and approvals under Article 8.3.2 and for the time required for failure to comply with laws, building codes, and other regulations (including Title 24 of the California Code of Regulations). Contractor shall maintain all required Article 8.3.2 Schedule items in the Baseline Schedule and indicate any days that have been used as allowed in Article 8. If Contractor fails to include all Article 8.3.2 items in its Baseline Schedule or Schedule Updates and the District either utilizes an Unapproved Schedule under Article 8.3.2.12 or does not object to the inclusion of required scheduling items, then all mandatory Schedule inclusions, including float, shall be utilized in the District's discretion. If the Contract Time is exceeded, then Contractor shall be subject to the assessment of Liquidated Damages pursuant to Article 8.4.

8.3.2.11 *Failure to Meet Requirements.* Failure of the Contractor to provide proper Schedules as required by this Article and Article 9 is a material breach of the Contract and grounds for Termination pursuant to Article 14. The District, at its sole discretion, may choose, instead, to withhold, in whole or in part, any Progress Payments or Retention amounts otherwise payable to the Contractor.

8.3.2.12 *Use of an Unapproved Baseline Schedule.* If the Baseline Schedule submitted by the Contractor is unacceptable to the District (i.e. failing to meet the requirements of Article 8.3.2) and Contractor does not incorporate or address the written comments to the Baseline Schedule and a Baseline Schedule is not approved, but due to extreme necessity, the District moves forward without an approved Baseline Schedule, Contractor shall diligently revise and meet Schedule update requirements of Article 8 and incorporate all Article 8.3.2 comments in all updates). However, for purposes of Termination pursuant to Article 14, the unapproved Baseline Schedule initially submitted shall be treated as the Baseline Schedule with durations shortened or revised to accommodate all float, all mandatory Schedule requirements under Article 8.3.2, any requirements in the Contract Documents, and all revisions by the District or Architect.

8.3.3 Update Schedules

8.3.3.1 *Updates Shall Be Based on Approved Baseline Schedule.* Except in the case where there has not been agreement as to a Baseline Schedule, the approved Baseline Schedule shall be used to build future Schedule updates. Schedule updates shall be a CPM based Schedule consistent with the Baseline Schedule requirements of 8.3.2

In the case that no Baseline has been approved, Schedule updates shall be provided monthly and each update shall incorporate all comments and revisions noted as not complying with the requirements of Article 8.3.2. Contractor shall be held to the Article 8.3.2.12 unapproved Baseline Schedule, inclusive of all Milestones, float, comments and revisions by the District and Architect, all required Baseline Schedule Inclusions under Article 8.3.2, and any requirements in the Contract Documents.

8.3.3.2 *Schedule Updates.* Contractor shall update the approved Schedule each month to address actual start dates and durations, the percent complete on activities, actual completion dates, estimated remaining duration for the Work in progress, estimated start dates for Work scheduled to start at future times and changes in duration of Work items

8.3.3.3 *Listing of Items Causing Delays.* Schedule updates shall provide a listing of activities which are causing delay in the progress of Work and a narrative shall be provided showing a

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description of problem areas, anticipated delays, and impacts on the Construction Schedule. Simply stating "District Delay" or "Architect Delay" shall be an inadequate listing. Delays shall only be listed if they meet the requirements of Article 8.4.

8.3.3.4 *Recovery Schedule.* In addition to providing a schedule update every thirty (30) days, the Contractor, if requested by the Architect or District, shall take the steps necessary to improve Contractor's progress and demonstrate to the District and Architect that the Contractor has seriously considered how the lost time, the Completion Date, or the Milestones that are required to be met within the terms of the Contract. Contractor shall immediately provide a Recovery Schedule showing how Milestones and the Completion Date will be met. In no case, shall a Recovery Schedule be provided later than ten (10) days following the request for a Recovery Schedule from the Architect or District.

- a. Failure to Provide a Recovery Schedule. Shall subject Contractor to the assessment of Liquidated Damages for failure to meet the Contract Time. Refusal or failure to provide a Recovery Schedule shall be considered a substantial failure of performance and a material breach of Contract and may result in Termination of the Contract pursuant to Article 14.
- b. Recovery Schedule Acceleration without Additional Cost. The District may require Contractor prepare a Recovery Schedule showing how the Project shall be accelerated, without any additional cost to the District. The District may order, without additional cost, the following:
 - 1. Increase the number of shifts;
 - 2. Utilize overtime to recover the approved Schedule; and/or
 - 3. Increase the days when Work occurs, including weekends, at the Project and at any manufacturer's plant.
- c. Recovery Schedule Acceleration without Additional Cost. If Contractor disputes that the Recovery Schedule acceleration shall be issued without additional costs, the Contractor shall submit concurrent with Recovery Schedule acceleration notice pursuant to Articles 8.4.3 and 8.4.4.

8.4 EXTENSIONS OF TIME - LIQUIDATED DAMAGES

8.4.1 Liquidated Damages

CONTRACTOR AND DISTRICT HEREBY AGREE THAT THE EXACT AMOUNT OF DAMAGES FOR FAILURE TO COMPLETE THE WORK WITHIN THE TIME SPECIFIED IS EXTREMELY DIFFICULT OR IMPOSSIBLE TO DETERMINE. IF THE WORK IS NOT SUBSTANTIALLY COMPLETED IN THE TIME SET FORTH IN THE AGREEMENT, IT IS UNDERSTOOD THAT THE DISTRICT WILL SUFFER DAMAGES. IT BEING IMPRACTICAL AND UNFEASIBLE TO DETERMINE THE AMOUNT OF ACTUAL DAMAGE, IT IS AGREED THE CONTRACTOR SHALL PAY TO THE DISTRICT THE AMOUNT LIQUIDATED DAMAGES SET FORTH IN THE AGREEMENT, FOR EACH CALENDAR DAY OF DELAY IN REACHING SUBSTANTIAL COMPLETION (SEE ARTICLE 1.1.46). CONTRACTOR AND ITS SURETY SHALL

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BE LIABLE FOR THE AMOUNT THEREOF PURSUANT TO GOVERNMENT CODE SECTION 53069.85.

8.4.2 Delay

Except and only to the extent provided under Article 7 and Article 8, by signing the Agreement, Contractor agrees to bear the risk of delays to Completion of the Work and that Contractor's bid for the Project was made with full knowledge of this risk.

In agreeing to bear the risk of delays to complete the Work, Contractor understands that, except and only to the extent provided otherwise in Article 7 and 8, the occurrence of events that delay the Work shall not excuse Contractor from its obligation to achieve Completion of the Project within the Contract Time, and shall not entitle the Contractor to an adjustment to the Contract time.

8.4.3 Excusable Delay

Contractor shall not be charged for Liquidated Damages because of any delays in completion of Work which are not the fault or negligence of Contractor or its Subcontractors, arising from Rain Float or Project Float, including acts of God, as defined in Public Contract Code section 7105, acts of enemy, epidemics and quarantine restrictions. Any approved delays caused by acts of God, as defined in Public Contract Code section 7105, acts of enemy, epidemics, pandemics, and quarantine restrictions (collectively, "Force Majeure Events") shall be deemed non-compensable excusable delays. Contractor shall within five (5) calendar days of beginning of any such delay notify District in writing of causes of delay; thereupon District shall ascertain the facts and extent of delay and grant extension of time for completing Work when, in its judgment, the findings of fact justify such an extension. Extensions of time shall apply only to that portion of Work affected by delay, and shall not apply to other portions of Work not so affected. An extension of time may only be granted after proper compliance with Article 8.3 requiring preparation and submission of a properly prepared CPM schedule.

8.4.3.1 *Excusable Delay Is Not Compensable.* No extended overhead, general conditions costs, impact costs, out-of-sequence costs or any other type of compensation, by any name or characterization, shall be paid to the Contractor for any delay to any activity not designated as a critical path item on the latest approved Project schedule or if caused by Force Majeure Events.

8.4.3.2 *Notification.* The Contractor shall notify the Architect in writing of any anticipated delay and its cause, in order that the Architect may take immediate steps to prevent, if possible, the occurrence or continuance of delay, and may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the Work might be delayed thereby.

8.4.3.3 *Extension Request.* In the event the Contractor requests an extension of Contract time for unavoidable delay, such request shall be submitted in accordance with the provisions in the Contract Documents governing changes in Work (See Article 7). When requesting time, i.e., extensions, for proposed Change Orders, they must be submitted with the proposed Change Order with full justification and documentation. If the Contractor fails to submit justification with the proposed Change Order it waives its right to a time extension at a later date. Such justification must be based on the official Contract schedule as updated at the time of occurrence of the delay or execution of Work related to any changes to the scope of Work. Blanket or general claims for extra days without specific detailed information as required herein

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or a blanket or general reservation of rights do not fulfill the requirements of this Article and shall be denied. The justification must include, but is not limited to, the following information:

- a. The duration of the activity relating to the changes in the Work and the resources (manpower, equipment, material, etc.) required to perform these activities within the stated duration.
- b. Logical ties to the official Baseline Schedule or Approved Updated Schedule for the proposed changes and/or delay showing the activity/activities in the schedule whose start or completion dates are affected by the change and/or delay. (A fragnet of any delay of over ten (10) days must be provided.)

The Contractor and District understand and expressly agree that insofar as Public Contract Code section 7102 may apply to changes in the Work or delays under this Contract, the actual delays and damages, if any, and time extensions are intended to, and shall provide, the exclusive and full method of compensation for changes in the Work and construction delays.

8.4.4 Notice by Contractor Required

The Contractor shall within five (5) calendar days of beginning of any such delay notify the District in writing of causes of delay with justification and supporting documentation. In the case of a Recovery Schedule pursuant to Article 8.3.3.4, Contractor shall submit written notice concurrent with the Recovery Schedule. District will then ascertain the facts and extent of the delay and grant an extension of time for completing the Work when, in its judgment, the findings of fact justify such an extension. Extensions of time shall apply only to that portion of the Work affected by the delay and shall not apply to other portions of the Work not so affected.

Claims relating to time extensions shall be made in accordance with applicable provisions of Article 7.

8.4.4.1 *Adjustment for Compensable Delays.* The Schedule may be adjusted for a delay if, and only if, Contractor undertakes the following:

- a. Contractor submits a timely COR or CO pursuant to the requirements of Article 7.
- b. Contractor submits a fragnet showing the critical path delay caused by the COR, CO, Changed Condition, CCD, or ICD
- c. Contractor has addressed all required float days in the Fragnet.
- d. Contractor submits a complete breakdown of all costs incurred utilizing the format of Article 7.7.3

8.4.5 No Additional Compensation for Coordinating Governmental Submittals and the Resulting Work

CONTRACTOR HAS PLANNED ITS WORK AHEAD OF TIME AND IS AWARE THAT GOVERNMENTAL AGENCIES, SUCH AS THE GAS COMPANIES, ELECTRICAL UTILITY COMPANIES, WATER DISTRICTS AND OTHER AGENCIES MAY HAVE TO APPROVE

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CONTRACTOR PREPARED DRAWINGS OR APPROVE A PROPOSED INSTALLATION. CONTRACTOR HAS INCLUDED DELAYS AND DAMAGES WHICH MAY BE CAUSED BY SUCH AGENCIES IN CONTRACTOR'S BID AND HAS INCLUDED ADEQUATE TIME IN THE CONTRACTOR'S BASELINE SCHEDULE. FAILURE TO ADEQUATELY PLAN AND SCHEDULE IS NOT A BASIS TO USE GOVERNMENTAL DELAY FLOAT.

8.4.6 District Right to Accelerate the Work

The District may direct the Contractor to meet schedule requirements when the Work has been delayed. The District shall compensate the Contractor for the additional costs incurred by acceleration to the extent that such costs are directly attributable to the acceleration and are incurred through no fault or negligence of the Contractor.

8.4.6.1 *Management of Acceleration.* Contractor acceleration shall not include Work that is part of the scope of Work detailed in the Plans and Specifications. Instead, the acceleration costs shall be premium or overtime and quantifiable additional work added to the Project meant to accelerate the Project. Contractor is directed to keep consistent crews on the Project so time can be tracked. If crews are circulated off the Project or crews brought in only for overtime, the District may be charged for Contract Work and not accelerated time. In such case, the District may object to the costs submitted.

8.4.6.2 *Costs for Acceleration.* Cost for Acceleration shall be supported by backup documentation, and time sheets signed by the Inspector for each day work has been performed, at or near the time when the Work was performed. A listing on the time sheet shall document all labor, materials and services utilized that day and provide areas of work, and amount of work performed. Contractor shall comply with submission requirements of Article 7.7.

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ARTICLE 9 PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

The Contract Sum or Contract Price is stated in the Agreement and, including authorized adjustments, is the total amount payable by the District to the Contractor for performance of the Work under the Contract Documents.

9.2 COST BREAKDOWN

9.2.1 Required Information

Contractor shall furnish the following:

- a. Within ten (10) days after Notice to Proceed, a detailed breakdown of the Contract Price (hereinafter "Schedule of Values") for each Project, Site, building, Milestone or other meaningful method to measure the level of Project Completion as determined by the District shall be submitted as a Submittal for the Project.;
- b. Within ten (10) days after the date of the Notice to Proceed, a schedule of estimated monthly payment requests due the Contractor showing the values and construction time of the various portions of the Work to be performed by it and by its Subcontractors or material and equipment suppliers containing such supporting evidence as to its correctness as the District may require;
- c. Within ten (10) days after the date of the Notice to Proceed, address, telephone number, telecopier number, California State Contractors License number, classification and monetary value of all subcontracts for parties furnishing labor, material, or equipment for completion of the Project.

9.2.2 Information and Preparation of Schedule of Values

9.2.2.1 *Break Down of Schedule of Values.* Schedule of Values shall be broken down by Project, site, building, Milestone, or other meaningful method to measure the level of Project Completion as determined by the District.

9.2.2.2 *Based on Contractor Bid Costs.* The Schedule of Values shall be based on the costs from Contractor's bid to the District. However, the submission of the Schedule of Values shall not be front loaded so the Contractor is paid a greater value than the value of the Work actually performed and shall not shift funds from parts of the Project that are later to Work that is performed earlier.

9.2.2.3 Largest Dollar Value for Each Line Item. Identify Subcontractors and materials suppliers proposed to provide portions of Work equal to or greater than ten thousand dollars (\$10,000) or one-half of one percent (0.5%) of their Contract Price, whichever is less.

9.2.2.4 *Allowances.* Any Allowances provided for in the Contract shall be a line item in the Schedule of Values.

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9.2.2.5 *Labor and Materials Shall Be Separate.* Labor and Materials shall be broken into two separate line items unless specifically agreed in writing by the District.

9.2.3 District Approval Required

The District shall review all submissions received pursuant to Article 9.2 in a timely manner. All submissions must be approved by the District before becoming the basis of any payment.

9.3 PROGRESS PAYMENTS

9.3.1 Payments to Contractor

Unless there is a resolution indicating that the Work for the Project is substantially complex, within thirty-five (35) days after approval of the Request for Payment, Contractor shall be paid a sum equal to ninety-five percent (95%) of the value of the Work performed (as certified by Architect and Inspector and verified by Contractor) up to the last day of the previous month, less the aggregate of previous payments. In the case of a Project designated substantially complex, the sum paid to the Contractor shall be equal to ninety percent (90%) of the value of the Work performed (as certified by the Architect and Inspector and verified by Contractor). The value of the Work completed shall be the Contractor's best estimate. Work completed as estimated shall be an approximation or estimate only and no mistake, inaccuracy, error or falsification in said any approved estimate shall operate to release the Contractor, or any Surety upon any bond, from damages arising from such Work, or from the District's enforcement of each and every provision of this Contract including but not limited to the Performance Bond and Payment Bond. The District shall have the right to subsequently to correct any mistake, inaccuracy, error or falsification made or otherwise set forth in any approved Request for Payment and such correction may occur in any future Payment Application or in the Retention Payment to the Contractor. No Surety upon any bond shall be relieved, released or exonerated of its obligations under this Contract or any applicable bond when the District is unable to correct an overpayment to the Contractor due to any abandonment by the Contractor or termination by the District.

The Contractor shall not be entitled to have any payment requests processed, or be entitled to have any payment made for Work performed, so long as any lawful or proper direction given by the District concerning the Work, or any portion thereof, remains incomplete.

Notwithstanding anything to the contrary stated above, the Contractor may include in its Request for Payment the value of any structural steel, glue laminated beams, trusses, bleachers and other such custom-made materials prepared specifically for the Project and unique to the Project so long as all of the following requirements are satisfied:

- a. The aggregate cost of materials stored off-site shall not exceed Twenty Five Thousand Dollars (\$25,000) at any time or as otherwise agreed to be District in writing;
- b. Title to such materials shall be vested in the District as evidenced by documentation satisfactory in form and substance to the District, including, without limitation, recorded financing statements, UCC filings and UCC searches;
- c. With each Contractor Request for Payment, the Contractor shall submit to the District a written list identifying each location where materials are stored off-site

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(which must be a bonded warehouse) and the value of the materials at each location. The Contractor shall procure insurance satisfactory to the District (in its reasonable discretion) for materials stored off-site in an amount not less than the total value thereof;

- d. The consent of any Surety shall be obtained to the extent required prior to payment for any materials stored off-site;
- e. Representatives of the District shall have the right to make inspections of the storage areas at any time; and
- f. Such materials shall be: (1) protected from diversion, destruction, theft and damage to the reasonable satisfaction of the District; (2) specifically marked for use on the Project; and (3) segregated from other materials at the storage facility.

9.3.2 Purchase of Materials and Equipment and Cost Fluctuations

The Contractor is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from District to assure that there will be no delays. Contractor understands that materials fluctuate in value and shall have adequately addressed market fluctuations through agreements with Contractor vendors or by other means. Contractor further understands and incorporates into Contractor's bid cost any wage rate increases during the Project for the Contractor's labor force as well as all other Subcontractor and vendor labor forces. District shall not be responsible for market fluctuations in costs or labor rate increases during the Project. Contractor further has incorporated any and all cost increases in areas of Work where there may be schedule variations so that cost increases are not passed through to the District.

9.3.3 No Waiver

No payment by District hereunder shall be interpreted so as to imply that District has inspected, approved, or accepted any part of the Work. Contractor specifically understands that Title 24 Section 4-343 which states:

"It is the duty of the contractor to complete the work covered by his or her contract in accordance with the approved Plans and Specifications therefore. The contractor in no way is relieved of any responsibility by the activities of the Architect, Engineer, Inspector or DSA in the performance of such duties... In no case, however, shall the instruction of the Architect or registered Engineer be construed to cause work to be done with is not in conformity with the approved Plans, Specifications, and change orders..."

Notwithstanding any payment, the District may enforce each and every provision of this Contract which includes, but is not limited to, the Performance Bond and Payment Bond. The District may correct any error subsequent to any payment. In no event shall the Contractor or the Surety be released or exonerated from performance under this Contract when the District overpays the Contractor based upon any mistake, inaccuracy, error or falsification in any estimate that is included in any Request for Payment.

9.3.4 Issuance of Certificate of Payment

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The Architect shall, within seven (7) days after receipt of the Contractor's Application for Payment, either approve such payment or notify the Contractor in writing of the Architect's reasons for withholding approval in whole or in part as provided in Article 9.6. The review of the Contractor's Application for Payment by the Architect is based on the Architect's observations at the Project and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. In some cases, the Architect may act upon or rely on the evaluation of the Work by the Inspector. This review of Payment Applications is sometimes called a "Pencil Draft." District's return of a Pencil Draft shall constitute the District's dispute of the Payment Application that has been submitted. Contractor shall promptly respond to Pencil Drafts or Contractor's Payment Applications may be delayed. Contractor's failure to promptly respond to a Pencil Draft shall qualify as a delay in the prompt payment of a Request for Payment or Request for Retention. The foregoing representations are subject to: (1) an evaluation of the Work for conformance with the Contract Documents, (2) results of subsequent tests and inspections, (3) minor deviations from the Contract Documents correctable prior to completion, and (4) specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute the Contractor's verified representation that the Contractor is entitled to payment in the amount certified.

9.3.5 Payment of Undisputed Contract Payments

In accordance with Public Contract Code section 7100, payments by the District to the Contractor for any and all undisputed amounts (including all Progress Payments, Final Payments or Retention Payment) is contingent upon submission of a proper and accurate Payment Application and the Contractor furnishing the District with a release of all Claims against the District related to such undisputed amounts. Disputed Contract Claims in stated amounts may be specifically excluded by the Contractor from the operation of the release. If, however, the Contractor specifically excludes any Claims, the Contractor shall provide details such as a specific number of disputed days or costs of any such exclusion in accordance with Articles 4.6 and 7.7.

9.4 APPLICATIONS FOR PROGRESS PAYMENTS

9.4.1 Procedure

9.4.1.1 *Application for Progress.* On or before the fifth (5th) day of each calendar month during the progress of the Work, Contractor shall submit to the Architect an itemized Application for Progress Payment for operations completed. Such application shall be notarized, if required, and supported by the following or such portion thereof as Architect requires:

1. The amount paid to the date of the Payment Application to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;
2. The amount being requested under the Payment Application by the Contractor on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract;
3. The balance that will be due to each of such entities after said payment is made;

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4. A certification that the As-Built Drawings and Annotated Specifications are current;
5. Itemized breakdown of Work done for the purpose of requesting partial payment;
6. An updated or approved Baseline Schedule or other Schedule updates in conformance with Article 8;
7. Failure to submit an updated Schedule for the month or any previous month;
8. The additions to and subtractions from the Contract Price and Contract Time;
9. A summary of the Retention held;
10. Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time;
11. The percentage of completion of the Contractor's Work by line item;
12. An updated Schedule of Values from the preceding Application for Payment;
13. Prerequisites for Progress Payments; and
14. Any other information or documents reasonably requested by the District, Architect, Inspector or CM (if applicable).

9.4.1.2 *First Payment Request.* The following items, if applicable, must be completed before the first payment request will be accepted for processing:

1. Installation of the Project sign;
2. Receipt by Architect of Submittals;
3. Installation of field office;
4. Installation of temporary facilities and fencing;
5. Submission of documents listed in the Article 9.2 relating to Contract Price breakdown;
6. Preliminary schedule analysis, due within 10 days after Notice to Proceed;
7. Contractor's Baseline Schedule (to be CPM based in conformance with Article 8);
8. Schedule of unit prices, if applicable;

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9. Submittal Schedule;
10. Copies of necessary permits;
11. Copies of authorizations and licenses from governing authorities;
12. Initial progress report;
13. Surveyor qualifications;
14. Written acceptance of District's survey of rough grading, if applicable;
15. List of all Subcontractors, with names, license numbers, telephone numbers, and scope of work;
16. All bonds and insurance endorsements; and
17. Resumes of General Contractor's Project Manager, and if applicable, job site secretary, record documents recorder, and job site Superintendent.

9.4.1.3 *Second Payment Request.* The second payment request will not be processed until all Submittals and Shop Drawings have been accepted for review by the Architect.

9.4.1.4 *All Payment Requests.* No payment requests will be processed unless Contractor has submitted copies of the certified payroll records for the Work which correlates to the payment request and a proper CPM schedule pursuant to Article 8 is submitted.

9.4.1.5 *Final Payment Application (90% or 95%).* See Article 9.11.1

9.4.1.6 *Final Payment Application (100%).* See Article 9.11.3

9.5 STOP NOTICE CLAIMS AND WARRANTY OF TITLE

The Contractor warrants title to all Work. The Contractor further warrants that all Work is free and clear of liens, claims, security interests, stop notices, or encumbrances in favor of the Contractor, Subcontractors, material and equipment suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work. Failure to keep work free of liens, stop notices, claims, security interests or encumbrances is grounds to make a claim against Contractor's Payment and Performance Bond to immediately remedy and defend.

If a lien or stop notice of any nature should at any time be filed against the Work or any District property, by any entity which has supplied material or services at the request of the Contractor, Contractor and Contractor's Surety shall promptly, on demand by District and at Contractor's and Surety's own expense, take any and all action necessary to cause any such lien or stop notice to be released or discharged immediately therefrom.

If the Contractor fails to furnish to the District within ten (10) calendar days after written demand by the District, satisfactory evidence that a lien or stop notice has been so released, discharged, or secured, then District may discharge such indebtedness and deduct the amount required therefor, together with any and all losses, costs, damages, and attorney's fees and expense incurred or suffered by District from any

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sum payable to Contractor under the Contract. In addition, any liens, stop notices, claims, security interests or encumbrances shall trigger the indemnification requirements under Article 3.15 and the Agreement Form, and shall act as a trigger under Civil Code section 2778 and 2779 requiring reimbursement for any and all costs following the District's written demand has been made. Any withholdings by the District for stop notices in accordance with Civil Code section 9358 shall not be a basis by the Contractor to make a Claim for interest penalties under Public Contract Code sections 7107 or 20104.50.

9.6 DECISIONS TO WITHHOLD PAYMENT

9.6.1 Reasons to Withhold Payment

The District may withhold payment in whole, or in part, to the extent reasonably necessary to protect the District if, in the District's opinion, the representations to the District required by Article 9.4 cannot be made. The District may withhold payment, in whole, or in part, to such extent as may be necessary to protect the District from loss because of, but not limited to:

- a. Defective Work not remedied;
- b. Stop notices served upon the District;
- c. Liquidated Damages assessed against the Contractor;
- d. The cost of Completion of the Contract if there exists reasonable doubt that the Work can be Completed for the unpaid balance of any Contract Price or by the completion date;
- e. Damage to the District or other contractor;
- f. Unsatisfactory prosecution of the Work by the Contractor;
- g. Failure to store and properly secure materials;
- h. Failure of the Contractor to submit on a timely basis, proper and sufficient documentation required by the Contract Documents, including, without limitation, acceptable monthly progress schedules, Shop Drawings, Submittal schedules, Schedule of Values, Product Data and samples, proposed product lists, executed Change Order, Construction Change Documents, and verified reports;
- i. Failure of the Contractor to maintain As-Built Drawings;
- j. Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Payment Application;
- k. Unauthorized deviations from the Contract Documents (including but not limited to Unresolved Notices of Deviations (DSA Form 154));
- l. Failure of the Contractor to prosecute the Work in a timely manner in compliance with established progress schedules and completion dates.

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- m. Failure to properly pay prevailing wages as defined in Labor Code section 1720, et seq.;
- n. Failure to properly maintain or clean up the Site;
- o. Payments to indemnify, defend, or hold harmless the District;
- p. Any payments due to the District including but not limited to payments for failed tests, or utilities changes or permits;
- q. Failure to submit an acceptable Baseline Schedule or any Schedule or Schedule update in accordance with Article 8;
- r. Failure to pay Subcontractor or suppliers as required by Article 9.8.1
- s. Failure to secure warranties, including the cost to pay for warranties;
- t. Failure to provide releases from material suppliers or Subcontractors when requested to do so;
- u. Items deducted pursuant to Article 2.2;
- v. Incomplete Punch List items under Article 9.9.1.1 which have gone through the Article 2.2 process; or
- w. Allowances that have not been used.

9.6.2 Reallocation of Withheld Amounts

District may, in its discretion, apply any withheld amount to payment of outstanding claims or obligations as defined in Article 9.6.1 and 9.5. In so doing, District shall make such payments on behalf of Contractor. If any payment is so made by District, then such amount shall be considered as a payment made under Contract by District to Contractor and District shall not be liable to Contractor for such payments made in good faith. Such payments may be made without prior judicial determination of claim or obligation. District will render Contractor an accounting of such funds disbursed on behalf of Contractor.

If Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision thereof, District may, after ten (10) calendar days written notice to the Contractor and without prejudice to any other remedy make good such deficiencies. The District shall adjust the total Contract price by reducing the amount thereof by the cost of making good such deficiencies. If District deems it inexpedient to correct Work which is damaged, defective, or not done in accordance with Contract provisions, an equitable reduction in the Contract Price (of at least 150% of the estimated reasonable value of the nonconforming Work) shall be made therefor.

9.6.3 Payment After Cure

When the grounds for declining approval are removed, payment shall be made for amounts withheld because of them. No interest shall be paid on any retainage or amounts withheld due to the failure of the Contractor to perform in accordance with the terms and conditions of the Contract Documents.

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9.7 NONCONFORMING WORK

Contractor shall promptly remove from premises all Work identified by District as failing to conform to the Contract whether incorporated or not. Contractor shall promptly replace and re-execute its own Work to comply with the Contract without additional expense to District and shall bear the expense of making good all Work of other contractors destroyed or damaged by such removal or replacement.

If Contractor does not remove such Work which has been identified by District as failing to conform to the Contract Documents within a reasonable time, fixed by written notice, District may remove it and may store the material at Contractor's expense. If Contractor does not pay expenses of such removal within ten (10) calendar days' time thereafter, District may, upon ten (10) calendar days' written notice, sell such materials at auction or at private sale and shall account for net proceeds thereof, after deducting all costs and expenses that should have been borne by Contractor.

9.8 SUBCONTRACTOR PAYMENTS

9.8.1 Payments to Subcontractors

No later than ten (10) days after receipt, or pursuant to Business and Professions Code section 7108.5, the Contractor shall pay to each Subcontractor, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

9.8.2 No Obligation of District for Subcontractor Payment

The District shall have no obligation to pay, or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.

9.8.3 Payment Not Constituting Approval or Acceptance

An approved Request for Payment, a progress payment, a Certificate of Substantial Completion, or partial or entire use or occupancy of the Project by the District shall not constitute acceptance of Work that is not in accordance with the Contract Documents.

9.8.4 Joint Checks

District shall have the right, if necessary for the protection of the District, to issue joint checks made payable to the Contractor and Subcontractors and material or equipment suppliers. The joint check payees shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. In no event shall any joint check payment be construed to create any contract between the District and a Subcontractor of any tier, any obligation from the District to such Subcontractor, or rights in such Subcontractor against the District. The District may choose to issue joint checks at District's sole discretion and only after all the requirements of that particular school district and county are specifically met. Some school districts cannot issue joint checks, so the ability to issue joint checks depends on the school district and the specific circumstances.

9.9 COMPLETION OF THE WORK

9.9.1 Close-Out Procedures

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9.9.1.1 *Incomplete Punch Items.* When the Contractor considers the Work Substantially Complete (See Article 1.1.46 for definition of Substantially Complete), the Contractor shall prepare and submit to the District a comprehensive list of minor items to be completed or corrected (hereinafter “Incomplete Punch Items” or “Punch List”). The Contractor and/or its Subcontractors shall proceed promptly to complete and correct the Incomplete Punch Items listed. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Contractor is aware that Title 24 Section 4-343(a) provides:

“RESPONSIBILITIES. IT IS THE DUTY OF THE CONTRACTOR TO COMPLETE THE WORK COVERED BY HIS OR HER CONTRACT IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS THEREFOR. THE CONTRACTOR IN NO WAY IS RELIEVED OF ANY RESPONSIBILITY BY THE ACTIVITIES OF THE ARCHITECT, ENGINEER, INSPECTOR OR DSA IN THE PERFORMANCE OF SUCH DUTIES.

9.9.1.2 *Punch List Is Prepared Only After the Project Is Substantially Complete.* If any of the conditions noted in Article 1.1.46 as defining Substantial Completion are not met, the Inspector, Architect or District may reject Contractor’s Incomplete Punch Items as premature. If the Architect and Inspector commence review of Incomplete Punch Items, all rights are reserved until the Project actually meets the definition of Substantially Complete. Liquidated Damages, warranties, and other contractual rights are not affected by Incomplete Punch Items unless otherwise addressed in these General Conditions.

Once the Inspector and the Architect determine the Project is Substantially Complete, a Certificate of Substantial Completion shall be issued. The Inspector and Architect shall prepare a Punch List of items which is an inspection report of the Work, if any, required in order to complete the Contract Documents and ensure compliance with the DSA Approved Plans so the Project may be Completed by the Contractor and a final DSA Close-Out is approved. When all Work for the Project is Complete, including Punch Lists and all Work complies with the approved Contract Documents and Change Orders, the Project has reached Final Completion.

9.9.1.3 *Time for Completion of Punch List.* Contractor shall only be given a period of no more than thirty (30) days to complete the Punch List for the Project. During the Punch List period, the Contractor’s Superintendent and Project Manager shall remain engaged in the Project and shall not be removed or replaced. If the Punch List is not completed at the end of the Punch List time then Contractor shall issue a valued Punch List within 5 days after the date the Punch List time ends. If Contractor does not issue such a list, the District or Architect may issue a valued Punch List to the Contractor and withhold up to 150% of the value of the Punch List Work pursuant to Article 2.2 of this Agreement.

Failure to issue a timely written request for additional time to complete Punch List shall result in the deletion of the remaining Punch List Work pursuant to Article 2.2 and the issuance of a Deductive Change Order.

- a. Extension of Time to Complete Punch List. If Contractor cannot finish the Punch List Work during the time period allotted under Article 9.9.1.3, the Contractor may make a written request for a Non-Compensable Punch List time extension accompanied by an estimate of the number of additional days it will take to complete the Punch List Work for a written consent from the District to allow continued Punch List Work. Punch List

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time extensions are a maximum of thirty (30) days for each request and must be accompanied by an itemized valued Punch List.

- b. If there is no valued Punch List accompanying any request or if Contractor intends to undertake Punch List without the continued support and supervision of its Superintendent and Project Manager (as required under Article 3.2), the District, Construction Manager or Architect may issue a valued Punch List, reject the Punch List Time Extension and deduct 150% of the valued Punch List pursuant to Article 2.2 and proceed to Close-Out the Project. Contractor shall cease work on the Project and proceed to complete Contractor's Retention Payment Application and complete the Work for the Project required pursuant to Article 9.11.3.

9.9.1.4 *District Rejection of Written Request for Punch List Time Extensions.* Following sixty (60) Days of Punch List under Article 9.9.1.3, the District has the option of rejecting Punch List Time Extension requests. The District may proceed under Article 2.2 and deduct the value of remaining Punch List Work pursuant to Article 2.2. If the District rejects the Punch List Time Extension request then Contractor shall cease Work on the Project and proceed to Final Inspection pursuant to Article 9.11.2.

9.9.1.5 *Punch List Liquidated Damages to Compensate for Added District Project Costs.* If the total time utilized for Punch List exceeds sixty (60) days [the thirty (30) day period under Article 9.9.1.3 plus an additional thirty (30) day period that has been requested in writing], and the District grants an additional written Punch List Time Extension that exceeds sixty (60) days of Punch List, then Contractor shall be charged Liquidated Damages of at least \$750 per day for continued Punch List Work to partially compensate the Inspector, Architect, and Construction Manager's extended time on the Project. This Punch List Liquidated Damage number is based on anticipated cost for an Inspector on site and additional costs for the Architect and Construction Manager to reinspect Punch List items and perform the administration of the Close-out.

Contractor received thirty (30) days without any charges for Punch List Liquidated Damages and is placed on notice pursuant to this Article 9.9.1.5 that \$750 is due for each day of Punch List that exceeds sixty (60) days at \$750, a cost much lower than typical (and actual) costs for Inspection, Architect and Construction Manager time required during Punch List. Starting at ninety (90) days of Punch List (an excessive number of days to complete Punch List), the District shall be entitled to adjust Punch List Liquidated Damages to an estimate of the actual costs incurred to oversee, monitor and inspect the Punch List. If costs exceed \$750 per day, the anticipated extended contract charges for Inspection, Architect, Construction Manager, and any other costs that will be incurred due to the extended Punch List shall be itemized and a daily rate of Punch List Liquidated Damages shall be presented in writing to the Contractor within five (5) days following the receipt of a written request for Punch List Time Extension by the Contractor that extends the Punch List time beyond ninety (90) days. This written notice of actual Punch List Liquidated Damages may be provided to the Contractor at any time following the first written request for Punch List Time extension requested under Article 9.9.1.3. The adjusted actual Punch List Liquidated Damage amount shall be applicable as Punch List Liquidated Damages commencing on the ninetieth (90th) day of Punch List.

9.9.2 Close-Out Requirements for Final Completion of the Project

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- a. Utility Connections. Buildings shall be connected to water, gas, sewer, and electric services, complete and ready for use. Service connections shall be made and existing services reconnected
- b. As-Builts Up to Date and Complete. The intent of this procedure is to obtain an exact “As-Built” record of the Work upon completion of the project. The following information shall be carefully and correctly drawn on the prints and all items shall be accurately located and dimensioned from finished surfaces of building walls on all As-Built Drawings
 - 1. The exact location and elevations of all covered utilities, including valves, cleanouts, etc. must be shown on As-Built Drawings
 - 2. Contractor is liable and responsible for inaccuracies in As-Built Drawings, even though they become evident at some future date.
 - 3. Upon completion of the Work and as a condition precedent to approval of Retention Payment, Contractor shall obtain the Inspector’s approval of the “As-Built” information. When completed, Contractor shall deliver corrected sepias and/or a Diskette with an electronic file in a format acceptable to the District.
 - 4. District may withhold the cost to hire a draftsman and potholing and testing service to complete Record As-Built Drawings at substantial cost if the Contractor does not deliver a complete set of Record As-Built Drawings. This shall result in withholding of between \$10,000 to \$20,000 per building that does not have a corresponding Record As Built Drawing.
- c. Any Work not installed as originally indicated on Drawings
- d. All DSA Close-Out requirements (See DSA Certification Guide) Contractor is also specifically directed to Item 3.2 in the DSA Certification Guide and the applicable certificates for the DSA-311 form.
- e. Submission of Form 6-C. Contractor shall be required to execute a Form 6-C as required under Title 24 Sections 4-343. The Contractor understands that the filing with DSA of a Form 6-C is a requirement to obtain final DSA Approval of the construction by Contractor and utilized to verify under penalty of perjury that the Work performed by Contractor complies with the DSA approved Contract Documents. The failure to file a DSA Form 6C has two consequences. First, the Construction of the Project will not comply with the design immunity provisions of Government Code section 830.6 and exposes the District and the individual Board members to personal liability for injuries that occur on the Project.

Secondly , under DSA IR A-20, since the Project cannot be Certified by DSA, no future or further Projects will be authorized so Contractor will have essentially condemned the campus from any future modernization or addition of new classrooms through their failure to file the DSA Form 6C.

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1. *Execution of the DSA Form 6-C is Mandatory.* Refusal to execute the Form 6-C, which is a Final DSA Verified Report that all Work performed complies with the DSA approved Contract Documents is a violation of Education Code section 17312 and shall be referred to the Attorney General for Prosecution.
 2. *Referral to the District Attorney for Extortion.* If the Contractor's refusal to execute the DSA Form 6C is to leverage a Dispute, Claim or litigation, then the matter shall also be referred to the District Attorney for prosecution for extortion.
 3. *Contractor shall be Responsible for All Costs to Certify the Project.* The District may certify the Project complies with Approved Plans and Specifications by utilizing the procedures under the Project Certification Guide (located at the DSA website). All costs for professionals, inspection, and testing required for an alternate Project Certification shall be the Contractor's responsibility and the District reserves its right to institute legal action against the Contractor and Contractor's Surety for all costs to certify the Project and all costs to correct Non-Compliant Work that is discovered during the Alternate Certification Process.
- f. ADA Work that must be corrected to receive DSA certification. See Article 12.2.
- g. Maintenance Manuals. At least thirty (30) days prior to final inspection, three (3) copies of complete operations and maintenance manuals, repair parts lists, service instructions for all electrical and mechanical equipment, and equipment warranties shall be submitted. All installation, operating, and maintenance information and Drawings shall be bound in 8½" x 11" binders. Provide a table of contents in front and all items shall be indexed with tabs. Each manual shall also contain a list of Subcontractors, with their addresses and the names of persons to contact in cases of emergency. Identifying labels shall provide names of manufactures, their addresses, ratings, and capacities of equipment and machinery.
1. Maintenance manuals shall also be delivered in electronic media for the Project. Any demonstration videos shall also be provided on electronic media.
- h. Inspection Requirements. Before calling for final inspection, Contractor shall determine that the following Work has been performed:
1. The Work has been completed;
 2. All fire/ life safety items are completed and in working order;
 3. Mechanical and electrical Work complete, fixtures in place, connected and tested;
 4. Electrical circuits scheduled in panels and disconnect switches labeled;

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5. Painting and special finishes complete;
6. Doors complete with hardware, cleaned of protective film relieved of sticking or binding and in working order;
7. Tops and bottoms of doors sealed;
8. Floors waxed and polished as specified;
9. Broken glass replaced and glass cleaned;
10. Grounds cleared of Contractor's equipment, raked clean of debris, and trash removed from Site;
11. Work cleaned, free of stains, scratches, and other foreign matter, replacement of damaged and broken material;
12. Finished and decorative work shall have marks, dirt and superfluous labels removed;
13. Final cleanup, as in Article 3.12;
14. All Work pursuant to Article 9.11.2; and
15. Furnish a letter to District stating that the District's Representative or other designated person or persons have been instructed in working characteristics of mechanical and electrical equipment.

9.9.3 Costs of Multiple Inspections

More than two (2) requests of the District to make inspections required under Article 9.9.1 shall be considered an additional service of Architect, Inspector, Engineer or other consultants shall be the Contractor's responsibility pursuant to Article 4.5 and all subsequent costs will be prepared as a Deductive Change Order.

9.10 PARTIAL OCCUPANCY OR USE

9.10.1 District's Rights

The District may occupy or use any completed or partially completed portion of the Work at any stage. The District and the Contractor shall agree in writing to the responsibilities assigned to each of them for payments, security, maintenance, heat, utilities, damage to the Work, insurance, the period for correction of the Work, and the commencement of warranties required by the Contract Documents. If District and Contractor cannot agree as to responsibilities such disagreement shall be resolved pursuant to Article 4.6. When the Contractor considers a portion complete, the Contractor shall prepare and submit a Punch List to the District as provided under Article 9.9.1.

9.10.2 Inspection Prior to Occupancy or Use

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Immediately prior to such partial occupancy or use, the District, the Contractor, and the Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.10.3 No Waiver

Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.11 COMPLETION AND FINAL PAYMENT

9.11.1 Final Payment (90% Billing if Substantially Complex Finding and 95% Billing If No Finding Is Made)

The following items must be completed before the Final Payment Application will be accepted for processing at Substantial Completion of the Project:

- a. Inspector sign-off of each item in the DSA 152 Project Inspection Card;
- b. The Project has reached the Punch List items under Article 9.9.1.2 and the Project has been determined to be Substantially Complete under Article 1.1.46;
- c. Removal of temporary facilities and services;
- d. Testing, adjusting and balance records are complete;
- e. Removal of surplus materials, rubbish, and similar elements;
- f. Changeover of door locks;
- g. Deductive items pursuant to Article 9.6 and Article 2.2; and
- h. Completion and submission of all final Change Orders for the Project.

9.11.2 Final Inspection (Punch List Completion)

Contractor shall comply with Punch List procedures under Article 9.9.1.1, and maintain the presence of Project Superintendent and Project Manager (not replacement project superintendent or project manager) until the Punch List is complete to ensure proper and timely completion of the Punch List. Under no circumstances shall Contractor demobilize its forces prior to completion of the Punch List.

Upon completion of the Work under Article 9.9.1, the Contractor shall notify the District and Architect, who shall again inspect such Work. If the Architect and the District find the Work contained in the Punch List acceptable under the Contract Documents, the Work shall have reached Final Completion. Architect shall notify Contractor, who shall then submit to the Architect its Application for Retention Payment. This Application for Retention Payment shall contain any deductions under Article 9.6, including but not limited to incomplete Punch List items under Article 9.9.1.

Upon receipt and approval of Application for Retention Payment, the Architect shall issue a Form 6 stating that to the best of its knowledge, information, and belief, and on the basis of its

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observations, inspections, and all other data accumulated or received by the Architect in connection with the Work, such Work has been completed in accordance with the Contract Documents. The District shall thereupon inspect such Work and either accept the Work as complete or notify the Architect and the Contractor in writing of reasons why the Work is not complete. Upon acceptance of the Work of the Contractor as fully complete (which, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the District shall record a Notice of Completion with the County Recorder, and the Contractor shall, upon receipt of payment from the District, pay the amounts due Subcontractors.

If the Architect and the District find that the Work contained in the Punch List is unacceptable, then Contractor shall issue a valued Punch List within 5 days after the date the Punch List time ends. If Contractor does not issue such a list, the District or Architect may issue a valued Punch List to the Contractor and withhold up to 150% of the value of the Punch List Work pursuant to Article 2.2 of this Agreement.

9.11.3 Retainage (100% Billing for the Entire Project)

The retainage, less any amounts disputed by the District or which the District has the right to withhold pursuant to the Contract Documents (including but not limited to incomplete Punch List items under Article 9.9.1), shall be paid after approval by the District of the Application for Retention Payment, after the satisfaction of the conditions set forth in Article 9, the Final Inspection under Article 9.11.2 is completed, and after thirty-five (35) days after the acceptance of the Work and recording of the Notice of Completion by District. No interest shall be paid on any retainage, or on any amounts withheld due to a failure of the Contractor to perform, in accordance with the terms and conditions of the Contract Documents, except as provided to the contrary in any escrow agreement between the District and the Contractor.

- a. Procedures for Application for Retention Payment. The following conditions must be fulfilled prior to release of Retention Payment:
 1. A full and final waiver or release of all stop notices in connection with the Work shall be submitted by Contractor, including a release of stop notice in recordable form, together with (to the extent permitted by law) a copy of the full and final release of all Stop Notice rights.
 2. The Contractor shall have made all corrections, including all Punch List Items, to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of District required under the Contract Documents.
 3. Each Subcontractor shall have delivered to the Contractor all written guarantees, warranties, applications, releases from the Surety and warranty bonds (if applicable) required by the Contract Documents for its portion of the Work.

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4. Contractor must have completed all requirements set forth in Article 9.9
5. Contractor must have issued a Form 6C for the Project.
6. The Contractor shall have delivered to the District all manuals and materials required by the Contract Documents.
7. The Contractor shall have completed final clean up as required by Article 3.12
8. Contractor shall have all deductive items under Article 9.6 and Article 2.2 submitted as part of the Retention Payment.

9.11.4 Recording of a Notice of Completion After Punch List Period and Final Inspection.

When the Work, or designated portion thereof, is complete or the District has completed the Article 9.6 and/or the Article 2.2 process, whichever occurs first, the District will file either a Notice of Completion or a Notice of Completion noting valued Punch List items. Valued Punch List items will be deducted from the Retention Payment.

During the time when Work is being performed on the Punch List, the Project does not meet the definition of "Complete" under Public Contract Code section 7107(c)(1) even if there is "beneficial occupancy" of the Project since that has been no "cessation of labor" on the Project. Completion of Punch List under this Article is not "testing, startup, or commissioning by the public entity or its agent." In other words, the continuing Punch List Work is Contractor labor on the Project until each and every item of Punch List Work is complete or the time periods under Article 9.9.1 have expired.

9.11.5 Warranties

Warranties required by the Contract Documents shall commence on the date of Completion of the entire Work. Warranty periods DO NOT commence at Substantial Completion or when a particular Subcontractor work is complete. No additional charges, extras, Change Orders, or Claims may be sought for warranties commencing from the Notice of Completion.

District shall have the right to utilize equipment, test, and operate as necessary for acclimation, or testing without voiding or starting warranties. Taking beneficial occupancy shall not start warranties except in the case where the District agrees, in writing, that warranties shall commence running or where the District is taking phased occupancy of specific buildings or areas and completes separate Punch Lists as further addressed in Article 4.2.7.

9.11.6 Time for Submission of Application for Final Payment and Retention Payment (Unilateral Processing of Final and Retention Payment Application).

If Contractor submits a Final Payment Application which fails to include deductive items under Article 9.6, the District or Architect shall note this defective request for Final Payment Application. The Contractor shall be notified that specific deductive items shall be included in the Final Payment Application. If Contractor either continues to submit the Final Payment Application without deductive items under Article 9.6, or a period of 14 calendar days passes after Contractor is provided written notice of deductive items for inclusion in Final Payment Application, then District may either alter the Final

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Payment Application and recalculate the math on the Final Payment Application to address the Article 9.6 deductive items or process a unilateral Final Payment Application.

9.11.7 Unilateral Release of Retention

After the recordation of the Notice of Completion, or within sixty (60) days following the completion of the Punch List or the expiration of the time for completion of Punch List under Article 9.9.1, if Contractor does not make an Application for Release of Retention, the District may unilaterally release retention less any deducts under Article 9.6 and/or Article 2.2, withholds due to stop notices, or withholdings due to other defective Work on the Project. District may also choose to unilaterally release Retention after deduction of 150% of any disputed items, which may also include items under Article 9.6 and 2.2. If a deduction pursuant to Article 9.6 is made from Retention, a letter deducting specific valued items shall be considered a notice of Default under the terms of the Escrow Agreement.

9.12 SUBSTITUTION OF SECURITIES

The District will permit the substitution of securities in accordance with the provisions of Public Contract Code section 22300 as set forth in the form contained in the Bid Documents.

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ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 Contractor Responsibility

The Contractor shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of this Contract and shall take all necessary measures and be responsible for the proper care and protection of all materials delivered and Work performed until completion and final acceptance by the District. All Work shall be solely at the Contractor's risk, with the exception of damage to the Work caused by "acts of God" as defined in Public Contract Code section 7105(b)(2).

Contractor shall take, and require Subcontractor to take, all necessary precautions for safety of workers on the Work and shall comply with all applicable federal, state, local and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to premises where Work is being performed and to provide a safe and healthful place of employment. In addition to meeting all requirements of OSHA, Cal-OSHA, state, and local codes, Contractor shall furnish, erect and properly maintain at all times, as directed by District or Architect or required by conditions and progress of Work, all necessary safety devices, safeguards, construction canopies, signs, audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created by such features in the course of construction. Contractor shall designate a responsible member of its organization on the Work, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety and health of workers. The name and position of person so designated shall be reported to District by Contractor. Contractor shall correct any violations of safety laws, rules, orders, standards, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, such violation shall be corrected promptly.

10.1.2 Subcontractor Responsibility

Contractor shall require that Subcontractors participate in, and enforce, the safety and loss prevention programs established by the Contractor for the Project, which will cover all Work performed by the Contractor and its Subcontractors. Each Subcontractor shall designate a responsible member of its organization whose duties shall include loss and accident prevention, and who shall have the responsibility and full authority to enforce the program. This person shall attend meetings with the representatives of the various Subcontractors employed to ensure that all employees understand and comply with the programs.

10.1.3 Cooperation

All Subcontractors and material or equipment suppliers shall cooperate fully with Contractor, the District, and all insurance carriers and loss prevention engineers.

10.1.4 Accident Reports

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Subcontractors shall immediately, within two (2) days, report in writing to the Contractor all accidents whatsoever arising out of, or in connection with, the performance of the Work, whether on or off the Site, which caused death, personal injury, or property damage, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported within four (4) days by telephone or messenger. Contractor shall thereafter immediately, within two (2) days, report the facts in writing to the District and the Architect giving full details of the accident.

10.1.5 First-Aid Supplies at Site

The Contractor will provide and maintain at the Site first-aid supplies which complies with the current Occupational Safety and Health Regulations.

10.1.6 Material Safety Data Sheets and Compliance with Proposition 65

Contractor is required to have material safety data sheets available in a readily accessible place at the job site for any material requiring a material safety data sheet per the Federal "hazard communication" standard, or employees' "right-to-know law." The Contractor is also required to properly label any substance brought into the job site, and require that any person working with the material, or within the general area of the material, is informed of the hazards of the substance and follows proper handling and protection procedures.

Contractor is required to comply with the provisions of California Health and Safety Code section 25249, et seq., which requires the posting and giving of notice to persons who may be exposed to any chemical known to the State of California to cause cancer. The Contractor agrees to familiarize itself with the provisions of this Section, and to comply fully with its requirements.

10.1.7 Non-Utilization of Asbestos Material

NO ASBESTOS OR ASBESTOS-CONTAINING PRODUCTS SHALL BE USED IN THIS CONSTRUCTION OR IN ANY TOOLS, DEVICES, CLOTHING, OR EQUIPMENT USED TO EFFECT THIS CONSTRUCTION.

Asbestos and/or asbestos-containing products shall be defined as all items containing, but not limited to, chrysotile, amosite, anthophyllite, tremolite, and antinolite.

Any or all material containing greater than one-tenth of one percent (>.1%) asbestos shall be defined as asbestos-containing material.

All Work or materials found to contain asbestos or Work or material installed with asbestos-containing equipment will be immediately rejected and this Work will be removed at no additional cost to the District.

Decontamination and removal of Work found to contain asbestos or Work installed with asbestos-containing equipment shall be done only under supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by the Environmental Protection Agency.

The asbestos removal contractor shall be an EPA accredited contractor qualified in the removal of asbestos and shall be chosen and approved by the asbestos consultant, who shall have sole discretion and final determination in this matter.

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The asbestos consultant shall be chosen and approved by the District, who shall have sole discretion and final determination in this matter.

The Work will not be accepted until asbestos contamination is reduced to levels deemed acceptable by the asbestos consultant.

Interface of Work under this Contract with Work containing asbestos shall be executed by the Contractor at his risk and at his discretion, with full knowledge of the currently accepted standards, hazards, risks, and liabilities associated with asbestos work and asbestos-containing products. By execution of this Contract, the Contractor acknowledges the above and agrees to hold harmless District and its assigns for all asbestos liability which may be associated with this work and agrees to instruct his employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor

The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury, or loss to:

- a. Employees on the Work and other persons who may be affected thereby;
- b. The Work, material, and equipment to be incorporated therein, whether in storage on or off the Site, under the care, custody, or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- c. Other property at the Site or adjacent thereto such as trees, shrubs, lawns, walks, pavement, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

Contractor is constructive owner of Project site as more fully discussed in Article 6.2.

10.2.2 Contractor Notices

The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on the safety of persons or property or their protection from damage, injury, or loss.

10.2.3 Safety Barriers and Safeguards

The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.

10.2.4 Use or Storage of Hazardous Material

When use or storage of explosives, other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. The Contractor shall notify the District

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any time that explosives or hazardous materials are expected to be stored on Site. Location of storage shall be coordinated with the District and local fire authorities.

10.2.5 Protection of Work

The Contractor and Subcontractors shall continuously protect the Work, the District's property, and the property of others, from damage, injury, or loss arising in connection with operations under the Contract Documents. The Contractor and Subcontractors, at their own expense, shall make good any such damage, injury, or loss, except such as may be solely due to, or caused by, agents or employees of the District.

The Contractor, at Contractor's expense, will remove all mud, water, or other elements as may be required for the proper protection and prosecution of its Work.

Contractor shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property and structures (including, without limitation, protection from settlement or loss of lateral support), and to avoid damage thereto, and repair any damage thereto caused by construction operations. All permits, licenses, or inspection fees required for such repair Work shall be obtained and paid for by Contractor.

10.2.6 Requirements for Existing Sites

Contractor shall (unless waived by the District in writing):

- a. When performing construction on existing sites, become informed and take into specific account the maturity of the students on the Site; and perform Work which may interfere with school routine before or after school hours, enclose working area with a substantial barricade, and arrange Work to cause a minimum amount of inconvenience and danger to students and faculty in their regular school activities. The Contractor shall comply with Specifications and directives of the District regarding the timing of certain construction activities in order to avoid unnecessary interference with school functioning.
- b. Avoid performing any Work that will disturb students during testing.
- c. Provide substantial barricades around any shrubs or trees indicated to be preserved.
- d. Deliver materials to building area over route designated by Architect.
- e. Take preventive measures to eliminate objectionable dust, noise, or other disturbances.
- f. Confine apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits or directions of Architect; and not interfere with the Work or unreasonably encumber premises or overload any structure with materials; and enforce all instructions of District and Architect regarding signs, advertising, fires, and smoking and require that all workers comply with all regulations while on the Project site.
- g. Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are

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disturbed by accident, they shall be replaced by an approved land surveyor or civil engineer and all maps and records required therefrom shall be filed with county and local authorities, at no cost to the District. All filing and plan check fees shall be paid by Contractor.

- h. Provide District on request with Contractor's written safety program and safety plan for each site.

10.2.7 Shoring and Structural Loading

The Contractor shall not impose structural loading upon any part of the Work under construction or upon existing construction on or adjacent to the Site in excess of safe limits, or loading such as to result in damage to the structural, architectural, mechanical, electrical, or other components of the Work. The design of all temporary construction equipment and appliances used in construction of the Work and not a permanent part thereof, including, without limitation, hoisting equipment, cribbing, shoring, and temporary bracing of structural steel, is the sole responsibility of the Contractor. All such items shall conform with the requirements of governing codes and all laws, ordinances, rules, regulations, and orders of all authorities having jurisdiction. The Contractor shall take special precautions, such as shoring of masonry walls and temporary tie bracing of structural steel Work, to prevent possible wind damage during construction of the Work. The installation of such bracing or shoring shall not damage the Work in place or the Work installed by others. Any damage which does occur shall be promptly repaired by the Contractor at no cost to the District.

10.2.8 Conformance within Established Limits

The Contractor and Subcontractors shall confine their construction equipment, the storage of materials, and the operations of workers to the limits indicated by laws, ordinances, permits, and the limits established by the District or the Contractor, and shall not unreasonably encumber the premises with construction equipment or materials.

10.2.9 Subcontractor Enforcement of Rules

Subcontractors shall enforce the District's and the Contractor's instructions, laws, and regulations regarding signs, advertisements, fires, smoking, the presence of liquor, and the presence of firearms by any person at the Site.

10.2.10 Site Access

The Contractor and the Subcontractors shall use only those ingress and egress routes designated by the District, observe the boundaries of the Site designated by the District, park only in those areas designated by the District, which areas may be on or off the Site, and comply with any parking control program established by the District, such as furnishing license plate information and placing identifying stickers on vehicles.

10.2.11 Security Services.

The Contractor shall be responsible for providing security services for the Site as needed for the protection of the Site and as determined in the District's sole discretion.

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10.3 EMERGENCIES

10.3.1 Emergency Action

In an emergency affecting the safety of persons or property, the Contractor shall take any action necessary, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 7.

10.3.2 Accident Reports

The Contractor shall promptly report in writing to the District all accidents arising out of or in connection with the Work, which caused death, personal injury, or property damage, giving full details and statements of any witnesses in conformance with Article 10.1.4. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported in accordance with Article 10.1.4, immediately by telephone or messenger to the District.

10.4 HAZARDOUS MATERIALS

10.4.1 Discovery of Hazardous Materials

In the event the Contractor encounters or suspects the presence on the job site of material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or any other material defined as being hazardous by § 25249.5 of the California Health and Safety Code, which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the District and the Architect in writing, whether or not such material was generated by the Contractor or the District. The Work in the affected area shall not thereafter be resumed, except by written agreement of the District and the Contractor, if in fact the material is asbestos, polychlorinated biphenyl (PCB), or other hazardous material, and has not been rendered harmless. The Work in the affected area shall be resumed only in the absence of asbestos, polychlorinated biphenyl (PCB), or other hazardous material, or when it has been rendered harmless by written agreement of the District and the Contractor.

10.4.2 Hazardous Material Work Limitations

In the event that the presence of hazardous materials is suspected or discovered on the Site (except in cases where asbestos and other hazardous material Work in the Contractor's responsibility), the District shall retain an independent testing laboratory to determine the nature of the material encountered and whether corrective measures or remedial action is required. The Contractor shall not be required pursuant to Article 7 to perform without consent any Work in the affected area of the Site relating to asbestos, polychlorinated biphenyl (PCB), or other hazardous material, until any known or suspected hazardous material has been removed, or rendered harmless, or determined to be harmless by District, as certified by an independent testing laboratory and approved by the appropriate government agency.

10.4.3 Indemnification by Contractor for Hazardous Material Caused by Contractor

In the event the hazardous materials on the Project Site is caused by the Contractor, the Contractor shall pay for all costs of testing and remediation, if any, and shall compensate the District for any additional costs incurred as a result of Contractor's generation of hazardous material on the Project Site. In addition, the Contractor shall defend, indemnify and hold harmless District and its agents, officers,

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and employees from and against any and all claims, damages, losses, costs and expenses incurred in connection with, arising out of, or relating to, the presence of hazardous material on the Project Site.

10.4.4 Terms of Hazardous Material Provision

The terms of this Hazardous Material provision shall survive the completion of the Work and/or any termination of this Contract.

10.5 SITE SAFETY PLAN

10.5.1 Requirements

A condition precedent of receiving the Notice to Proceed (NTP), the Contractor must submit to the District a Site Safety Plan (SSP) in compliance with DSA Bulletin BU 24-05. At a minimum, the SSP shall include the following information required in California Fire Code (CFC) Section 3303.1.1

- Name and contact information of site safety director.
- Documentation of training of the site safety director and fire watch personnel.
- Procedures for reporting emergencies.
- Fire department vehicle access routes.
- Locations of fire protection equipment, including portable fire extinguishers, standpipes, fire department connections and fire hydrants.
- Smoking and cooking policies, designated areas to be used where approved, and signage locations in accordance with CFC Section 3305.8.
- Location and safety considerations for temporary heating equipment.
- Hot work (welding, roofing, etc.) plan.
- Plans for control of combustible waste.
- Locations and methods for storage and use of flammable and combustible liquids and other hazardous materials.
- Provisions of site security.
- Changes that affect this plan.
- Other site-specific information requested by the local fire authority (LFA).

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ARTICLE 11 INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

Refer to EXHIBIT A: Owner Controlled Insurance Program (OCIP)

11.2 WORKERS' COMPENSATION INSURANCE

Refer to EXHIBIT A: Owner Controlled Insurance Program (OCIP)

11.3 BUILDER'S RISK/ "ALL RISK" INSURANCE

Refer to EXHIBIT A: Owner Controlled Insurance Program (OCIP)

11.4 FIRE INSURANCE

Refer to EXHIBIT A: Owner Controlled Insurance Program (OCIP)

11.5 AUTOMOBILE LIABILITY

Refer to EXHIBIT A: Owner Controlled Insurance Program (OCIP)

11.6 OTHER INSURANCE

Refer to EXHIBIT A: Owner Controlled Insurance Program (OCIP)

11.7 PROOF OF INSURANCE

Refer to EXHIBIT A: Owner Controlled Insurance Program (OCIP)

11.8 COMPLIANCE

Refer to EXHIBIT A: Owner Controlled Insurance Program (OCIP)

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11.9 WAIVER OF SUBROGATION

Refer to EXHIBIT A: Owner Controlled Insurance Program (OCIP)

11.10 PERFORMANCE AND PAYMENT BONDS

11.10.1 Bond Requirements

Unless otherwise specified in the Supplemental Conditions, prior to commencing any portion of the Work, the Contractor shall furnish separate Payment and Performance Bonds for its portion of the Work which shall cover 100% faithful performance of and payment of all obligations arising under the Contract Documents and/or guaranteeing the payment in full of all claims for labor performed and materials supplied for the Work. All bonds shall be provided by a corporate Surety authorized and admitted to transact business in California as sureties.

To the extent, if any, that the Contract Price is increased in accordance with the Contract Documents, the Contractor shall, upon request of the District, cause the amount of the bonds to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the District. To the extent available, the bonds shall further provide that no change or alteration of the Contract Documents (including, without limitation, an increase in the Contract Price, as referred to above), extensions of time, or modifications of the time, terms, or conditions of payment to the Contractor will release the Surety. If the Contractor fails to furnish the required bonds, the District may terminate the Contract for cause.

11.10.2 Surety Qualification

Only bonds executed by admitted Surety insurers as defined in Code of Civil Procedure § 995.120 shall be accepted. Surety must be a California-admitted Surety and listed by the U.S. Treasury with a bonding capacity in excess of the Project cost.

11.10.3 Alternate Surety Qualifications

If a California-admitted Surety insurer issuing bonds does not meet these requirements, the insurer will be considered qualified if it is in conformance with § 995.660 of the California Code of Civil Procedure and proof of such is provided to the District.

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ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

12.1 COMPLIANCE WITH TITLE 24 INSTALLATION REQUIREMENTS

Contractor is aware of the requirements governing Contractor's Work under title 24 Section 4-343 which provides, in pertinent part:

4-343. Duties of the Contractor.

(a) **Responsibilities.** It is the duty of the contractor to complete the Work covered by his or her contract in accordance with the approved Plans and Specifications therefore. The contractor in no way is relieved of any responsibility by the activities of the architect, engineer, Inspector or DSA in the performance of such duties.

(b) **Performance of the Work.** The contractor shall carefully study the approved Plans and Specifications and shall plan a schedule of operations well ahead of time. If at any time it is discovered that Work is being done which is not in accordance with the approved Plans and Specifications, the contractor shall correct the Work immediately. All inconsistencies or items which appear to be in error in the Plans and Specifications shall be promptly called to the attention of the architect or registered engineer, through the Inspector, for interpretation or correction. In no case, however, shall the instruction of the architect or registered engineer be construed to cause Work to be done which is not in conformity with the approved Plans, Specifications, and Change Orders. The contractor must notify the Project Inspector, in advance, of the commencement of construction of each and every aspect of the Work.

12.1.1 Issuance of Notices of Non-Compliance

The Inspector may issue a Notice of Non-Compliance on the Project indicating deviation from Plans and Specifications. It is Contractor's responsibility to correct all deviations from the approved Plans and Specifications unless the District has issued an Immediate Change Directive. In such case, the Contractor shall proceed with the Work with the understandings of the District as set forth in the ICD and as specifically noted in Article 7.3.

12.2 SPECIAL NOTICE OF AMERICAN'S WITH DISABILITIES ACT

Some of the requirements in the Plans and Specifications are meant to comply with the Americans with Disabilities Act ("ADA"). The requirements of the ADA are technical in nature and may appear to be minor in nature (i.e. whether a walkway or ramp has a 2% cross-slope). Contractor is warned that even the slightest deviation from the specific requirements from the ADA is considered a Civil Rights violation and subjects the District to fines of three times actual damages sustained by a handicap individual or up to \$4,000 per violation and attorney's fees required to enforce the ADA violation. As a result of the significant liability and exposure associated with ADA aspects of the Contract, Contractor shall take special care to meet all ADA requirements detailed in the Plans and Specifications. Failure to comply with ADA rules that results in a Notice of Non-Compliance shall be repaired to meet ADA requirements promptly. In addition, any ADA violations that are not identified by Inspector or Architect that are later identified shall be repaired and charged back to the Contractor through a Deductive Change Order.

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12.2.1 Indemnification of ADA Claims

Contractor shall indemnify, hold harmless and defend the District from ADA claims arising from the failure to comply with the Plans and Specifications. Further, any withholdings for ADA violations under Article 9.6 shall include potential redesign costs and an accelerated repair costs due to the potential for ADA claims arising from DSA posting of ADA violations on the Project.

12.3 UNCOVERING OF WORK

12.3.1 Uncovering Work for Required Inspections

Work shall not be covered without the Inspector's review and the Architect's knowledge that the Work conforms with the requirements of the approved Plans and Specifications (except in the case of an ICD under Article 7.3). Inspector must be timely notified of inspections and of new areas so Work can be inspected at least 48 hours before opening a new area (For example, see DSA Form 156 for Commencement/Completion of Work Notification which requires "at least 48 hour" advance notification of a new area). An Inspector must comply with DSA protocols for signing each category or phase of Work under DSA Form 152 (in compliance with the Form 152 Manual) or a Notice of Deviation (DSA Form 154) will be issued requiring the Work that was not inspected be uncovered for inspection. Thus, if a portion of the Work is covered without inspection or Architect approval, is subject to a Notice of Non-Compliance for being undertaken without inspection, or otherwise not in compliance with the Contract Documents, after issuance of a Written Notice of Non-Compliance (Form 154) or a written notice to uncover Work, Contractor shall promptly uncover all Work (which includes furnishing all necessary facilities, labor, and material) for the Inspector's or the Architect's observation and such Work shall be replaced at the Contractor's expense without change in the Contract Sum or Time.

12.3.2 Costs for Inspections Not Required

If a portion of the Work has been covered is believed to be Non-Conforming to the Plans and Specifications, even if the Form 152 for the category of Work has been signed by the Inspector, the Inspector or the Architect may request to see such Work, and it shall be promptly uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncover and replacement shall, by appropriate Change Order and shall, be charged to the District. If such Work is not in accordance with Contract Documents, the Contractor shall be responsible for all costs to uncover the Work, delays incurred to uncover the Work, and Contractor shall pay all costs to correct the Non-Conforming construction condition unless the condition was caused by the District or a separate contractor, in which event the District shall be responsible for payment of such costs to the Contractor.

12.4 CORRECTION OF WORK

12.4.1 Correction of Rejected Work

The Contractor shall promptly correct the Work rejected by the Inspector or the District upon recommendation of the Architect as failing to conform to the requirements of the Contract Documents, whether observed before or after Completion and whether or not Fabricated, installed, or completed. The Contractor shall bear costs of correcting the rejected Work, including cost for delays that may be incurred by Contractor or Subcontractors, the cost for additional testing, inspections, and compensation for the Inspector's or the Architect's services and expenses made necessary thereby (including costs for preparing a CCD, DSA CCD review fees, and additional inspection and special inspection costs).

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12.4.2 One-Year Warranty Corrections

If, within one (1) year after the date of Completion of the Work or a designated portion thereof, or after the date for commencement of warranties established under Article 9.9.1, or by the terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the District to do so unless the District has previously given the Contractor a written acceptance of such condition. This period of one (1) year shall be extended with respect to portions of the Work first performed after Completion by the period of time between Completion and the actual performance of the Work. This obligation under this Article 12.4.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The District shall give such notice promptly after discovery of the condition.

12.4.3 District's Rights if Contractor Fails to Correct

If the Contractor fails to correct nonconforming Work within a reasonable time, the District may correct the Work and seek a Deductive Change Order, pursuant to Article 9.6 or Article 2.2.

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ARTICLE 13 MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located.

13.2 SUCCESSORS AND ASSIGNS

The District and the Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

13.3 WRITTEN NOTICE

In the absence of specific notice requirements in the Contract Documents, written notice shall be deemed to have been duly served if delivered in person to the individual, member of the firm or entity, or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES

13.4.1 Duties and Obligations Cumulative

Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

13.4.2 No Waiver

No action or failure to act by the Inspector, the District, or the Architect shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.5 TESTS AND INSPECTIONS

13.5.1 Compliance

Tests, inspections, and approvals of portions of the Work required by the Contract Documents will comply with Division 1, Title 24, and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction.

13.5.2 Independent Testing Laboratory

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The District will select and pay an independent testing laboratory to conduct all tests and inspections. Selection of the materials required to be tested shall be made by the laboratory or the District's representative and not by the Contractor. See Articles 3.13.1 and 4.3.6 regarding costs or expenses of inspection or testing outside of the Project Site.

13.5.3 Advance Notice to Inspector

The Contractor shall notify the Inspector a sufficient time in advance of its readiness for required observation or inspection so that the Inspector may arrange for same. The Contractor shall notify the Inspector a sufficient time in advance of the manufacture of material to be supplied under the Contract Documents which must, by terms of the Contract Documents, be tested in order that the Inspector may arrange for the testing of the material at the source of supply.

13.5.4 Testing Off-Site

Any material shipped by the Contractor from the source of supply, prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said Inspector that such testing and inspection will not be required, shall not be incorporated in the Work.

13.5.5 Additional Testing or Inspection

If the Inspector, the Architect, the District, or public authority having jurisdiction determines that portions of the Work require additional testing, inspection, or approval not included under Article 13.5.1, the Inspector will, upon written authorization from the District, make arrangements for such additional testing, inspection, or approval. The District shall bear such costs except as provided in Articles 13.5.6 and 13.5.7.

13.5.6 Costs for Retesting

If such procedures for testing, inspection, or approval under Articles 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs arising from such failure, including those of re-testing, re-inspection, or re-approval, including, but not limited to, compensation for the Architect's services and expenses. Any such costs shall be paid by the District, invoiced to the Contractor, and deducted from the next Progress Payment.

13.5.7 Costs for Premature Test

In the event the Contractor requests any test or inspection for the Project and is not completely ready for the inspection, the Contractor shall be invoiced by the District for all costs and expenses resulting from that testing or inspection, including, but not limited to, the Inspector's and Architect's fees and expenses, and the amount of the invoice shall be deducted from the next Progress Payment.

13.6 TRENCH EXCAVATION

13.6.1 Trenches Greater Than Five Feet

Pursuant to Labor Code section 6705, if the Contract Price exceeds \$25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, the Contractor shall, in advance of

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excavation, submit to the District or a registered civil or structural engineer employed by the District or Architect, a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

13.6.2 Excavation Safety

If such plan varies from the Shoring System Standards established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer, but in no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted by the District or by the person to whom authority to accept has been delegated by the District.

13.6.3 No Tort Liability of District

Pursuant to Labor Code § 6705, nothing in this Article shall impose tort liability upon the District or any of its employees.

13.6.4 No Excavation without Permits

The Contractor shall not commence any excavation Work until it has secured all necessary permits including the required CAL OSHA excavation/shoring permit. Any permits shall be prominently displayed on the Site prior to the commencement of any excavation.

13.7 WAGE RATES, TRAVEL, AND SUBSISTENCE

13.7.1 Wage Rates

Pursuant to the provisions of Article 2 (commencing at § 1720), Chapter 1, Part 7, Division 2, of the Labor Code, the District has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public works project is to be performed for each craft, classification, or type of worker needed for this Project from the Director of the Department of Industrial Relations (“Director”). These rates are on file at the administrative office of the District and are also available from the Director of the Department of Industrial Relations. Copies will be made available to any interested party on request. The Contractor shall post a copy of such wage rates at appropriate, conspicuous, weatherproof points at the Site.

Any worker employed to perform Work on the Project, but such Work is not covered by any classification listed in the published general prevailing wage rate determinations or per diem wages determined by the Director of the Department of Industrial Relations, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the employment of such person in such classification.

13.7.2 Holiday and Overtime Pay

Holiday and overtime work, when permitted by law, shall be paid for at the rate set forth in the prevailing wage rate determinations issued by the Director of the Department of Industrial Relations or at least one and one-half (1½) times the specified basic rate of per diem wages, plus employer payments, unless otherwise specified in the Contract Documents or authorized by law.

13.7.3 Wage Rates Not Affected by Subcontracts

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The Contractor shall pay and shall cause to be paid each worker engaged in the execution of the Work on the Project not less than the general prevailing rate of per diem wages determined by the Director, regardless of any contractual relationship which may be alleged to exist between the Contractor or any Subcontractor and such workers.

13.7.4 Per Diem Wages

The Contractor shall pay and shall cause to be paid to each worker needed to execute the Work on the Project per diem wages including, but not limited to, employer payments for health and welfare, pensions, vacation, travel time and subsistence pay as provided for in Labor Code §1773.1.

13.7.5 Forfeiture and Payments

Pursuant to Labor Code §1775, the Contractor shall forfeit to the District, not more than Two Hundred Dollars (\$200.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing wages rates as determined by the Director of the Department of Industrial Relations, for the work or craft in which the worker is employed for any Work done under the Agreement by the Contractor or by any Subcontractor under it. The amount of the penalty shall be determined by the Labor Commissioner and shall be based on consideration of: (1) whether the Contractor or Subcontractor's failure to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected upon being brought to the attention of the Contractor or Subcontractor; and (2) whether the Contractor or Subcontractor has a prior record of failing to meet its prevailing wage obligations.

13.7.6 Monitoring and Enforcement by Labor Commissioner

Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE). The Contractor and all subcontractors shall be required to furnish, at least "monthly" as defined by Labor Code section 1771.4(a)(3)(A)(i), certified payroll records directly to the Labor Commissioner in accordance with Labor Code section 1771.4. All payroll records shall be furnished in an electronic format and in the manner required by the Labor Commissioner. The Contractor and all subcontractors must sign up for, and utilize, the Labor Commissioner's electronic certified payroll records submission system. The District will have direct and immediate access to all CPRs for the Project that are submitted through the Labor Commissioner's system. The District can use this information for any appropriate purpose, including monitoring compliance, identifying suspected violations, and responding to Public Records Act requests.

The Labor Commissioner/ DLSE may conduct various compliance monitoring and enforcement activities including, but not limited to, confirming the accuracy of payroll records, conducting worker interviews, conducting audits, requiring submission of itemized statements prepared in accordance with Labor Code section 226, and conducting random in-person inspections of the Project site ("On-Site Visits"). On-Site Visits may include inspections of records, inspections of the Work site and observation of work activities, interviews of workers and others involved with the Project, and any other activities deemed necessary by the Labor Commissioner/DLSE to ensure compliance with prevailing wage requirements. The Labor Commissioner/DLSE shall have free access to any construction site or other place of labor and may obtain any information or statistics pertaining to the lawful duties of the Labor Commissioner/DLSE.

Any lawful activities conducted or any requests made by the Labor Commissioner/DLSE shall not be the basis for any delays, claims, costs, damages or liability of any kind against the District by

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the Contractor. Contractor and all subcontractors shall cooperate and comply with any lawful requests by the Labor Commissioner/ DLSE. The failure of the Labor Commissioner, DLSE, or any other entity related to the Department of Industrial Relations to comply with any requirement imposed by the California Code of Regulations, Title 8, Chapter 8 shall not of itself constitute a defense to the failure to pay prevailing wages or to comply with any other obligation imposed by Division 2, Part 7, Chapter 1 of the Labor Code.

Prior to commencing any Work on the Project, the Contractor shall post the required notice/poster required under the California Code of Regulations and Labor Code section 1771.4 in both English and Spanish at a conspicuous, weatherproof area at the Project site. The required notice/poster is available on the Labor Commissioner's website.

13.8 RECORDS OF WAGES PAID

13.8.1 Payroll Records

- a. Pursuant to §1776 of the Labor Code, the Contractor and each Subcontractor shall keep an accurate payroll record showing the name, address, social security number, work classification and straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed by him or her in connection with the Project.
- b. All payroll records, as specified in Labor Code §1776, of the Contractor and all Subcontractors shall be certified and furnished directly to the Labor Commissioner in accordance with Labor Code §1771.4(a)(3) once every thirty (30) days while Work is being performed on the Project and within thirty (30) days after the final day of Work performed on the Project (or more frequently if required by the District or the Labor Commissioner). The Contractor and all Subcontractors shall submit their own payroll records to the Labor Commissioner on the internet website of the Department of Industrial Relations and such payroll records shall be in an electronic format prescribed by the Labor Commissioner. Pursuant to Labor Code §1771.4(a)(3)(B), the Contractor and any Subcontractor who fails to furnish payroll records in accordance with Labor Code §1771.4(a)(3), relating to their own employees, shall be subject to a penalty by the Labor Commissioner. The amount of the penalty shall be One Hundred Dollars (\$100.00) for each calendar day in which such party is in violation of Labor Code §1771.4(a)(3), not to exceed a total penalty of Five Thousand Dollars (\$5,000.00) per project. Payroll records as specified in Labor Code §1776 shall also be certified and submitted to the District with each application for payment.

All payroll records shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:

1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.
2. A certified copy of all payroll records shall be made available for inspection or furnished upon request to a representative of District, the

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Division of Labor Standards Enforcement or the Division of Apprenticeship Standards of the Department of Industrial Relations.

3. A certified copy of all payroll records shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to Paragraph (2) above, the requesting party shall, prior to being provided the records, reimburse the costs, according to law for the preparation by the Contractor, Subcontractor(s), and the entity through which the request was made. The public shall not be given access to such records at the principal office of the Contractor.
- c. The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the Division of Labor Standards Enforcement.
- d. The Contractor or Subcontractor(s) shall file a certified copy of all payroll records with the entity that requested such records within 10 calendar days after receipt of a written request.
- e. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or the Subcontractor(s) performing the Contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (Section 175a of Title 29 of the United States Code) shall be marked or obliterated only to prevent disclosure of an individual's name and social security number. Notwithstanding any other provision of law, agencies that are included in the Joint Enforcement Strike Force on the Underground Economy established pursuant to Section 329 of the Unemployment Insurance Code and other law enforcement agencies investigating violations of law shall, upon request, be provided non-redacted copies of certified payroll records.
- f. The Contractor shall inform the District of the location of all payroll records, including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.
- g. The Contractor or Subcontractor(s) shall have 10 calendar days in which to comply subsequent to receipt of a written notice requesting payroll records. In the event that the Contractor or Subcontractor(s) fails to comply within the 10-day period, the Contractor or Subcontractor(s) shall, as a penalty to the District, forfeit One Hundred Dollars (\$100.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of

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Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

Responsibility for compliance with this Article shall rest upon the Contractor.

13.8.2 Withholding of Contract Payments & Penalties

The District may withhold or delay contract payments to the Contractor and/or any Subcontractor if:

- a. The required prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations is not paid to all workers employed on the Project; or
- b. The Contractor or Subcontractor(s) fail to submit all required certified payroll records to the Labor Commissioner in accordance with Labor Code §1771.4(a)(3); or
- c. The Contractor or Subcontractor(s) fail to submit all required certified payroll records with each application for payment, but not less than once per month; or
- d. The Contractor or Subcontractor(s) submit incomplete or inadequate payroll records; or
- e. The Contractor or Subcontractor(s) fail to comply with the Labor Code requirements concerning apprentices; or
- f. The Contractor or Subcontractor(s) fail to comply with any applicable state laws governing workers on public works projects.

13.9 APPRENTICES

13.9.1 Apprentice Wages and Definitions

All apprentices employed by the Contractor to perform services under the Contract shall be paid the standard wage paid to apprentices under the regulations of the craft or trade for which he or she is employed, and as determined by the Director of the Department of Industrial Relations, and shall be employed only at the craft or trade to which he or she is registered. Only apprentices, as defined in §3077 of the Labor Code, who are in training under apprenticeship standards that have been approved by the Chief of the Division of Apprenticeship Standards and who are parties to written apprenticeship agreements under Chapter 4 (commencing with §3070) of Division 3, are eligible to be employed under this Contract. The employment and training of each apprentice shall be in accordance with the apprenticeship standards and apprentice agreements under which he or she is training, or in accordance with the rules and regulations of the California Apprenticeship Council.

13.9.2 Employment of Apprentices

Contractor agrees to comply with the requirements of Labor Code §1777.5. The Contractor awarded the Project, or any Subcontractor under him or her, when performing any of the Work under the Contract or subcontract, employs workers in any apprenticeable craft or trade, the Contractor and

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Subcontractor shall employ apprentices in the ratio set forth in Labor Code §1777.5. The Contractor or any Subcontractor must apply to any apprenticeship program in the craft or trade that can provide apprentices to the Project site for a certificate approving the contractor or subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected. However, the decision of the apprenticeship program to approve or deny a certificate shall be subject to review by the Administrator of Apprenticeship. The apprenticeship program or programs, upon approving the Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or Subcontractor upon the Contractor's or Subcontractor's request. "Apprenticeable craft or trade" as used in this Article means a craft or trade determined as an apprenticeable occupation in accordance with the rules and regulations prescribed by the California Apprenticeship Council. The ratio of work performed by apprentices to journeyman employed in a particular craft or trade on the Project shall be in accordance with Labor Code §1777.5.

13.9.3 Submission of Contract Information

Prior to commencing Work on the Project, the Contractor and Subcontractors shall submit contract award information to the applicable apprenticeship program(s) that can supply apprentices to the Project and make the request for the dispatch of apprentices in accordance with the Labor Code. The information submitted shall include an estimate of journeyman hours to be performed under the Contract, the number of apprentices proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to the District if requested. Within 60 days after concluding Work on the Project, the Contractor and Subcontractors shall submit to the District, if requested, and to the apprenticeship program a verified statement of the journeyman and apprentice hours performed on the Project.

13.9.4 Apprentice Fund

The Contractor or any Subcontractor under him or her, who, in performing any of the Work under the Contract, employs journeymen or apprentices in any apprenticeable craft or trade shall contribute to the California Apprenticeship Council the same amount that the Director determines is the prevailing amount of apprenticeship training contributions in the area of the Project. The Contractor and Subcontractors may take as a credit for payments to the California Apprenticeship Council any amounts paid by the Contractor or Subcontractor to an approved apprenticeship program that can supply apprentices to the Project. The Contractor and Subcontractors may add the amount of the contributions in computing his or her bid for the Contract.

13.9.5 Prime Contractor Compliance

The responsibility of compliance with Article 13 and §1777.5 of the Labor Code for all apprenticeable occupations is with the Prime Contractor. Any Contractor or Subcontractor that knowingly violates the provisions of this Article or Labor Code §1777.5 shall be subject to the penalties set forth in Labor Code §1777.7.

13.10 ASSIGNMENT OF ANTITRUST CLAIMS

13.10.1 Application

Pursuant to Government Code § 4551, in entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor or

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Subcontractor offers and agrees to assign to the District all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act, (15 U.S.C. § 15) or under the Cartwright Act (Chapter 2 [commencing with § 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from the purchase of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders Retention Payment to the Contractor, without further acknowledgment by the parties. If the District receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Chapter 11 (commencing with § 4550) of Division 5 of Title 1 of the Government Code, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the District any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the District as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

13.10.2 Assignment of Claim

Upon demand in writing by the assignor, the District shall, within one (1) year from such demand, reassign the cause of action assigned pursuant to this Article if the assignor has been or may have been injured by the violation of law for which the cause of action arose and the District has not been injured thereby or the District declines to file a court action for the cause of action.

13.11 STATE AND DISTRICT CONDUCTED AUDITS

Pursuant to and in accordance with the provisions of Government Code § 10532, or any amendments thereto, all books, records, and files of the District, the Contractor, or any Subcontractor connected with the performance of this Contract involving the expenditure of state funds in excess of Ten Thousand Dollars (\$10,000.00), including, but not limited to, the administration thereof, shall be subject to the examination and audit of the Office of the Auditor General of the State of California for a period of five (5) years after Retention Payment is made or a Notice of Completion is Recorded, whichever occurs first. Contractor shall preserve and cause to be preserved such books, records, hard drives, electronic media, and files for the audit period.

Pursuant to the remedies under Public Contract Code section 9201 and Government Code section 930.2, Contractor, through execution of this Agreement, also agrees the District shall have the right to review and audit, upon reasonable notice, the books and records of the Contractor concerning any monies associated with the Project. The purpose of this "Audit" is to quickly and efficiently resolve Disputes or Claims based on the actual costs incurred and to reduce the uncertainty in resolving Disputes or Claims with limited information. The District shall perform any audits at its own cost and any such audit shall be performed by an independent auditor, having no direct or indirect relationship with the functions or activities being audited or with the business conducted by the Contractor or District. In the event the independent auditor determines that Change Orders, response to Request for Proposals, Disputes, Claims, or other requests for payment are in error, or have has any other concerns or questions, the Auditor shall report the results of the Audit findings to the District and provide a copy to the Contractor after giving the District Board the opportunity for at least 10 days review. If the Contractor disputes the findings of the independent auditor, such dispute shall be handled in the manner set forth under Article 4.6.2.

If Contractor having agreed to the terms of this Contract fails to produce books or records requested by Auditor, such failure to produce books or records that were required to be preserved for audit, it shall be presumed that the information contained in the withheld books or records were unfavorable to the Contractor and the Auditor shall note this refusal in the results of the Audit findings for further

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evaluation by the District and the District's Board. The refusal to release records that are concerning monies associated with the Project may be used as a grounds to debar the Contractor under Article 15 for failure to preserve records under Article 13.11 and the failure to produce required audit records may also be used as a grounds for a negative finding against the Contractor depending on the significance of the records that are withheld by Contractor. Failure to produce job cost data tied to job cost categories and budgets shall be presumed an intentional failure to produce key audit records. Similarly, failure to produce Daily Reports (prepared at or near the time of the Work actually took place (See Article 3.16) shall be presumed an intentional failure to produce key audited records.

If Contractor is seeking costs for inefficiency, home office overhead, or unanticipated increased costs due to delays or acceleration, Contractor shall also produce copies of the original bid tabulation utilized in submitting Contractor's bid for the Project. This document shall be considered confidential and shall not be subject to disclosure through a Public Records Act and shall not be distributed to anyone other than the District and the District's counsel. This bid tabulation shall only be used in litigation, arbitration, evaluation of Claims or Disputes, Audit, and trial. If the records for the bid tabulation are kept on a computer, the Contractor shall also produce all metadata (in native format) that accompanies the bid tabulation for inspection to prove the authenticity of the underlying bid tabulation. Failure to produce the bid tabulation for review of inefficiency, home office overhead, or unanticipated increased costs due to delays or accelerations shall be considered material evidence that the bid tabulation was not favorable to the Contractor. This evidence shall be entered as a jury instruction for trial that the bid tabulation was not produced and the bid tabulation information was unfavorable to the Contractor. The evidence may also be used in debarment proceedings, and noted as an exception to an Audit findings.

Upon notification of Contractor concerning the results of the audit and a reasonable time has passed for Contractor to respond to the Audit findings and if either there is no Dispute of the Audit findings under Article 4.6 or if the result after utilizing the Disputes Clause confirms the Audit findings, the District may seek reimbursement for overstated Disputes, Claims, or Change Orders and may also undertake debarment proceedings under Article 15 of these General Conditions.

13.12 STORM WATER POLLUTION PREVENTION

13.12.1 Application

This Section addresses the preparation, implementation and monitoring of a Storm Water Pollution Prevention Plan (SWPPP) for the purpose of preventing the discharge of pollutants from the construction site. This includes the elimination of pollution discharges such as improper dumping, spills or leakage from storage tanks or transfer areas. The District will not issue a Notice to Proceed until Contractor has prepared by a qualified individual and obtained approval of the Permit Registration Documents ("PRDs") that include a Notice of Intent, Construction Risk Calculation, Site Map, SWPPP, Annual Fee and any additional required documents from all applicable Local Governing Agencies including the Regional Water Quality Control Board. The Contractor shall also secure a certification that the Project has met all of the conditions of the General Construction Activity Storm Water Permit (GCASP) and comply with all applicable local, state and federal regulations governing storm water pollution prevention.

13.12.2 References and Materials

- California Stormwater Quality Association New Development and Redevelopment Best Management Practice Handbook

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- 2009 California Stormwater Quality Association Construction BMP Handbook .
- State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbing Activities. Available on-line at:
- http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.- Use materials of a class, grade and type needed to meet the performance described in the BMP Handbook.

13.12.3 Preparation and Approval

The Contractor shall prepare by a qualified individual the PRDs that include a Notice of Intent, Construction Risk Calculation, Site Map, SWPPP, Annual Fee and any additional required documents. The Contractor's Qualified SWPPP Developer ("QSD") shall prepare the Storm Water Pollution Prevention Plan (SWPPP) as required to comply with storm water pollution regulations for project sites with storm water discharges associated with construction activity such as clearing or demolition, grading, excavation and other land disturbances. The SWPPP shall apply to all areas that are directly related to construction activity, including but not limited to staging areas, storage yards, material borrow areas, and access roads.

13.12.3.1 The Contractor shall prepare and submit to the Local Governing Agencies and the District the SWPPP for review and approval if the project sites, new or existing, with land disturbance of 1 or more acres (or less than 1 acres if part of a common plan of development); the construction activity that results in land surface disturbances of less than one acre is part of a larger common plan of development or sale of one or more acres of disturbed land surface; or the construction activity associated with Linear Underground/Overhead Projects ("LUPs") including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

13.12.3.2 The Contractor shall also pay annual renewal fee(s) until the contract is completed and make all such checks payable to the State Water Resources Control Board. The Notice of Intent must be submitted at least two weeks prior to the commencement of construction activities.

13.12.3.3 The Contractor shall prepare the SWPPP by following the format in Sections 2, 3, 4 and Appendices A through F of the California Stormwater BMP Handbook - Construction, January 2009 edition, published by the California Stormwater Quality Association. The publication is available from:

California Stormwater
Quality Association
P.O. Box 2105
Menlo Park, CA 94026-2105
Phone: (650) 366-1042
E-mail: info@casqa.org

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or

<https://www.casqa.org/store/products/tabid/154/p-167-construction-handbookportal-initial-subscription.aspx>

13.12.3.4 Where land disturbance is less than 1 acre, any BMPs indicated in the BMP Handbook needed to prevent or minimize storm water pollution shall be implemented at no extra cost to the District.

13.12.3.5 Within two weeks after Award of Contract by the District, the Contractor shall submit to the District's Civil Engineer one copy of the PRDs including the SWPPP for review. After the District's approval, the Contractor shall provide approved copies of the SWPPP as follows: one copy each to the Project Inspector, Construction Manager, Architect, Commissioned Architect and District's Civil Engineer.

13.12.4 Implementation

The Contractor shall implement the Storm Water Pollution Prevention Plan by doing the following:

- a. Obtain a Waste Discharger Identification (WDID) number from the SWRCB before beginning construction. This number will be issued once your PRDs are administratively accepted and fee is received.
- b. Keep the SWPPP, REAPs, monitoring data on the construction site.
- c. Employ a Qualified SWPPP Practitioner (QSP) to implement the SWPPP during construction and develop Rain Event Action Plans ("REAPs").
- d. Install, inspect, maintain and monitor BMPs required by the General Permit.
- e. Install perimeter controls prior to starting other construction work at the site.
- f. Contain on-site storm water at the jobsite. Do not drain on-site water directly into the storm drain.
- g. Implement the SWPPP.
- h. Provide SWPPP and BMP implementation training for those responsible for implementing the SWPPP.
- i. Designate trained personnel for the proper implementation of the SWPPP.
- j. Conduct monitoring, as required, and assess compliance with the Numeric Action Levels (NALs) or Numeric Effluent Limitations (NELs) appropriate to your project.
- k. Report monitoring data:

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1. Maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed.
 2. Have a QSD revise the SWPPP as needed to reflect the phases of construction and to suit changing site conditions and instances when properly installed systems are ineffective.
 3. Assist the District with entering any necessary data or information into the Stormwater Multi-Application and Reporting System (“SMARTS”) system.
1. At the end of Construction Contract:
1. Submit Notice of Termination (NOT) into the SMARTS when construction is complete and conditions of termination listed in the NOT have been satisfied. A copy of the NOT can be found at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.
 2. Leave in place storm water pollution prevention controls needed for post-construction storm water management and remove those that are not needed as determined by the District. Thereafter, left-in-place controls will be maintained by the District.
 3. Provide Site Monitoring Reports, SWPPP revisions, Compliance Certifications and related documents to the District. Post-construction storm water operation and management plan as mentioned in the compliance certifications are considered to be in place at the end of the Construction Contract.

13.12.5 Monitoring

The Contractor shall conduct examination of storm water pollution prevention controls as required by the State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbing Activities. This includes properly qualified personnel performing all required monitoring, testing, inspections and monitoring. The Contractor shall also conduct examination of storm water pollution prevention controls, as well as before and after each storm event in compliance with the State Water Resources Control Board Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities (General Permit) (SWRCB, 2009).and at least once each 24-hour period during extended storm events to identify BMP effectiveness and implement repairs or BMP changes as soon as feasible. All maintenance related to a storm event should be completed within 48 hours of the storm event. The Contractor shall also prepare and maintain, at the jobsite, a log of each inspection using Site Monitoring Report forms.

13.12.6 Liabilities and Penalties

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- a. Review of the SWPPP and inspection logs by the District shall not relieve the Contractor from liabilities arising from non-compliance with storm water pollution regulations.
- b. Payment of penalties for non-compliance by the Contractor shall be the sole responsibility of the Contractor and will not be reimbursed by the District.
- c. Compliance with the Clean Water Act pertaining to construction activity is the sole responsibility of the Contractor. For any fine(s) levied against the District due to non-compliance by the Contractor, the District will deduct from the final payment due the Contractor the total amount of the fine(s) levied on the District, plus legal and associated costs.
- d. The Contractor shall submit to the District a completed NOI for change of information (Construction Site Information and Material Handling/Management Practices).

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ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR FOR CAUSE

14.1.1 Grounds for Termination

The Contractor may terminate the Contract if the Work is stopped for a period of thirty (30) consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons performing portions of the Work for whom the Contractor is contractually responsible, for only the following reasons:

- a. Issuance of an order of a court or other public authority having jurisdiction; or
- b. An act of the United State or California government, such as a declaration of national emergency.

14.1.2 Notice of Termination

If one of the above reasons exists, the Contractor may, upon written notice of seven (7) additional days to the District, terminate the Contract and recover from the District payment for Work executed and for reasonable costs verified by the Architect with respect to materials, equipment, tools, construction equipment, and machinery, including reasonable overhead, profit, and damages.

14.2 TERMINATION BY THE DISTRICT FOR CAUSE

14.2.1 Grounds for Termination

The District may terminate the Contractor and/or this Contract for the following reasons:

- a. Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- b. Persistently or repeatedly is absent, without excuse, from the job site;
- c. Fails to make payment to Subcontractors, suppliers, materialmen, etc.;
- d. Persistently disregards laws, ordinances, rules, regulations, or orders of a public authority having jurisdiction;
- e. Fails to provide a schedule or fails or refuses to update schedules required under the Contract;
- f. Falls behind on the Project and refuses or fails to undertake a Recovery Schedule;
- g. If the Contractor has been debarred from performing Work

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- h. Becomes bankrupt or insolvent, including the filing of a general assignment for the benefit of creditors; or
- i. Otherwise is in substantial breach of a provision of the Contract Documents.

14.2.2 Notification of Termination

When any of the above reasons exist, the District may, without prejudice to any other rights or remedies of the District and after giving the Contractor and the Contractor's Surety written notice of seven (7) days, terminate the Contractor and/or this Contract and may, subject to any prior rights of the Surety:

- a. Take possession of the Project and of all material, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- b. Accept assignment of Subcontracts. Contractor acknowledges and agrees that if the District (in its sole and absolute discretion) decides to takeover completion of the Project, the Contractor agrees to immediately assign all subcontracts to the District which the District has chosen to accept;
- c. Complete the Work by any reasonable method the District may deem expedient, including contracting with a replacement contractor or contractors; and,
- d. Agree to accept a takeover and completion arrangement with Surety that is acceptable to the District Board.

14.2.3 Takeover and Completion of Work after Termination for Cause

A Termination for Cause is an urgent matter which requires immediate remediation since Project Work is open and incomplete, the site is subject to vandalism and theft, the Project site is considered a public nuisance, and there is a possibility of injury and deterioration of the Project Work and materials. Thus, the District shall be entitled to enter a takeover contract to either remediate the unfinished condition or complete the Work for this Project.

14.2.4 Payments Withheld

If the District terminates the Contract for one of the reasons stated in Article 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is complete. All costs associated with the termination and completion of the Project shall be the responsibility of the Contractor and/or its Surety.

14.2.5 Payments upon Completion

If the unpaid balance of the Contract Sum exceeds costs of completing the Work, including compensation for professional services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor and its Surety shall pay the difference to the District. The amount to be paid to the Contractor, or District, as the case may be, shall be certified by the Architect upon application. This payment obligation shall survive completion of the Contract.

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14.2.6 Conversion of Termination Upon Determination by Any Court or Other Tribunal

In the event the Contract or Contractor's performance of the Contract is terminated under Article 14.2, and it is finally determined by an arbitrator, court, jury or other tribunal having jurisdiction, for any reason, that the Contractor was not in default under the provisions hereof, or that the District's exercise of its rights under Article 14.2 was defective, deficient, ineffective, invalid or improper for any reason, the termination shall be deemed a Termination for Convenience by the District and thereupon, the rights and obligations of the District and the Contractor shall be determined in accordance with Article 14.3 .1 hereof.

14.3 TERMINATION OF CONTRACT BY DISTRICT (CONTRACTOR NOT AT FAULT)

14.3.1 Termination for Convenience

District may terminate the Contract upon fifteen (15) calendar days of written notice to the Contractor and use any reasonable method the District deems expedient to complete the Project, including contracting with replacement contractor or contractors, if it is found that reasons beyond the control of either the District or Contractor make it impossible or against the District's interest to complete the Project. In such a case, the Contractor shall have no Claims against the District except for: (1) the actual cost for approved labor, materials, and services performed in accordance with the Contract Documents which have not otherwise been previously paid for and which are supported and documented through timesheets, invoices, receipts, or otherwise; and (2) profit and overhead of ten percent (10%) of the approved costs in item (1); and (3) termination cost of five percent (5%) of the approved costs in item (1). Contractor acknowledges and agrees that if the District (in its sole and absolute discretion) decides to takeover completion of the Project, the Contractor agrees to immediately assign all subcontracts to the District which the District has chosen to accept.

14.3.2 Non-Appropriation of Funds/ Insufficient Funds

In the event that sufficient funds are not appropriated to complete the Project or the District determines that sufficient funds are not available to complete the Project, District may terminate or suspend the completion of the Project at any time by giving written notice to the Contractor. In the event that the District exercises this option, the District shall pay for any and all work and materials completed or delivered onto the site for which value is received, and the value of any and all work then in progress and orders actually placed which cannot be canceled up to the date of notice of termination. The value of work and materials not otherwise already paid for by the District up to the time of termination under this Paragraph shall include a factor of fifteen percent (15%) for the Contractor's overhead and profit and there shall be no other costs or expenses paid to Contractor. All work, materials and orders paid for pursuant to this provision shall become the property of the District. District may, without cause, order Contractor in writing to suspend, delay or interrupt the Project in whole or in part for such period of time as District may determine. Adjustment shall be made for increases in the cost of performance of the Agreement caused by suspense, delay or interruption.

14.4 REMEDIES OTHER THAN TERMINATION

If a default occurs, the District may, without prejudice to any other right or remedy, including, without limitation, its right to terminate the Contract pursuant to Article 14.2, do any of the following:

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- a. Permit the Contractor to continue under this Contract, but make good such deficiencies or complete the Contract by whatever method the District may deem expedient, and the cost and expense thereof shall be deducted from the Contract Price or paid by the Contractor to the District on demand;
- b. If the workmanship performed by the Contractor is faulty or defective materials are provided, erected or installed, then the District may order the Contractor to remove the faulty workmanship or defective materials and to replace the same with work or materials that conform to the Contract Documents, in which event the Contractor, at its sole costs and expense, shall proceed in accordance with the District's order and complete the same within the time period given by the District in its notice to the Contractor; or
- c. Initiate procedures to declare the Contractor a non-responsible bidder for a period of two (2) to five (5) years thereafter.

All amounts expended by the District in connection with the exercise of its rights hereunder shall accrue interest from the date expended until paid to the District at the maximum legal rate. The District may retain or withhold any such amounts from the Contract Price. If the Contractor is ordered to replace any faulty workmanship or defective materials pursuant to Paragraph (b) above, the Contractor shall replace the same with new work or materials approved by the Architect and the District, and, at its own cost, shall repair or replace, in a manner and to the extent the Architect and the District shall direct, all Work or material that is damaged, injured or destroyed by the removal of said faulty workmanship or defective material, or by the replacement of the same with acceptable work or materials. In no event shall anything in this Article be deemed to constitute a waiver by the District of any other rights or remedies that it may have at law or in equity, it being acknowledged and agreed by the Contractor that the remedies set forth in this Article are in addition to, and not in lieu of, any other rights or remedies that the District may have at law or in equity.

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ARTICLE 15 DEBARMENT

15.1 DEBARMENT MEANS THERE HAS BEEN A FINDING THAT THE CONTRACTOR IS NOT RESPONSIBLE.

During the course of the Project, or if it is determined through Change Orders, Claims, or Audit that a Contractor is not responsible, the District may, in addition to other remedies provided in the Contract, debar the Contractor from bidding or proposing on, or being awarded, and/or performing work on District contracts for a specified period of time, which generally will not exceed five (5) years, but may exceed five (5) years or be permanent if the circumstances warrant such debarment. In addition to the debarment proceeding, a finding that a Contractor is to be debarred shall result in the termination of any or all existing Contracts the Contractor may have with the District.

15.2 BOARD FINDING

The District may debar a Contractor if the Board, or the Board's delegatee, in its discretion, finds the Contractor has done any of the following:

15.2.1 Intentionally or with reckless disregard, violated any term of the Contract with the District

15.2.2 Committed an acts or omission which reflects on the Contractor's quality, fitness or capacity to perform Work for the District;

15.2.3 Committed an act or offense which indicates a lack of business integrity or business honesty; or,

15.2.4 Made or submitted a false claim against the District or any other public entity.

15.3 HEARING AND PRESENTATION OF EVIDENCE

If there is evidence that the Contractor may be subject to debarment, the District shall notify the Contractor in writing of the evidence which is the basis for the proposed debarment and shall advise the Contractor of the scheduled date for a debarment hearing before the District Board or its delegated designee.

The District Board, or designee, shall conduct a hearing where evidence on the proposed debarment is presented. The Contractor or the Contractor's representative shall be given an opportunity to submit evidence at the hearing. The Contractor shall be provided an adequate amount of time to prepare and object to evidence presented. A tentative proposed decision shall be issued as a tentative decision and the District shall be entitled to modify, deny or adopt the proposed decision. The proposed decision shall contain a recommendation regarding whether the Contractor should be debarred, and, if so, the appropriate length of time of the debarment. The Contractor and the District shall be provided an opportunity to object to the tentative proposed decision for a period of 15 days. If additional evidence is presented, the District shall evaluate this evidence and either issue an amended ruling, issue the same ruling, or call a further hearing.

If a Contractor has been debarred for a period of longer than five (5) years, that Contractor may after the debarment has been in effect for at least five (5) years, submit a written request for review of the debarment determination to reduce the period of debarment or terminate the debarment. The District may,

GENERAL CONDITIONS

in its discretion, reduce the period of debarment or terminate the debarment if it finds that the Contractor has adequately demonstrated one or more of the following: (1) elimination of the grounds for which the debarment was imposed; (2) a bona fide change in ownership or management; (3) material evidence discovered after debarment was imposed; or (4) any other reason that is in the best interests of the District.

The District will consider a request for review of a debarment determination only where: (1) the Contractor has been debarred for a period longer than five (5) years; (2) the debarment has been in effect for at least five (5) years; and (3) the request is in writing, states one or more of the grounds for reduction of the debarment period or termination of the debarment, and includes supporting documentation. Upon receiving an appropriate request, the District will provide notice of the hearing on the request. At the hearing, the District shall review evidence on the proposed reduction of debarment period. This hearing shall be conducted and the request for review decided by the District pursuant to the same procedures as for a debarment hearing.

The District's proposed decision shall contain a recommendation on the request to reduce the period of debarment or terminate the debarment.

The terms shall also apply to Subcontractors of Contractor.

EXHIBIT A: Owner Controlled Insurance Program (OCIP)

OWNER CONTROLLED INSURANCE PROGRAM (OCIP)

1.1 INTRODUCTION

The District, hereinafter referenced as “District” or “Owner”, has elected, at its sole discretion, to implement an Owner Controlled Insurance Program (“OCIP”) under the Statewide Educational Wrap Up Program (“SEWUP”). The SEWUP Joint Powers Authority (“JPA”) will be providing the OCIP on behalf of the Owner. All terms and conditions of the SEWUP Contractual Provisions will apply during the term of the contract.

The SEWUP JPA will provide Workers’ Compensation, Employer’s Liability, General & Excess Liability, and Contractor’s Pollution Liability for all Enrolled Contractors (and their Enrolled Subcontractors of every tier) and other designated parties for work performed at the Project Site (hereinafter called “Project”) as well as Builder’s Risk insurance. The Owner agrees to pay all premiums associated with the OCIP, unless otherwise stated in this section and in other contract documents. The OCIP coverages will be primary to other valid and collectable insurance for the owner and enrolled parties in the program.

Insurance coverage provided under the OCIP is limited in scope and specific to work performed after the inception date of enrollment into the OCIP. Labor and ongoing operations related to offsite locations are not covered by the OCIP. In addition to any insurance provided by the Owner, all Contractors/Subcontractors will be responsible for providing certain insurance as specified in section 1.7. The Owner recommends that Contractors discuss the OCIP with their insurance agents, brokers or consultants to ensure that other proper coverages are maintained prior to contract acceptance.

Keenan & Associates, hereinafter called “Program Administrator”, shall administer the OCIP on behalf of the SEWUP JPA. At all times, all Contractors/Subcontractors shall: (a) cooperate with Owner, Program Administrator, and all OCIP insurers, as applicable, and their respective consultants, agents and representatives, in its or their administration of the OCIP and all other terms and conditions described herein, and (b) comply with the terms, conditions, warranties, and subjectivities of the insurance policies provided pursuant to the OCIP, including, without limitation, any and all directives and requirements of Owner’s and the OCIP insurers’ respective consultants, agents and representatives, including, without limitation, any directive or requirement relating to loss control, and quality control, and the closure to Owner’s satisfaction of open items on any and all quality control checklists and inventories.

A. Participation in the OCIP

Participation in the OCIP is mandatory but not automatic. Each Eligible Contractor/Subcontractor must follow the guidelines, as specified in section 1.5.

Definitions:

Enrollment: Required application and documents to be submitted by Contractors/Subcontractors of all tiers for review by the OCIP Program Administrator for submission to the insurer. (See Sections 1.7 and 1.8)

Contractor: Includes all vendors, suppliers, businesses, persons, or entities and entities which the Owner has engaged directly by contract to perform services relating to the Project.

Subcontractor: Includes, but is not limited to, all businesses, vendors, suppliers, and other persons or entities that have been engaged by a Contractor to perform or assist with the performance of services relating to the Project, including all sub-tier contractors.

Enrolled Contractor: All Eligible Contractors/Subcontractors of all tiers are considered Enrolled once required application and documents are received, reviewed, and processed by the OCIP Program Administrator and submitted to the insurer. (See Sections 1.7 and 1.8)

Eligible: Includes all Contractors/Subcontractors providing direct labor on the Project, and excludes Ineligible Contractors, as defined below. Temporary labor services and leasing companies are to be treated as Eligible Contractors.

Ineligible: It is not the intent to insure certain entities and scopes of work, including, but not necessarily limited to the following: consultants; suppliers; abatement and/or removal of hazardous materials; vendors; off-site fabricators; materials dealers; surveyors; guard services; non-construction janitorial services; and truckers, including trucking to the Project where delivery is the only scope of work performed; and contractors performing landscape maintenance (though landscape work itself is covered). Ineligible parties are required to ensure that any (of their) eligible subcontractors who provide on-site labor comply with the OCIP Enrollment requirements. Program Administrator reserves the right to reconsider any entity's participation in the OCIP should its scope of work or contract change at any time. **Any questions regarding a contractor's status as "Eligible" or "Ineligible" should be referred by written request to Owner and must be approved by the Program Administrator.**

EACH CONTRACTOR/SUBCONTRACTOR MUST INCLUDE THIS DOCUMENT WITH THEIR BID SPECIFICATIONS TO ANY AND ALL SUBCONTRACTORS, INCLUDING ALL SUB-TIER SUBCONTRACTORS. Any contractor/subcontractor's failure to comply with the OCIP Administrator and all OCIP requirements shall be considered non-compliant under the contract.

Enrollment of each Contractor's eligible Subcontractors is mandatory. Contractor shall notify Owner and the Program Administrator in writing of the identity of each Subcontractor regardless of enrollment eligibility and shall cause each Subcontractor to notify the Program Administrator in writing of the identity of each of its Sub-subcontractors, prior to such party's commencement of their work and entry onto the Project. Contractors and Subcontractors of all tiers shall not be deemed enrolled until the Program Administrator and OCIP insurers receive and approve a completed Contract Enrollment Form for each awarded contract. Enrollment is required prior to commencement of on-site activities but no contractor shall be enrolled sooner than 30 days prior to their start date. Each Contractor/Subcontractor shall be solely responsible for any and all losses, damages, claims, liabilities, and suits arising out of such Subcontractor's failure to enroll, or delay in enrolling, any of its Subcontractors.

Unless otherwise directed by the Owner, Ineligible Contractors and Subcontractors will be required to maintain their own insurance for both on-site and off-site activities and will be required to participate in the Project Safety Program (See Section 1.16). Minimum Insurance and endorsement requirements are located in Sections 1.7 & 1.8. Each ineligible contractor must register with the OCIP's online portal ("WrapPortal"). All required certificates and endorsements must be supplied via WrapPortal.

B. Project Site and Offsite Premises

Coverages provided by the OCIP are **Project Site** specific. The Project Site shall be designated by the Owner. The Project Site consists of any and all projects that are endorsed to this policy, which includes the following:

1. Ways and means adjoining the endorsed project site
2. Adjacent locations to the endorsed project sites where incidental operations are being performed, excluding permanent locations

With the exception of 1 and 2 mentioned above, off-site locations, labor and ongoing operations are not covered by the OCIP. It will be the responsibility of each Contractor/Subcontractor to maintain off-site insurance, as identified in Section 1.7, which specifies coverage types and minimum limits. Contractor/Subcontractor will promptly furnish to the Owner, or its designated representative, Certificates of Insurance evidencing that all required insurance is in force.

1.2 PREQUALIFICATION & COST IDENTIFICATION

A. Contractor Pre-Qualification

Pursuant to Government Code Section 4420.5, Bidders must meet certain minimum standards to bid on the Owners' Project. The following qualification standards apply to ALL Bidding Contractors at time of bid opening:

1. **Average Workers' Compensation Experience Modification Rate (EMR) of 1.25 or less over the last five (5) years OR the current published year.**
 - *We encourage the bidder to choose subcontractors who meet these requirements however this will not exclude eligible subcontractors from enrolling in the OCIP.*
2. **Zero (0) Serious and Willful violations (Labor Code Section 6300) against them in the past five (5) years**
3. **Evidence of an Injury and Illness Prevention Program (IIPP). Evidence is required to be submitted post bid opening and prior to bid award.**

FAILURE TO MEET THESE MINIMUM STANDARDS SHALL DISQUALIFY THE BIDDER.

B. Contractor Insurance Cost Identification

Contractor's base bid shall exclude all costs for insurance coverages provided under the OCIP. If insurance cost is not removed, the bidder may not qualify as the lowest responsive bidder. The Bidder declares under penalty of perjury under California law, that the base bid excludes any costs relating to any insurance coverages afforded under the OCIP and that each subcontractor to the Bidder has similarly excluded costs for any insurance coverage afforded under the OCIP.

C. Change Order Pricing

All Contractors/Subcontractors declare, under penalty of perjury under California law, that any change order issued to the contract is priced to exclude any costs relating to any insurance coverage afforded under the OCIP.

1.3 OWNER-PROVIDED INSURANCE COVERAGES

CONTRACTOR/SUBCONTRACTOR SHOULD REFER TO THE ACTUAL POLICIES FOR DETAILS CONCERNING COVERAGE, EXCLUSIONS, AND LIMITATIONS. THE ORIGINAL POLICIES WILL PREVAIL AS THE SOLE BINDING AGREEMENT IN CONNECTION WITH ANY CLAIM OR QUESTION REGARDING COVERAGE PROVIDED BY THE OCIP. OCIP POLICIES AND THE PROJECT INSURANCE MANUAL ARE AVAILABLE UPON WRITTEN REQUEST TO THE PROGRAM ADMINISTRATOR.

THE OCIP IS INTENDED TO PROVIDE BROAD COVERAGES AND HIGH LIMITS TO ALL ENROLLED CONTRACTORS/SUBCONTRACTORS. THE OWNER DOES NOT WARRANT OR REPRESENT THAT THE OCIP COVERAGES CONSTITUTE AN INSURANCE PROGRAM THAT COMPLETELY ADDRESSES THE RISKS OF THE CONTRACTORS/SUBCONTRACTORS. PRIOR TO CONTRACT AWARD, IT IS THE RESPONSIBILITY OF ALL CONTRACTORS/SUBCONTRACTORS TO ENSURE THAT THE OCIP COVERAGES PROVIDED SUFFICIENTLY ADDRESS THEIR INSURANCE NEEDS. UPON REQUEST, OCIP POLICIES ARE AVAILABLE FOR REVIEW.

OCIP coverage applies only to Work performed under the contract at the Project (see Section 1.1, B for definition). All Contractors must provide their own insurance for Automobile Liability and off-site locations, labor, and operations.

Such policies or programs may be amended from time to time, and the terms of such policies or programs, as amended, are incorporated herein by reference.

The Contractors/Subcontractors enrolled in the OCIP agree that the OCIP policies' limits of liability, coverage terms, and conditions shall determine the scope of coverage provided by the OCIP. As of October 1, 2025, 100% of the limits are available.

A. Workers' Compensation and Employer's Liability Insurance will be provided in accordance with applicable state laws to all Enrolled Contractors/Subcontractors (each as a named insured, and issued an individual policy) reflecting the following Limits of Liability:

Workers' Compensation: California Statutory Benefits

Employer's Liability:

- \$1,000,000 Bodily Injury each Accident
- \$1,000,000 Bodily Injury by Disease – Policy Limit
- \$1,000,000 Bodily Injury by Disease – Each Employee

1. Deductible: None

2. Exclusions: The known exclusions for this coverage are set forth below:

- | | |
|--|---|
| • Bodily Injury Outside US or Canada | • Intentional or Aggravated Bodily Injury |
| • Bodily Injury To Any Member of Flying Crew | • Obligations Imposed By Disability Benefits or Any Similar Law |
| • Bodily Injury To Person Subject To Federal Workers' Compensation | • Obligations Imposed By Occupational Disease Laws |
| • Bodily Injury To Person Subject To Occupational Disease Laws | • Obligations Imposed By Unemployment Compensation Laws |
| • Contractual Liability | • Obligations Imposed By Workers' Compensation Laws |
| • Employees Knowingly Employed Illegally | • State or Federal Law Violation Fines, Penalties |
| • Employment Related Practices | |

This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

3. **Policy Term:** The master policy effective date is October 1, 2025. The policy term is three years, with one automatic two-year renewal. The policy is intended to remain in effect for the length of the construction of the Project or through October 1, 2030 at 12:01am, whichever comes first. Warranty work and post contract repair work is excluded. Contractor and each Subcontractor is insured under the policy for the length of its work at the Project, or the policy end date, whichever comes first.
4. Workers' Compensation claims handled by this OCIP are still reflected in an Enrolled Contractor's Experience Modification Rating (EMR). Claims occurring on this OCIP project will impact an Enrolled Contractor's EMR the same way as claims occurring on non-OCIP work.

B. General and Excess Liability Insurance is written on an "Occurrence" form under master liability policies. Certificates of Insurance will be provided to all enrolled Contractors/Subcontractors as named insureds, with the total limits of liability reflecting the following*:

- \$125,000,000 Each Occurrence
- \$195,000,000 General Liability Aggregate
- \$125,000,000 Products / Completed Operations Aggregate Limit

*The noted limits apply to the 10 Year Extended Completed Operations Coverage Term with no reinstatement (see Section 1.3.B.4.b)

1. Deductible: None

2. Conditional Warranties*:

- a. **Subsidence:** It is expressly warranted that the Named Insured and all Contractors and Sub-Contractors comply with all recommendations contained in the geotechnical/environmental reports. Failure to comply will result in subsidence coverage being null and void and a full subsidence exclusion would be re-instated.
- b. **EIFS Installation Agreement:** The following terms and conditions shall be satisfied in connection with all EIFS work on any Project:
 - i. EIFS work is to be specifically identified, and its value declared.
 - ii. All EIFS work will be monitored by an independent EIFS inspection company to document compliance with manufacturers' handling and installation instructions.
 - iii. EIFS product manufacturers and warranty providers will be identified and provided to the Owner.

3. Exclusions: The known exclusions for this coverage are set forth below:

- | | |
|--|--|
| • Aircraft, Auto or Watercraft | • Pollution and Hazardous Materials |
| • Asbestos | • Prior Continuous, or Progressively Deteriorating Injury or Damage |
| • Medical Payments Coverage | • Professional Liability |
| • Certain Exclusions to Personal and Advertising Injury Liability | • Property Damage to the Project During the Course of Construction |
| • Certified Acts of Terrorism | • Punitive Damages |
| • Communicable Disease | • Residential and Condominium Conversion |
| • Contractual Liability (Limited Coverage Provided) | • Recall of Products, Work Or Impaired Property |
| • Cross Suits – Limited | • Silica or Silica Mixed Dust |
| • Cyber and Data | • Subsidence - Conditional Warranty – So long as Contractor/Subcontractors follows specifications of geotechnical/environmental reports then the exclusion will be waived; if not, exclusion will be fully implemented |
| • Employers Liability | • Violation of Statutes Governing Collecting, Transmitting Information |
| • Employment Related Practices | • Violation of Statutes Governing Email, Fax, Phone Calls |
| • Expected or Intended Injury | • War |
| • Fungi Or Bacteria | • Workers' Compensation and Similar Laws |
| • Lead | |
| • Certain exclusions for transportation or use of "Mobile Equipment" | |
| • Nuclear | |
| • Personal and Advertising Bodily Injury | |

This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the tables. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions and policy terms.

4. **Policy Term:**

- a. The master policy effective date is October 1, 2025. The policy is intended to remain in effect for the length of the construction of the Project or through October 1, 2030 at 12:01am, whichever comes first.
- b. The policy provides an Extended Products-Completed Operations Hazard Period of a maximum of 10 years from the date of substantial completion of the Project

C. Contractor's Pollution Liability is written under a master liability policy. Certificates of Insurance will be provided to all enrolled Contractors/Subcontractors, as named insured, reflecting the following Limits of Liability and Self Insured Retention (SIR):

- \$15,000,000 Per Claim / \$25,000,000 Policy Aggregate
 - Defense costs up to \$1,000,000, which are outside of the Limits of Liability
1. \$10,000 Self Insured Retention (SIR) Each Claim: Contractor/Subcontractor shall be liable for payment of the SIR, at its expense; to the extent claims payable are attributable to their acts or omissions and/or the acts or omissions of its Subcontractors of any tier or any other entity or person for whom it may be responsible. The SIR will apply to each occurrence and must be satisfied prior to payment of loss or expense by the carrier. The SIR amount shall not be reimbursed by the OCIP Insurance Program or the District.
 2. Exclusions: The known exclusions for this coverage are set forth below:

- | | |
|---|--|
| • Auto, Aircraft, Vessel Or Rolling Stock | • Nuclear |
| • Claims Between Certain Insureds | • Other Entities |
| • Contractual Liability | • Pre-Existing Conditions |
| • Damage To Property | • Products |
| • Fines, Penalties, and Treble Damages | • Terrorism |
| • Employment Related Practices | • War |
| • Owned Hazardous Materials Facility | • Workers' Compensation and Similar Laws |

This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

3. Policy Term: The master policy effective date is October 1, 2025. The policy is intended to remain in effect for the length of the Project or through October 1, 2030 at 12:01am, whichever comes first.

D. Builder's Risk: coverage will be in place during the course of construction at the Project. Such insurance shall be written on a repair or replacement cost basis, subject to exclusions, sub limits, property limitations and conditions. Such insurance shall include the interests of the Owner as named insured and enrolled Contractors/Subcontractors as additional insureds. The deductible schedule is as follows:

Deductibles

- \$5,000 - \$50,000 deductible (depending on type of structure) for Wood Frame, Modular, Tilt-Up Construction, Joisted Masonry, and Fire Resistive / Non-Combustible / Masonry Non-Combustible.
 - Up to \$100,000 deductible for Water Damage to All Construction Types
 - Deductibles are subject to increase if a Project's Builder's Risk term is extended 60 days or more.
1. Contractor/Subcontractors shall be responsible for the applicable deductible. The deductible shall apply to each occurrence and must be satisfied prior to payment of the loss. The deductible shall not be reimbursed by the OCIP Insurance Program or the District.

2. Exclusions: The known exclusions for this coverage are set forth below:

- | | |
|---|--|
| <ul style="list-style-type: none">• Asbestos• Certain Offsite Property• Certain Release, Discharge, Escape, or Dispersal of Contaminants or Pollutants• Certified Acts of Terrorism (Optional Coverage)• Cessation of Work• Consequential Loss (except as provided in Delay in Opening Coverage)• Communicable Disease• Contractor's Tools, Machinery, Plans, Equipment• Cost of Making Good (Optional Coverage)• Damage to Existing Property (Optional Coverage)• Damage While Testing Prototype or Used Machinery/Equipment• Damages, Fines, Penalties at Government Agency or Court Order• Disappearance or When Revealed by Inventory Shortage Alone• Earth Movement (Optional Coverage)• Electrical, Magnetic, or Errors Related to Electronic Records• Financial Accounts, Instruments, Stamps, Deeds, Precious Material | <ul style="list-style-type: none">• Flood (Optional Coverage) (rain and the accumulation of rainwater included in Flood definition)• Foreign Terrorism• Infidelity, Dishonesty, Fraudulent Activity of Insured• Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement• Loss Under Any Manufacturer or Supplier Guarantee/Warranty• Normal Subsidence• Nuclear• Offshore or Barrier Island Property• Property That Stores, Processes, or Handles Radioactive Materials• Rolling Stock, Aircraft, Watercraft• Software Loss, unless results from an Open Peril• Standing Timber, Growing Crops, Animals• Vehicles or Equipment Licensed For Highway Use• War and Military Action |
|---|--|

This builder's risk coverage and exclusion summary may not be all inclusive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions, sublimit and deductibles.

3. **Special Conditions: All Wood Frame and Modular projects are subject to Protective Safeguards as shown in A**

4. **Policy Term:** The policy term is the term of the project.

5. **All Contractors/Subcontractors shall be responsible for any loss or damage to their personal property. This would include, but is not limited to, tools, equipment, mobile construction equipment, or materials NOT intended to be a permanent part of the building, whether owned, borrowed, used, leased, or rented by any Contractor/Subcontractor. Any insurance purchased by the Contractors/Subcontractors, or self-insurance, shall be the Contractors'/Subcontractors' sole source of recovery in the event of a loss.**

E. **OCIP Policies Establish OCIP Coverage.** The insurance coverages, limits of liability, definitions, terms, conditions, exclusions and limitations referenced in these contractual provisions and the other contract documents are set forth in full in the OCIP insurance policies. The summary descriptions of such policies in these contractual provisions, in the Project Insurance Manual, or in any other contract document or elsewhere are not intended to be complete or to alter or amend any provisions of the actual OCIP policies. To the extent, if any, such descriptions herein or therein conflict with any such insurance policies, the provisions of the actual insurance policies shall govern. To the extent there are any other conflicts between or among the provisions of such insurance policies, these contractual provisions, the contract documents, or the Project Insurance Manual, then in descending order, the insurance policies shall govern, followed by these contractual provisions, the contract, the other contract documents, then the Project Insurance Manual. Contractor/Subcontractor acknowledges that it has had the opportunity to review the insurance policies as provided in Section 1.3, and that it is relying solely on the provisions set forth in the insurance policies, and not upon any

oral or written statement or reference in these contractual provisions, any other contract document, the Project Insurance Manual, or otherwise.

1.4 OCIP CERTIFICATES AND POLICIES

All Enrolled Contractors/Subcontractors will receive Certificates of Insurance for Workers' Compensation, General Liability, Excess Liability and Contractor's Pollution Liability coverages. Each enrolled Contractor/Subcontractor will receive their own Workers' Compensation policy. Program Administrator will provide a copy of the OCIP policies upon written request. Such policies or programs may be amended from time to time and the terms of such policies or programs, as they may be amended, are incorporated herein by reference. Contractors/Subcontractors hereby agree to be bound by the terms of coverage, as contained in such insurance policies and/or self-insurance programs.

1.5 CONTRACTOR/SUBCONTRACTOR RESPONSIBILITIES

Participation in the OCIP is mandatory but not automatic. Contractor /Subcontractor must comply with the following:

A. Contractor Eligibility, see Section 1.1, A for definition.

B. Contractor Registration & Enrollment

The Program Administrator will provide online registration via WrapPortal (see Section 1.1 A); a User Name, Password and URL for website enrollment will be provided to each Subcontractor upon entry of Subcontractor identifying information into WrapPortal by Contractor or Parent Subcontractor regardless of enrollment eligibility.

An Eligible Contractor/subcontractor is not enrolled until the Program Administrator and OCIP insurers receive and approve a completed OCIP Enrollment via WrapPortal for each awarded contract. Subcontractor shall also upload declarations pages, including proof of rates from Subcontractor's current policies. Enrollment is required prior to commencement of on-site activities but no Subcontractor shall be enrolled sooner than 30 days prior to their start date. Subcontractors must provide the Required Insurance Coverages (see Sections 1.7 and 1.8) via WrapPortal.

Any Subcontractor who enrolls in the OCIP after their start date must provide a No- Known-Loss Letter to the Program Administrator, along with the enrollment documentation. Late Enrollment is not guaranteed and must be approved and accepted by the insurance carrier. Upon approval, the Program Administrator will provide evidence of OCIP coverage to the Subcontractor, as noted in Section 1.4

All Contractors/Subcontractors of all tiers shall cooperate with and require their Subcontractors to cooperate with the Owner and the Program Administrator regarding the administration and operation of the OCIP.

C. Contractor/Subcontractor Compliance with Other Forms and Procedures

All Enrolled Contractors/Subcontractors are required to complete and submit the following forms:

1. Project Site Monthly Payroll Report

Project Site Monthly Payroll must be submitted to the Program Administrator by the 10th of each month via WrapPortal until the completion of the contract and in no event shall be later than the 15th of each month. This report must summarize the unburdened payroll by Workers' Compensation Class Code. Certified payroll is not a requirement of the OCIP and cannot be accepted. **If the Project Site Monthly Payroll Report is not submitted to the Program Administrator, the Contractor, Construction Manager and/or Owner may withhold payment from the prime or parent contractor until the report is received.** Subcontractor agrees to keep and maintain accurate and classified records of their payroll for operations at the

Project Site. This payroll information is submitted to the OCIP insurer. At the end of each contract, a carrier audit may be performed using the reported payroll and other supporting documents, as required by the California Workers' Compensation Insurance Rating Bureau (WCIRB).

2. Workers' Compensation Insurance Rating Bureau Requirements

Once an Eligible Contractor/Subcontractor is enrolled into the OCIP, a separate Workers' Compensation Policy will be issued to them. All Enrolled Contractors/Subcontractors shall comply with the rules and regulations of the California Workers' Compensation Insurance Rating Bureau (WCIRB).

3. Contractor's Completion Notice

*Contractor's Completion Notice must be submitted to the Program Administrator via WrapPortal upon completion of work at the Project, which includes punch list items, but not warranty work. Contractor/Subcontractor shall cooperate with Contractor in completing the Contractor's Completion Notice. The Contractor's Completion Notice shall evidence all enrolled Contractors/Subcontractors' **final contract value, actual start and completion dates**, per contract. This information is used to confirm that each Workers' Compensation Policy was issued with correct policy term dates, covering the Contractors/Subcontractors for the duration of their work at the Project. This information is subsequently submitted to the Workers' Compensation Insurance Rating Bureau (WCIRB).*

4. Project Insurance Manual

A Project Insurance Manual will be provided to all awarded Contractors/Subcontractors, which includes a Program Summary, Claims Reporting Instructions, Project Safety Guidelines, necessary forms, and contact information. Copies can be requested from the Program Administrator.

Contractor/Subcontractor Compliance with all aspects of the OCIP

All Contractors/Subcontractors further acknowledge and agree to comply fully and promptly with such safety, loss control, and quality control rules, requirements, and directives as may from time to time be promulgated by Owner, the Program Administrator and/or the OCIP insurers or any of its or their respective consultants, agents, or representatives. Neither the Contractor or Subcontractor of any tier shall impede or otherwise prevent Owner, their representatives or the Program Administrator or their respective consultants from entering or otherwise accessing the project or its related off-site locations. Nothing in this document, or any other contract document or in the Project Insurance Manual, shall be deemed to render Owner or any of its affiliates of any tier an employer of Contractor/Subcontractor or any of its Subcontractors or any of its or their personnel or employees.

Failure to comply will be considered non-performance under the contract.

It is the obligation of each Eligible Contractor/Subcontractor to enroll in the OCIP and to comply with all OCIP requirements set forth in these contractual provisions, in the OCIP insurance policies, in the Project Insurance Manual, and elsewhere in the contract documents. Contractor/Subcontractor shall provide each of its Subcontractors, among other things, with a copy of the Project Insurance Manual and a copy of these contractual provisions.

Contractor/Subcontractor shall require in writing that each enrolling Subcontractor comply with, among other things, the provisions of the OCIP insurance policies, the Project Insurance Manual, and the contract documents. All such requirements shall be included in all subcontracts and sub-subcontracts with eligible parties. The failure of Contractor/Subcontractor or any other party to provide eligible Subcontractors with a copy of this document, the Project Insurance Manual, and/or all other applicable requirements shall not relieve any such Subcontractor of any of the obligations contained therein.

Contractor/Subcontractor shall keep and maintain accurate records and information in accordance with the requirements of the OCIP Insurer(s), the Project Administrator, the Project Insurance

Manual, and the contract documents, and shall provide such records and information to Owner, the Program Administrator, and/or the OCIP insurers upon request.

1.6 **OCIP DISCLAIMER**

The Owner does not warrant or represent that the OCIP coverages constitute an insurance program that completely addresses all the risks of the Contractors/Subcontractors. Prior to the commencement of work under the contract, it is the responsibility of all Contractors/Subcontractors to ensure that the OCIP coverages provided sufficiently address their insurance needs. Any additional insurance coverage purchased will be at Contractor's/Subcontractor's option and sole expense.

1.7 **REQUIRED CONTRACTOR/SUBCONTRACTOR PROVIDED INSURANCE COVERAGES**

For any work under this contract, and until completion and final acceptance of the work by the Owner, the Contractors/Subcontractors shall, at their own expense, promptly furnish Certificates of Insurance evidencing that coverage is in force and any required Additional Insured Endorsements to the Owner, with a copy to the Program Administrator for the following coverages, before commencing work on the Project.

- A. Automobile Liability Insurance Requirements and Limits:** See Section 1.8 for Certificate Holder and Additional Insured Endorsement specifications. Automobile Liability Insurance must cover all vehicles owned by, hired by, or used on behalf of the Contractors/Subcontractors for both Project Site and off-site operations with the following minimum limits of liability:

All Contractors/Subcontractors*

<u>General/Prime Contractor</u>	<u>Subcontractor</u>	
\$2,000,000	\$1,000,000	Bodily Injury and Property Damage Liability

***See Section 1.8 for additional insured language**

- B. Workers' Compensation and Employer's Liability Insurance Limits:**

Workers' Compensation – Statutory Benefits - All States

Employer's Liability:

\$1,000,000 Bodily Injury each Accident

\$1,000,000 Bodily Injury by Disease – Policy Limit

\$1,000,000 Bodily Injury by Disease – Each Employee

C. General Liability Insurance, minimum limits of liability are as follows:

Eligible Contractors/Subcontractors

<u>General/Prime Contractor</u>	<u>Subcontractor</u>	
\$2,000,000	\$1,000,000	Bodily Injury and Property Damage Liability Per Occurrence
\$2,000,000	\$1,000,000	General Aggregate
\$2,000,000	\$1,000,000	Products/Completed Operations Aggregate
\$2,000,000	\$1,000,000	Personal/Advertising Injury Liability Per Person or Organization

Ineligible Contractors / Subcontractors (Excluded)

<u>General/Prime Contractor</u>	<u>Subcontractor</u>	
\$2,000,000	\$1,000,000	Bodily Injury and Property Damage Liability Per Occurrence
\$2,000,000	\$1,000,000	General Aggregate
\$2,000,000	\$1,000,000	Products/Completed Operations Aggregate
\$2,000,000	\$1,000,000	Personal/Advertising Injury Liability Per Person or Organization

- D. Professional Liability Insurance:** If Contractor's/Subcontractor's work requires design and/or design-assist services, or Contractor/Subcontractor performs professional services of any kind, Contractor/Subcontractor shall purchase and maintain, at its sole cost and expense, Professional Liability (Errors and Omissions) insurance for all professional services provided. This Professional Liability insurance shall include full prior acts coverage sufficient to cover the services under this agreement, with the following minimum limits of liability:

\$1,000,000 per Claim/Annual Aggregate

Deductible or self-insured retention amount must not be greater than \$100,000 per claim, including coverage of contractual liability.

Professional Liability Insurance is to be maintained during the term of the contract and for so long as the insurance is reasonably available as provided herein, for a period of ten (10) years after completion of the services.

- E. Environmental and Asbestos Abatement Coverages:** If the Contractor's/Subcontractor's scope of work involves the removal of asbestos, the removal/replacement of underground tanks, or the removal of toxic chemicals and substances, the Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

\$1,000,000 per Claim/Aggregate

Aircraft or Watercraft Liability Insurance: If any Contractor/Subcontractor requires the use of Aircraft or Watercraft at the Project Site, including without limitation aircraft insurance required in connection with use of drones, the Contractor/Subcontractor shall purchase and maintain, or cause the operator of the Aircraft or Watercraft to purchase and maintain, Aircraft or Watercraft liability insurance. This must insure passengers and the General Public against personal injury, bodily injury or property damage arising out of the ownership, maintenance, use or entrustment to others. It includes Aircraft or Watercraft owned or operated by or rented or loaned to any insured. Use includes operation and "loading or unloading." **Use of drones or other aircraft or watercraft without the required insurance shall**

be a material breach of the Contract. Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the District:

\$5,000,000 per Claim/Aggregate

1.8 REQUIRED CONTRACTOR/SUBCONTRACTOR CERTIFICATES OF INSURANCE AND ADDITIONAL INSURED ENDORSEMENTS

Certificates of Insurance and Additional Insured Endorsements acceptable to the Owner and Program Administrator must be filed with the Owner within ten (10) days after award of the contract to all Contractors/Subcontractors and prior to commencement of on-site activities.

All required insurance shall be maintained, without interruption, from the date of commencement of on-site activities, until the date of the final payment or expiration of any extended period, as set forth in this agreement. These certificates and additional insured endorsements required by Section 1.7 and 1.8 shall provide not less than thirty (30) days prior written notice to the Owner, with a copy to the Program Administrator, of any material change in the insurance, cancellation, or non-renewal.

Certificates of Insurance: The Project must be identified on the Certificate of Insurance in the “Description of Operations/Locations/Vehicles/Special Items” section. The Certificates of Insurance should name District, as the Certificate Holder, as specified below:

Certificate Holder:

Liberty Union High School District

c/o Statewide Educational Wrap Up Program (SEWUP)

2355 Crenshaw Blvd., Suite 200

Torrance, CA 90501

Additional Insured Endorsements: The Owner must be specifically named on the Schedule of an Additional Insured Endorsement, under the section titled, “Name of Person or Organization”, as specified below:

1. **The District, CM, Architect, Inspector, the State of California, their officers, employees, agents, volunteers, and independent contractors as additional insureds.**
2. All Contractors/Subcontractors must provide an additional insured endorsement for automobile liability.

Ineligible Contractors/Subcontractors must provide an additional insured endorsement on both the Automobile Liability and General Liability policies and a waiver of subrogation on workers’ compensation policies.

Liberty Union High School District

c/o Statewide Educational Wrap Up Program (SEWUP)

2355 Crenshaw Blvd., Suite 200

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1.9 CONTRACTOR/SUBCONTRACTOR INSURANCE FOR PERSONAL PROPERTY AND EQUIPMENT

All Contractors/Subcontractors shall be solely responsible for any loss or damage to their personal property including, without limitation, their tools and equipment, mobile construction equipment, scaffolding, and temporary structures, whether owned, borrowed, used, leased, or rented by any Contractor/Subcontractor. Contractors/Subcontractors may at their sole discretion, purchase and maintain insurance or self-insure such equipment and property, and any deductible in relation thereto shall be their sole responsibility. Any insurance,

including self-insurance, shall be the Contractors'/Subcontractors' sole source of recovery in the event of a loss.

Any type of insurance or any increase of limits of liability not described in this Section, which the Contractors/Subcontractors require for their own protection or on account of any statute, will be their own responsibility and at their expense.

1.10 ASSIGNMENT OF RETURN PREMIUMS

The Owner will be responsible for the payment of all premiums associated solely with the OCIP and will be the sole recipient of any dividend(s) and/or return premium(s) generated by the OCIP.

1.11 WAIVER OF SUBROGATION AND OWNER INDEMNIFICATION

With respect to their work on the Project:

1. Owner waives all rights of subrogation and recovery against the Contractors/Subcontractors for any loss or damage which is insured under the OCIP.
2. Contractors/Subcontractors waive all rights of subrogation and recovery against the Owner and other Contractors/Subcontractors for any loss or damage which is insured under the OCIP.
3. The Contractors/Subcontractors are obligated to obtain insurance required herein to insure against risks not covered by the OCIP. It is Contractor's responsibility to ensure that it and its Subcontractors have obtained required insurance. Failure of Entity or any Subcontractor to obtain required insurance shall not invalidate or negate any obligation to indemnify the District for damages or claims not covered by the OCIP.

1.12 NO RELEASE

The provision of the OCIP by the Owner will in no way be interpreted as relieving the Contractors/Subcontractors of any other responsibility or liability under this agreement or any applicable law, statute, regulation, or order.

1.13 OWNER'S RIGHT TO AUDIT

The Contractor/Subcontractor will permit the Owner and/or its representative to examine and/or audit its books, records, and insurance policy information. Contractor/Subcontractor will also provide any additional information to the Owner, or its appointed representatives, as may be required.

1.14 DUTIES IN THE EVENT OF A LOSS

Contractors/Subcontractors are required to report all losses and potential losses promptly to OCIP insurers and/or Program Administrator. A full description and details of the incurred loss are also required.

The Contractor/Subcontractor shall assist the Owner, its agents, and the Program Administrator, by providing the utmost cooperation in the adjustment of claims arising out of the operations conducted under, or in connection with, the Project and shall cooperate with the Owner's insurers in claims and demands that arise out of the Project and that the insurers are called upon to adjust.

In the event of an accident, it shall be the responsibility of the employer and/or responsible Contractor/Subcontractor to see that injured workers or members of the public are provided immediate medical treatment. All appropriate medical and claim forms must be filed in accordance with the claim procedures developed for this Project by Keenan & Associates, hereinafter called "Program Administrator." This includes notification to the appropriate state authorities, if necessary.

1.15 OCCUPATIONAL SAFETY AND HEALTH COMPLIANCE

All Contractors/Subcontractors are expected to comply with all applicable local, state, and federal occupational safety and health requirements. If additional safety and health requirements are set forth in the contract specifications, all contractors shall comply with these requirements.

It is the responsibility of each Contractor/Subcontractor to maintain an environment free of recognized hazards. All Contractors/Subcontractors shall exercise reasonable care to prevent work-related injuries; property and equipment damage at the Project, as well as minimize risk to the public and third-party property.

The Program Administrator shall conduct periodic loss control surveys on behalf of the District. These surveys will focus on evaluating the Contractors'/Subcontractors' efforts to minimize loss, assist in identifying loss exposures, and to recommend appropriate corrective measures. The Program Administrator is a resource to supplement the safety and loss prevention activity of Contractors/Subcontractors. Its loss control survey activities or other activities of the Program Administrator and/or OCIP insurers do not in any way relieve the Contractors/Subcontractors of their responsibilities for Project safety.

1.16 PROJECT SAFETY PROGRAM

In addition, local, state, and federal occupational safety and health laws, the following standards apply to all Enrolled and Non-Enrolled Contractors/Subcontractors.

A. Safety Orientation

1. Contractor/Subcontractor employees shall be provided with a project specific safety orientation prior the start of the project. At a minimum, the orientation will address the following items:
 - a. The District's site safety requirements.
 - b. Site specific safety hazards and protective measures for these hazards.
 - c. Emergency telephone numbers and procedures.
 - d. Local medical clinic/hospital information within the Medical Provider Network (MPN).

B. Program Management

1. Each Contractor/Subcontractors shall have the following safety programs:
 - a. Injury and Illness Prevention Plans
 - b. Hazard Communication Programs
 - c. Heat Illness Prevention Plans
2. Each Contractor/Subcontractor shall have an onsite competent person responsible for occupational safety and health. A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

C. Mandatory 6' Fall Protection

1. Contractor/Subcontractor employees shall be protected from fall exposures of 6 feet or greater. Activities include but are not limited to:
 - a. Steel erection
 - b. Roofing
 - c. Framing
 - d. Decking
 - e. Work performed from scaffolds
 - f. Work performed from ladders

Exceptions: The following exceptions apply only to framers and wood frame activities:

- a. When installing or "rolling" the joists, Cal/OSHA fall protection requirements shall govern.
- b. When framers are walking/working on securely braced joists, rafters, or roof trusses on center spacing not exceeding 24 inches, and more than 6' from an unprotected side or edge, they shall be considered protected from falls between the joists, rafters, or roof trusses.

2. A safety monitor as means of fall protection is prohibited.
3. Ladder jacks and lean-to scaffolds are prohibited.
4. Contractor/Subcontractors are required to provide training to their employees who might be exposed to a fall hazard prior to the exposure or upon hiring. This training shall be documented and available for review.
5. Methods of fall protection include but are not limited to the following:
 - a. Railings
 - b. Covers for Floor, Roof, and Wall Openings
 - c. Personal Fall Arrest Systems, Personal Fall Restraint Systems, and Positioning Devices
 - d. Controlled Access Zones
6. The design and construction of railings shall conform to the Cal/OSHA Construction Safety Orders.
7. The use of wire ropes as top rails and intermediate rails of guardrail systems used for perimeter protection, or at interior openings such as stairways and elevator shafts, shall be installed in accordance with Cal/OSHA requirements. Additionally, wire ropes shall be secured to each support and taut at all times. The maximum deflection of the top rail when a load of 200 pounds is applied in any direction at any point of the top rail shall not exceed 3 inches in one direction which includes the free hanging sag in the wire rope.
8. The minimum parapet height allowed for fall protection is 42 inches or greater.
9. Covers used to cover floor, roof, and wall openings shall be secured in place to prevent accidental removal or displacement and shall be marked in accordance with Cal/OSHA Construction Safety Orders.
10. Covers used to cover floor and roof openings shall be capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time.
11. Controlled access zones shall be defined by a control line or other means that restricts access. Each line shall have a minimum breaking strength of 200 pounds. Signs shall be posted to warn unauthorized employees to stay out of the controlled access zone.
12. Control lines shall consist of ropes, wires, tapes, or equivalent materials. Control lines shall be erected and supported in accordance with Cal/OSHA Construction Safety Orders.
13. Scaffold Access/Egress. An internal ladder system with hatches and drop-down ladders or temporary stairs shall be provided for safe access/egress on all scaffolds 20 feet or greater in height. External straight ladders are prohibited on all scaffolds if it exposes a user to a fall of 20 feet or greater in height.

Exception: When adjustable scaffolds are utilized, rest platforms shall not exceed 20' vertical intervals.

D. Site Safety

According to industry practices, it is the responsibility of contractors of all tiers to exercise reasonable care to prevent work-related injuries; property and equipment damage at the project site, and to minimize risk to the third-party persons and property. Contractors/Subcontractors of all tiers shall be expected to comply with the following safety and loss control requirements:

1. All Subcontractors shall identify their contact person(s) to the General or Prime Contractor.
2. All Contractors/Subcontractors shall follow District procedures for dealing with the media.

3. At all times, hard hats shall be worn in the construction environment. Hard hats shall meet the requirements of ANSI Z89.1. No modification to the shell or suspension is allowed except when such changes are approved by the manufacturer.
4. 100% protective eyewear with side shield protection is required while in the construction environment, shop, or anytime eye hazards exist. Protective eyewear shall bear a legible and permanent "Z87" logo to indicate compliance with applicable ANSI/ASSE Standard.
5. All construction employees shall wear clothing suitable for the weather and work conditions. At a minimum, this shall be short sleeved shirts, long pants, and leather or other protective work shoes or boots.
6. Alcohol is prohibited on District property always.
7. Contractors/Subcontractors will be required to respond to all District complaints about objectionable levels of dust or noise and will be required to provide prompt and appropriate abatement.
8. Construction personnel cannot enter District grounds other than the construction site unless accompanied by District personnel and are allowed only "incidental" contact with students. Violations of these requirements by any construction employee will result in a mandatory background check of that employee – including fingerprinting – as required by state law.
9. All prime contractors must attend the site-specific pre-construction meeting.
10. No sexual reference or preference shall be permitted on any piece of clothing or the hardhat. Any employee observed disregarding this policy shall be removed from the job site until further notice.
11. Contractors and subcontractors at all times shall keep premises free from debris such as waste, rubbish, and excess materials and equipment caused by contract work. Contractors and subcontractors shall not leave debris under, in, or about the premises. Upon completion of the contract work, contractors and subcontractors shall clean the interior and exterior of the building or improvement including fixtures, equipment, walls, floors, ceilings, roofs, windowsills and ledges, horizontal projections, and any areas where debris has collected so surfaces are free from foreign material or discoloration. Contractors and subcontractors shall clean and polish all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment and contractor shall also remove temporary fencing, barricades, planking and construction toilet and similar temporary facilities from the site. No glass containers are permitted on the site.
12. Theft or willful damage to any property of the Owner, student, or other contractors will be prosecuted fully.
13. All Contractors/Subcontractors will advise non-English speaking employees in their native language either in a written format or via an interpreter of these policies.

E. Crane Safety

1. In accordance with Title 8, California Code of Regulations, section 5006.1, employers shall only permit operators who have a valid certificate (license) of competency to operate cranes. The operator shall have his license on his person, readily available for review.
2. All cranes used in lifting service, exceeding 3 tons rated capacity, and their accessory gear shall not be used until the employer has ascertained that such equipment has been certificated in accordance with Cal/OSHA as evidenced by current and valid documents. Certificates (annual and quadrennial) attesting to current compliance with testing and examination standards shall be maintained, readily available for each crane.

F. Fire Prevention During Welding, Cutting, and Other Hot Work

1. Contractors engaged in welding and allied processes, heat treating, grinding, cutting, thawing pipe, powder-driven fasteners, hot riveting, torch-applied roofing in conjunction with the requirements of NFPA 241, and similar applications producing or using a spark, flame, or heat shall adhere to National Fire Protection Association Standard 51B entitled "Standard for Fire Prevention During Welding, Cutting, and Other Hot Work."

G. Incident Investigation Requirements

1. The contractor shall perform thorough, in-depth investigations and evaluations of all incidents. A formal incident investigation shall be conducted whenever any incident occurs, including, without limitation, both non-injury incidents and incidents involving first aid. Additionally, near miss accidents and/or incidents must be reported and undergo the same in-depth investigation, root cause analysis and lessons learned process. The incident investigation report shall be e-mailed to Keenan and Associates within 5 working days.
2. Recommendations and lessons learned to prevent recurrence of incidents shall be documented and communicated to all employees of contractor and subcontractors through safety meetings and on-the-job training.

H. Return to Work:

1. The District and OCIP Carrier are committed to working with all Enrolled Contractors and Subcontractors to promote the successful & timely return to work of injured employees following a work-related injury. The purpose of this policy is to ensure that Enrolled Contractor/Subcontractor employees who temporarily cannot return to their normal duties due to job-related injury or illness but can safely perform transitional duties while recovering is offered appropriate transitional duties for a limited time only.
 - a. An employee who has experienced a job-related injury requiring medical treatment must provide a proper medical release prior to returning to work.
 - b. An employee who has been removed from the jobsite ambulatory must provide a proper medical release prior to returning to work.
 - c. Each Enrolled Contractor/Subcontractor will cooperate with the OCIP Carrier to facilitate the return to work of any injured employee capable of safely performing transitional duties.
 - d. When the employee is released to transitional duties, it is the Enrolled Contractor/Subcontractor's responsibility to facilitate the injured employee's return to work.
 - e. The Enrolled Contractor/Subcontractor is expected to accommodate the injured employee and facilitate the return to work.
 - f. It will be the responsibility of the insurance carrier to maintain communication with the treating physician and the Enrolled Contractor/Subcontractor to facilitate the prompt return of an employee to full work status.

I. Conflicting Safety Requirements:

Contractors and subcontractors shall adhere to all applicable federal, state, local, and contractual safety and health requirements. If there is a conflict between any of these safety and health requirements, the most stringent requirement shall apply.

J. Noncompliance and Unsafe Practices

Owner or their representative shall have the authority to immediately cease any and all operation (s) on the jobsite that is deemed by Owner or their representative to be unsafe to property or has the potential to cause Bodily Injury, pursuant to Title VIII California Code of Regulation, Section 1511. Any such cession of work shall not constitute recoverable delay or other contractual

remedies for liquidated damages and may expose the offending contractor to any such losses to the District or other trades.

K. Professional Conduct Clause

Contractors and subcontractors shall at all times adhere to safety requirements (contractual and regulatory) and shall encourage safe and professional behavior among their employees. Contractor and subcontractors shall not allow on the job site any unfit person, unsafe person, anyone unskilled and unqualified to perform the work assigned to them, or anyone exhibiting such qualities. Any person in the employ of the contractor or subcontractor whom the District or the District's agent/representative may deem incompetent, unsafe, or unfit shall be immediately dismissed from the OCIP job site and shall not again be allowed on the OCIP the job site except with the written consent of District or the District's agent/representative. The District reserves the right to request that the contractor or subcontractor's assigned Project Supervisor/Manager be replaced immediately.

1.17 OWNER'S INSURANCE OBLIGATIONS; CONTRACTORS'/SUBCONTRACTORS' OBLIGATIONS; REPRESENTATIONS, WARRANTIES AND DISCLAIMERS

(a) Owner assumes no obligation to provide insurance other than that summarily described in these Contractual Provisions, in the Project Insurance Manual, and in the OCIP insurance policies. Contractor/Subcontractor shall review the OCIP coverages, limits of liability, and insurance policies to satisfy themselves that the coverages offered thereby meet its needs. Nothing contained herein shall be deemed to place any responsibility on Owner, and Owner disclaims any responsibility, for ensuring that the insurance provided by the OCIP is sufficient for the conduct of Contractor's/Subcontractor's business or performance of the Work, including, without limitation, the adequacy of the limits of liability provided by, and as to all other terms, conditions, and exclusions of, the OCIP insurance policies. The furnishing of insurance by Owner through the OCIP shall in no way relieve or limit or be construed to relieve or limit Contractor/Subcontractor of any responsibility, liability or obligation imposed by the contract, the contract documents, the Project Insurance Manual, the OCIP insurance policies, or by law, including, without limitation, all indemnification obligations on the part of Contractor/Subcontractor.

(b) By enrolling in the OCIP, Contractor/Subcontractor acknowledge that (i) the limits of liability of the OCIP insurance policies are shared by all insured parties under the OCIP; (ii) Owner is not an insurer or in the business of insurance and is not an agent, broker, partner or guarantor of Contractor/Subcontractor or any of the insurance companies providing coverage under the OCIP (the "OCIP insurers"); and (iii) Owner is not responsible for (a) the availability, adequacy, or exhaustion of the limits of the OCIP, (b) the present or future solvency of any of the OCIP insurers or (c) any claims or disputes by, between or among Owner, Contractor/Subcontractor and any of the OCIP insurers, including, without limitation, claims or disputes arising out of any the OCIP insurers' payment or nonpayment of claims or losses, or such insurers' contractual or extra-contractual duties, including, without limitation, defense and/or indemnity obligations. Any type of insurance coverage or limits of liability not provided by the OCIP which Contractor/Subcontractor desires for its own protection, or which is required by applicable laws or regulations, shall be its sole responsibility and expense and shall not be included in its compensation for performance of the contract work. If Contractor/Subcontractor believes that additional limits of liability beyond those provided by the OCIP would be prudent for its protection, it agrees to investigate and procure such additional limits of liability for itself at its sole cost.

(c) By enrolling in the OCIP, Contractor/Subcontractor represents and warrants that it has had the opportunity to read and analyze (and to obtain professional assistance to read and analyze) a copy of the OCIP insurance policies and understand the contents thereof. Any reference in these contractual provisions, in the Project Insurance Manual, or elsewhere in any contract document as to amount, nature, type or extent of coverage provided under the OCIP and/or potential applicability to any potential claim or loss is for reference

only and Contractor/Subcontractor represents and warrants that it has not relied upon any such reference or any other oral or written statement by or on behalf of Owner, the Project Administrator, or any of its or their agents, employees or representatives, but solely upon its own independent review and analysis of the OCIP insurance policies in formulating any understanding and/or belief as to amount, nature, type or extent of any coverage, conditions, extensions, or limits of liability provided by and as to all other terms of the OCIP insurance policies and/or their potential applicability to any claim or loss or their sufficiency for the conduct of Contractor's/Subcontractor's business or performance under the contract documents. To the extent that Contractor/Subcontractor deems it prudent to secure and maintain additional, supplemental, excess, or wholly independent insurance or liability associated with its work on the Project or otherwise, it shall be responsible to do so at its sole expense.

(d) Contractor/Subcontractor hereby releases Owner, the Program Administrator and their respective representatives, agents, directors, officers, employees, partners, shareholders, members, affiliates of every tier, successors, and assigns from any and all claims and liabilities arising out of or relating to acts, errors, omissions or negligence (i) in the design, selection, placement, adequacy, amount, limits, scope and nature of insurance coverage afforded by the OCIP, (ii) in the selection, performance and present and future solvency of the OCIP insurers, and (iii) in the implementation and administration of the OCIP. Contractor/Subcontractor shall make its own determinations regarding such matters and expressly waives all rights and benefits conferred upon it by the provisions of California Civil Code Section 1542, which provides:

“A general release does not extend to claims that the creditor or releasing party does not know or suspect to exist in his or her favor at the time of executing the release and that, if known by him or her, would have materially affected his or her settlement with the debtor or released party.”

Contractor/Subcontractor expressly acknowledges that the foregoing waiver of the provisions of Section 1542 was separately bargained for, and expressly agrees that the release provision shall be given full force and effect, including, without limitation, as to unknown or unsuspected claims, demands, liabilities and causes of action, if any may exist or arise. This release provision shall survive the completion of the contract work and the expiration or other termination of the Agreement.

1.18 JOINT DEFENSE OF CLAIMS AND SUITS AGAINST MORE THAN ONE INSURED

(a) If a claim, demand, suit, or other proceeding (“Claim”) is brought against more than one insured under the OCIP, Owner and Contractor/Subcontractor recognize the common interest of all OCIP insureds in jointly defending that Claim. To the fullest extent permitted by law, and absent a material, current, actual, conflict of interest that cannot be waived and which mandates the appointment of separate counsel under applicable law, Owner and Contractor/Subcontractor insured under the OCIP (i) shall be defended by the same counsel and by the same consultants and experts selected by Owner and/or the OCIP insurers at its or their sole discretion, regardless of whether the defense under the OCIP is provided subject to a reservation of rights issued by any OCIP insurer, and (ii) waive their respective rights to independent counsel as to any and all such Claims. This waiver is deemed to be continuing. Contractor/Subcontractor agrees to execute such other documents as are required to effectuate this waiver and fulfill the purpose of this Section 1.18.

(b) In defense of Claims arising under the OCIP, information shared with counsel engaged to defend the insureds (“Defense Counsel”) will be protected from disclosure and shall remain privileged even after the termination of the OCIP and/or the completion of the Project. Contractor/Subcontractor agrees not to disclose to any person or entity, other than to Owner and to Defense Counsel, any confidential information obtained in the defense or pursuit of Claims covered, or potentially covered, under the OCIP. Any such confidential information shall only be used in matters that arise directly pursuant to such OCIP Claims. However, disclosures of such confidential information may be made (i) upon written approval from Defense Counsel or (ii) where required by court order or by applicable law.

(c) Nothing in this Section 1.18 shall preclude Contractor/Subcontractors from engaging counsel of its choice, at its sole expense, to associate in the defense of any such Claim.

1.19 Duty of Care

Nothing contained in the OCIP insurance policies, the contract, these contractual provisions, any other contract document, or the Project Insurance Manual shall relieve Contractor/Subcontractor of its obligations to exercise due care in the performance of its duties in connection with the contract work and to complete the contract work in strict compliance with the contract documents.

NOTE: THE OWNER AND PROGRAM ADMINISTRATOR MUST APPROVE CHANGES TO ANY OCIP REQUIREMENT OR PROCEDURE. NO CONTRACTOR OR SUBCONTRACTOR HAS THE AUTHORITY TO AMEND THE OCIP REQUIREMENTS.

OCIP EXHIBIT A

PROTECTIVE SAFEGUARDS

APPLICABLE TO 'WOOD FRAME' PROJECTS ONLY:

The Builders Risk Policy will not pay for LOSS caused by or resulting from exposures, if the applicable protective safeguards are not maintained during the Builders Risk Policy term of INSURED PROJECT.

As a condition precedent to fire, theft, vandalism, and malicious mischief coverage provided by the Builders Risk Policy, the following protective safeguards will be maintained at every INSURED PROJECT site of Wood Frame construction insured by the Builders Risk Policy.

1. **Fencing** – The entire INSURED PROJECT site shall be surrounded with a six foot chain link fence suitably anchored in the ground and placed a reasonable distance from the insured property. Gates through the chain link fence shall be securely locked during non-working hours.
2. **Lighting** – The entire INSURED PROJECT site shall be illuminated from sunset to sunrise, each day.

**Wood Frame Projects with total insured values greater than \$15M may also be required to provide the following:

- Electronic Security – Electronic security by a contracted service from a surveillance company that owns and operates a UL-certified, North American based monitoring center. The surveillance system must be cloud-based and operational covering 100% of the INSURED PROJECT site utilizing infrared illumination or thermal imaging cameras. The electronic security system must have the following capabilities:
 - Live audible voice-over functionality;
 - Lighting or visual indication features;
 - Four hour back up battery life in the event AC power is lost.

OCIP EXHIBIT B

Project Insurance Manual

EXHIBIT B: OCIP Project Insurance Manual



www.sewup.org

**Statewide Educational Wrap Up Program (SEWUP) JPA
Owner Controlled Insurance Program (OCIP)**

Project Insurance Manual

This manual is intended to provide only a general overview of the Owner Controlled Insurance Program and does not in any way alter or take precedence over the language in the actual insurance policies and contracts. It makes no promise to provide insurance to those not enrolled in the Owner Controlled Insurance Program

Program Administrator:
*Keenan & Associates
SEWUP Department*

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Preface

This Manual

- Identifies responsibilities of the various parties involved in the project
- Provides a basic description of the OCIP coverage and program structure
- Describes audit and administrative procedures
- Provides answers to basic questions about the OCIP
- Provides claim reporting procedures
- Will be updated as necessary

This Manual Does Not

- Provide OCIP coverage interpretations
- Provide complete information about OCIP coverages (Refer to OCIP policies)
- Provide answers to specific claims questions

1.0 Introduction

The Statewide Educational Wrap Up Program JPA (SEWUP), of which this school district is a member, is providing an Owner Controlled Insurance Program (OCIP) for work performed at specific project sites, on behalf of the district, (herein referenced as the “District” or the “Owner”). The OCIP is an insurance program that insures eligible and enrolled subcontractors, for work performed at the Job Site (at times referenced herein as the “Work”). **Keenan & Associates**, hereinafter called “Program Administrator”, will administer the OCIP on behalf of the SEWUP JPA.

Certain subcontractors are excluded from this OCIP. These parties are identified in the Contract Documents and Section 3 (Definitions) of this manual.

The Owner / District will pay the insurance premiums for the OCIP coverage described in this manual. You should notify your insurer(s) to endorse your coverage to be excess and contingent over the insurance provided under this OCIP for on-site activities and the related costs. Each bidding prime or general contractor (“Contractor”) and subcontractors of every tier (“Subcontractor”) is required to exclude from its bid price and requests for payment the cost of insurance coverages that will be provided by the OCIP.

Note

The guidelines in this manual are to be used for informational purposes only. This manual does not constitute a contractual agreement. If conflicts exist between this manual and OCIP Insurance Policies, or this manual and the Contracts between the District, Construction Manager, and Contractor (Enrolled Parties), the OCIP Policies or Owner’s Contracts will govern.

1.1 Participation & Contractor Compliance

Participation in the OCIP is mandatory but not automatic. Enrollment eligibility will be determined upon completion of an online enrollment form which will include documentation of trade, scope of work, estimated value, estimated start and completion. All Contractors and Subcontractors of all tiers must register via the OCIP’s online portal (“WrapPortal”) (www.keenanwrap.com) and adhere to all program requirements, as specified in [Section 5.0](#).

The program Administrator will provide a User Name, Password and URL for website enrollment to each subcontractor upon entry of Subcontractor identifying information into WrapPortal by its Contractor or Parent Subcontractor.

Enrollment of each Contractor’s eligible Subcontractors is mandatory. Contractor shall notify Owner and the Program Administrator in writing of the identity of each Subcontractor regardless of enrollment eligibility and shall cause each Subcontractor to notify the Program Administrator in writing of the identity of each of its Sub-subcontractors, prior to such parties’ commencement of their portion of the Work and prior to their entry onto the Project. Contractors and subcontractors of all tiers shall not be deemed enrolled until the Program Administrator and OCIP insurers receive and approve a completed Contract Enrollment Form, for each awarded contract. Enrollment is required prior to commencement of on-site activities but no contractor shall be enrolled sooner than 30 days prior to their start date. Each Contractor/Subcontractor shall be solely responsible for any and all losses, damages, claims, liabilities, and suits arising out of such Subcontractor’s failure to enroll, or delay in enrolling, any of its Subcontractors.

Enrollment (Definition): Required application and documents to be submitted by Contractors/Subcontractors of all tiers for review by the OCIP Program Administrator for submission to the insurer.

Enrolled Contractor (Definition): All Eligible Contractors/Subcontractors of all tiers are considered Enrolled once required application and documents are received, reviewed, and processed by the OCIP Program Administrator and submitted to the insurer.

1.2 Subcontractor Eligibility

A. Eligible

Includes all Contractors and Subcontractors providing direct labor on the Project and excludes Ineligible contractors as defined below. Temporary labor services and leasing companies are to be treated as Eligible Contractors.

B. Ineligible Contractor (Excluded)

It is not the intent to insure certain entities and scopes of work, including, but not necessarily limited to the following: consultants; suppliers; abatement and/or removal of hazardous materials; vendors; off-site fabricators; materials dealers; surveyors; guard services; non-construction janitorial services; and truckers, including trucking to the Project where delivery is the only scope of work performed; and contractors performing landscape maintenance (though landscape work itself is covered). Ineligible parties are required to ensure that any eligible subcontractors who provide on-site labor comply with the OCIP Enrollment and are provided with a copy of this OCIP Manual. Program Administrator reserves the right to reconsider an ineligible entity's participation in the OCIP should its scope of work or contract change at any time. Ineligible contractors will be required to adhere to insurance certificate requirements as stated in section [4.0, under Contractor-Provided Insurance Coverage](#). In addition, any party deemed an Ineligible Contractor, but who has direct labor on the Project, will be required to participate in the Project Safety Program ([see Section 6.0](#)).

Any questions regarding a Subcontractor's status as "Eligible" or "Ineligible" should be referred by written request to Contractor and Owner and approved by the Program Administrator.

1.3 Project Site and Offsite Premises

Coverages provided by the OCIP are Project Site specific. The Project-Site must be designated by the Owner. The Project Site consists of any and all projects that are endorsed to this policy, which includes the:

1. Ways and means adjoining the endorsed project site.
2. Adjacent locations to the endorsed projects sites where incidental operations are being performed, excluding permanent locations.

With the exception of 1 and 2 mentioned above, off-site locations, labor and operations are not covered by the OCIP. It will be the responsibility of each contractor to maintain off-site insurance, as identified in Section 4.3, which specifies coverage types and minimum limits. Contractor will promptly furnish to the Owner, or their designated representative, Certificates of Insurance evidencing that all required insurance is in force.

2.0 Information Directory

2.1 Program Administrator

Keenan & Associates – SEWUP Department

2355 Crenshaw Blvd., Suite 200

Torrance, CA 90501

Phone: 800.654.8102

Questions Regarding OCIP

Refer questions concerning the OCIP and its administration or coverages to the Program Administrator. Answers to questions may also be found in [Section 9.0 - Frequency Asked Questions](#).

2.2 Insurance Companies

Workers' Compensation

General Liability

Excess Liability

Liberty Mutual Insurance

Certain Underwriters at Lloyd's of London

Certain Underwriters at Lloyd's of London

Endurance American Specialty Insurance Company

Crum & Forester Specialty Insurance Company

Texas Insurance Company

Fair American Select Insurance Company

Great American Assurance Company

Starr Surplus Lines Insurance Company

Westchester Surplus Lines Insurance Company

Navigators Specialty Insurance Company

Fortegra Specialty Insurance Company

Illinois Union Insurance Company

Berkley Assurance Company

Builder's Risk

Contractor's Pollution Liability

See Section 6 For Claims Reporting Instructions and Procedures.

3.0 OCIP Coverages

Description of Owner Controlled Insurance Program (OCIP) Coverages

The OCIP is for the benefit of the Owner and all Enrolled Contractor/Subcontractors who have on-site employees. OCIP coverage applies only to Work performed under the contract at the Project Site specified by the Owner. All Contractors must provide their own insurance for Automobile Liability and off-site locations, labor, and operations. The following coverages are provided by the OCIP:

Workers' Compensation and Employers Liability

Commercial General & Excess Liability

Builder's Risk

Contractor's Pollution Liability

A Certificate of Insurance evidencing workers' compensation & employer's liability, general and excess liability and pollution liability insurance will be issued to each contractor that is enrolled for

coverage in the OCIP (“Enrolled Party”) via WrapPortal. Other documentation including forms, posting notices, etc., will be provided to each Enrolled Party.

OCIP Disclaimer

The OCIP is intended to provide broad coverages and high limits, to all Enrolled Contractors/Subcontractors. The Owner does not warrant or represent that the OCIP coverages constitute an insurance program that completely addresses the risks of the Contractors/Subcontractors. Prior to contract award, it is the responsibility of all Contractors/Subcontractors to ensure that the OCIP coverages provided sufficiently address their insurance needs. Upon request, OCIP policies are available for review.

3.1 Workers’ Compensation and Employer’s Liability Insurance

Workers’ Compensation and Employer’s Liability Insurance will be provided in accordance with applicable state laws to all Enrolled Contractors/Subcontractors (each as a named insured, and issued an individual policy) reflecting the following Limits of Liability:

Coverage A – Workers’ Compensation

Liability imposed by the Workers’ Compensation and/or Occupational Disease statute of the State of California or governmental authority having jurisdiction related to the work performed on the Project.

Coverage B – Employers Liability

\$1,000,000 Bodily Injury each Accident
\$1,000,000 Bodily Injury by Disease – Policy Limit
\$1,000,000 Bodily Injury by Disease – Each Employee

Contractor Deductible: None

Exclusions: The known exclusions for this coverage are listed in [Section 10.0 – Known Policy Exclusions](#). This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The master policy effective date is October 1, 2025. The policy term is three years, with one automatic two-year renewal. The policy is intended to remain in effect for the length of the construction of the Project or through October 1, 2030 at 12:01am, whichever comes first. Warranty work and post contract repair work is excluded. Contractor and each Subcontractor is insured under the policy for the length of its work at the Project, or the policy end date, whichever comes first.

3.2 Commercial General Liability & Excess Liability Insurance

All Enrolled Contractors/Subcontractors are considered Named Insureds under SEWUP’s Master General & Excess Liability policies. The Master Policies are available for review by Contractors/Subcontractors, upon request to the Owner or the Program Administrator.

Primary Coverage: Total Limits for Bodily Injury and Property Damage

\$125,000,000 Each Occurrence
\$195,000,000 General Liability Aggregate
\$125,000,000 Products / Completed Operations Aggregate Limit

- Ten (10) year Products and Completed Operations Extension after project completion with a single non-reinstated aggregate limit.

Policy Forms: “Occurrence” Form

Contractor Deductible: None

Conditional Warranty:

Subsidence: It is expressly warranted that the Named Insured and all Contractors and Sub-Contractors comply with all recommendations contained in the geotechnical/ environmental reports. Failure to comply will result in subsidence coverage being null and void and a full subsidence exclusion would be re-instated.

EIFS Installation Agreement

The following terms and conditions shall be satisfied in connection with all EIFS work on any Project:

1. EIFS work is to be specifically identified and its value declared.
2. All EIFS work will be monitored by an independent EIFS inspection company to document compliance with manufacturers' handling and installation instructions.
3. EIFS product manufacturers and warranty providers will be identified and provided to the Owner.

Exclusions: This insurance does not provide coverage for products liability of any enrolled party for any product manufactured, assembled or otherwise worked upon away from the Project Site.

The known exclusions for this coverage are listed in Section 10.0 – Known Policy Exclusions. This list is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The master policy effective date is October 1, 2025. The policy is intended to remain in effect for the length of the Project or through October 1, 2030 at 12:01am, whichever comes first.

3.3 Builder's Risk Insurance

The Builders Risk Master Policy names the Owner as named insured and enrolled Contractors/Subcontractors as additional insureds. This Master policy is available for review by Contractors/Subcontractors, upon request to the Owner or the Program Administrator.

Primary Coverage: Builders Risk coverage will be in place during the course of construction of the Project. Such insurance shall be written on a repair or replacement cost basis, subject to exclusions, sub limits, property limitations and conditions. The policy covers materials, supplies, equipment, fixtures, or machinery, which will become a permanent part of the building or structure at the Project site specified, limited to policy terms, limits, and exclusions.

Deductible: A deductible, which shall be determined by the type of construction, will apply to each occurrence. The deductible schedule is as follows:

New Construction & Renovation

- \$5,000 - \$50,000 deductible (depending on type of structure) for Wood Frame, Masonry Non-Combustible or Joisted Masonry, and Fire Resistive / Non-Combustible.
- Up to \$100,000 deductible for Water Damage to All Construction Classifications.
- Deductibles are subject to increase if a Project's Builder's Risk term is extended 60 days or more

Contractor Deductible: Contractor/Subcontractors shall be responsible for the applicable deductible. The deductible shall apply to each occurrence and must be satisfied prior to payment of the loss. The deductible shall not be reimbursed by the OCIP Insurance Program or the District.

Exclusions: The known exclusions for this coverage are listed in [Section 10.0 – Known Policy Exclusions](#). This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The policy term is the term of the project.

Note:

All Contractors'/Subcontractors shall be responsible for any loss or damage to their personal property. This would include, but is not limited to, tools, equipment, mobile construction equipment, or materials NOT intended to be a permanent part of the building, whether owned, borrowed, used, leased, or rented by any Contractor/Subcontractor. Any insurance purchased by the Contractors/Subcontractors, or self-insurance, shall be the Contractors'/Subcontractors' sole source of recovery in the event of a loss.

3.4 Contractor's Pollution Liability Insurance

Contractor's Pollution Liability is written under a master liability policy. This Master policy is available for review by Contractors/Subcontractors, upon request to the Owner or the Program Administrator. Certificates of Insurance will be provided to all enrolled Contractors/Subcontractors, as named insured.

Primary Coverage: Bodily Injury or Property Damage from a pollution event as defined within the policy form resulting from covered operations or completed operations.

Limits: \$15,000,000 Per Claim / \$25,000,000 Policy Aggregate
Defense costs up to \$1,000,000 (outside the Limits of Liability)

Self Insured Retention: \$10,000 Each Claim

Contractor/Subcontractor shall be liable, at its expense; to the extent claims payable are attributable to their acts or omissions and/or the acts or omissions of its Subcontractors of any tier or any other entity or person for whom it may be responsible. The deductible amount shall not be reimbursed by the OCIP Insurance Program or the District.

Exclusions: The known exclusions for this coverage are listed in [Section 10.0 – Known Policy Exclusions](#). This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The master policy effective date is October 1, 2025. The policy is intended to remain in effect for the length of the Project or through October 1, 2030, at 12:01am, whichever comes first.

3.5 OCIP Certificates

All Enrolled Contractors/Subcontractors will receive their own Workers' Compensation policy. Certificates of Insurance will be furnished for the General Liability, Excess Liability, Contractor's Pollution Liability, and Builder's Risk coverages. These policies are available for review by the Contractor/Subcontractor, upon request to the Owner or the Program Administrator. Such policies or programs may be amended from time to time and the terms of such policies or programs are incorporated herein by reference. Contractors/Subcontractors hereby agree to be bound by the terms of coverage, as contained in such insurance policies and/or self-insurance programs.

4.0 Contractor Required Insurance

For any work under this contract, and until completion and final acceptance of the work by the Owner, the Contractors/Subcontractors shall, at their own expense, promptly furnish required Certificates of Insurance and Additional Insured Endorsements acceptable to the Owner and Program Administrator. Copies should be provided to the Program Administrator via WrapPortal, for both Project Site and Off-Site operations, within ten (10) days after award of the contract to all Contractors/Subcontractors and prior to commencement of on-site activities.

All required insurance shall be maintained, without interruption, from the date of commencement of on-site activities, until the date of the final payment or expiration of any extended period. Certificates and additional insured endorsements shall provide not less than thirty (30) days prior written notice to the Program Administrator, of any material change in the insurance, cancellation or non-renewal.

The OCIP places contractors and subcontractors into one of two main categories: Enrolled Contractors or Ineligible (Excluded) Contractors.

4.1 Verification of Required Insurance Coverages

A. Enrolled Contractor/Subcontractors:

- **Certificates of Insurance** must be provided, evidencing Workers' Compensation & Employer's Liability, and General Liability, Excess/Umbrella Liability insurance for off-site activities, and Automobile Liability insurance for on and off-site activities as per the insurance specifications in the Contract.
- **Additional Insured Endorsements** for Auto Liability. These endorsements must name **the District** specifically as additional insured. If the insured's policy has a 'Blanket' Additional Insured Endorsement and cannot name any entity, provide a copy of the endorsement for our review.

B. Ineligible (Excluded) Contractors/Subcontractors:

- **Certificates of Insurance** must be provided, evidencing Workers' Compensation & Employer's Liability, General Liability, Excess/Umbrella Liability and Automobile Liability insurance for all activities including both on-site and off-site activities as per the insurance specifications in the Contract.
- **Additional Insured Endorsements** for General Liability and Auto Liability. These endorsements must name **the District** specifically as additional insured. If the insured's policy has a 'Blanket' Additional Insured Endorsement and cannot name any entity, provide a copy of the endorsement for our review.
- **Waiver of Subrogation** for Workers Compensation and General Liability in favor of the owner.

4.2 Contractor Maintained Insurance Coverage

*Indicates off-site required coverage / **Indicates off-site & on-site required coverage

A. Workers' Compensation and Employer's Liability Insurance*

- Enrolled & Ineligible/Excluded Contractors
- Required limits on Certificate of insurance are as follows:

Subcontractors

Part 1: Workers' Compensation	California Statutory Benefits
Part 2: Employer's Liability	
\$1,000,000	Bodily Injury each Accident
\$1,000,000	Bodily Injury by Disease – Policy Limit
\$1,000,000	Bodily Injury by Disease – Each Employee

- Ineligible/Excluded Subcontractors must also provide **Waiver of Subrogation** for Workers' Compensation in favor of the owner.

B. General Liability Insurance*

- Enrolled & Ineligible/Excluded Subcontractors
- Minimum Required limits of insurance are as follows:

General/Prime Contractor	Subcontractor	
\$2,000,000	\$1,000,000	Bodily Injury and Property Damage Liability Per Occurrence
\$2,000,000	\$1,000,000	General Aggregate
\$2,000,000	\$1,000,000	Products/Completed Operations Aggregate
\$2,000,000	\$1,000,000	Personal/Adv. Injury Liability Any One Person or Organization

- It is recommended that the Designated Operations Covered by a Consolidated (Wrap-Up) Insurance Program (CG 21 31 05 09) endorsement be added to your primary general liability policy. This will ensure appropriate coverage for any off-site exposures associated with this OCIP project.

C. Automobile Liability Insurance**

- Enrolled & Ineligible/Excluded Subcontractors
- Must cover all vehicles owned by, hired by, or used on behalf of the Contractors/Subcontractors for both Project Site and off-site operations with the following minimum limits of liability:

General/Prime Contractor	Subcontractor	
\$2,000,000	\$1,000,000	Bodily Injury and Property Damage

D. Professional Liability Insurance**

- Enrolled & Ineligible/Excluded Subcontractors
- If Subcontractor's work requires design and/or design-assist services, or Subcontractor performs professional services of any kind, Subcontractor shall purchase and maintain, at

its sole cost and expense, Professional Liability (Errors and Omissions) insurance for all professional services provided.

- Subcontractor's policy shall include full prior acts coverage sufficient to cover the services under this agreement, with the following minimum limits of liability:
\$2,000,000 per Claim/Annual Aggregate
- Deductible or self-insured retention amount must not be greater than \$100,000 per claim, including coverage of contractual liability.
- Coverage must be maintained during the term of the contract and for so long as the insurance is reasonably available as provided herein, for a period of ten (10) years after completion of the services.

E. Environmental and Asbestos Abatement Coverages**

- Ineligible Subcontractors
- If Subcontractor's scope of work involves the removal of asbestos, the removal/replacement of underground tanks, or the removal of toxic chemicals and substances, the Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

\$2,000,000 per Claim/Aggregate

F. Aircraft or Watercraft Liability Insurance**

- If any Subcontractor requires the use of Aircraft or Watercraft at the Project Site, the Subcontractor shall purchase and maintain or cause the operator of the Aircraft or Watercraft to purchase and maintain, Aircraft or Watercraft liability insurance.
- Must insure passengers and the General Public against personal injury, bodily injury or property damage arising out of the ownership, maintenance, use or entrustment to others.
- Includes Aircraft or Watercraft owned or operated by or rented or loaned to any insured.
- Use includes operation and "loading or unloading". Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

\$5,000,000 per Claim/Aggregate

Please note, Drones are considered aircraft and coverage is expressly excluded from the OCIP policies.

4.3 Certificates of Insurance

The Project must be identified on the Certificate of Insurance in the "Description of Operations/Locations/Vehicles/Special Items" section. The Certificates of Insurance should name District, as the Certificate Holder, as specified below:

Certificate Holder:

{Insert District Name}

c/o Statewide Educational Wrap Up Program (SEWUP)

2355 Crenshaw Blvd., Suite 200

Torrance, CA 90501

4.4 Additional Insured Endorsements

The Owner must be specifically named on the Schedule of an Additional Insured Endorsement, under the section titled, "Name of Person or Organization", as specified below:

- **The District, CM, Architect, Inspector, the State of California, their officers, employees, agents, volunteers and independent contractors as additional insureds.**
- All Contractors must provide an additional insured endorsement for automobile liability.
- Ineligible/Excluded Contractors must provide an additional insured endorsement on both the Automobile Liability and General Liability policies and a waiver of subrogation on workers' compensation.

{Insert District Name}

c/o Statewide Educational Wrap Up Program (SEWUP)
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501

5.0 Contractor Responsibilities / Requirements

Throughout the course of the Project, Subcontractors will be responsible for reporting and maintaining certain records as outlined in this section.

All Subcontractors shall cooperate with, and require their tier Subcontractors to cooperate with, the Owner and the Program Administrator, regarding administration and operation of the OCIP. **Each Subcontractor must include this document with their bid specifications to any and all Subcontractors.**

Responsibilities of Subcontractors:

- Enrolling in the OCIP and assuring all eligible tier subcontractors promptly enroll in the OCIP, via WrapPortal, prior to the start of any work
- Complying with the provisions of the OCIP Manual and cooperating in the administration and operation of the OCIP
- Including OCIP Provisions in all subcontracts, as appropriate
- Identifying and removing from bid the cost of OCIP-provided insurance (by all eligible contractors / subcontractors)
- Providing each Subcontractor with a copy of the OCIP manual
- Providing timely evidence of insurance to the SEWUP Department via WrapPortal
- Notifying the SEWUP Department of all awarded subcontracts via WrapPortal
- Maintaining and reporting monthly payroll records (by all eligible subcontractors) via WrapPortal
- Complying with the OCIP Administrator's requests for information
- Complying with insurance, claim and safety procedures
- Notifying OCIP Administrator immediately of any insurance cancellation or non-renewal of Contractor required insurance
- Complying with the OCIP insurance policy requirements, including but not limited to, physical audit of payroll records by the insurance company or its representatives.

5.1 Contractor Bids & Change Orders - Removing Insurance Costs

The Owner / School District provides insurance for all eligible, Enrolled Contractors/Subcontractors for work performed at the project site(s). The Owner pays the insurance premiums for the OCIP coverages described in this manual under section 3.0 OCIP Coverages.

A. Contractor Insurance Cost Identification

Contractor's base bid shall exclude all costs for insurance coverages provided under the OCIP. If insurance cost is not removed, the bidder may not qualify as the lowest responsive bidder. The Bidder declares under penalty of perjury under California law, that the base bid excludes any costs relating to any insurance coverages afforded under the OCIP and that each subcontractor to the Bidder has similarly excluded costs for any insurance coverage afforded under the OCIP.

B. Change Order Pricing

All Contractors/Subcontractors declare, under penalty of perjury under California law, that any change order issued to the contract is priced to exclude any costs relating to any insurance coverage afforded under the OCIP.

5.2 Program Compliance

A. Participation in the OCIP is mandatory but not automatic. An Eligible contractor is not enrolled until the Program Administrator receives and approves the following items:

- Completed Contract Enrollment, for each awarded contract, within ten (10) days of Contract Award and prior to commencement of on-site activities. Enrollments can be completed and submitted electronically visiting www.keenanwrap.com
- Certificates of Insurance, evidencing Insurance for Workers' Compensation & General Liability coverages for off-site locations, labor, and operations
- Certificate of Insurance, including an Additional Insured Endorsement, naming the Owner as an Additional Named Insured, for Automobile Liability for both Project Site and Off-Site operations
- Policy Declarations pages, including proof of rates from your current policies

B. All Contractors/Subcontractors of all tiers shall cooperate with, and require their Subcontractors to cooperate with, the Owner and the Program Administrator in regard to the administration and operation of the OCIP.

C. All Contractors/Subcontractors further acknowledge and agree to comply fully and promptly with such safety, loss control, and quality control rules, requirements, and directives as may from time to time be promulgated by Owner, the Program Administrator and/or the OCIP insurers or any of its or their respective consultants, agents, or representatives. Nothing in this document or any other contract document or in the Project Insurance Manual, shall be deemed to render Owner or any of its affiliates of any tier an employer of Contractor/Subcontractor or any of its Subcontractors or any of its or their personnel or employees. **Failure to comply will be considered non-performance under the contract.**

OCIP Enrollment completed through WrapPortal by the following deadline:

- Subcontractors (All Tiers): Within ten (10) days of Contract Award and prior to commencement of On-site activities
-

All questions regarding enrollment compliance should be directed to the assigned OCIP Administrator.

Any Subcontractor who enrolls in the OCIP after their start date will have to provide a No-Known-Loss Letter to the Program Administrator, along with enrollment documentation.

For any work under this contract, and until completion and final acceptance of the work by the Owner, the Subcontractors shall, at their own expense, promptly furnish Certificates of Insurance to the Program Administrator before commencing work on the Project Site. Automobile Liability Insurance must be maintained for both Project Site and off-site operations.

5.3 Confirmation of Enrollment & Evidence of OCIP Coverages

Upon review of completed enrollment, OCIP Administrator will acknowledge acceptance of the Eligible Subcontractor into the Owner's OCIP, by issuing the following to each Enrolled Party:

- Confirmation Letter
- OCIP Certificates of Insurance
- Claims Kit, including DWC1 and MPN Notices

These documents, as issued by the OCIP Administrator, will clearly identify the effective dates of the OCIP coverages for the Contract. A separate Workers' Compensation policy will be issued and sent to each Enrolled Party.

Should an Enrolled Party perform work on several contracts/projects, an Enrollment Form must be completed for each contract. The OCIP Administrator will issue confirmation letters and certificates of insurance to each Enrolled Party for each separate contract. However, only one individual Workers' Compensation policy (that will apply to all contracts/projects) will be issued to each Enrolled Party.

Note:

Verify that the Workers' Compensation effective date, listed on your OCIP Certificate of Insurance, reflect the same date as your start date.

5.4 Payroll Reporting Compliance

Project Site Monthly Payroll Report Requirements

- Project Site Monthly Payroll must be submitted to the Program Administrator by the 10th of each month via WrapPortal until the completion of the contract and in no event shall be later than the 15th of each month. Payroll shall be reported only for labor performed at the project jobsite.
- Monthly Payroll Reporting is to begin from the enrollment effective date until the completion of the contract or the policy end date.
- Should no work be performed on the Project Site during a given month, each Enrolled Party is required to submit a form stating that "Non-Performance."
- Payroll reporting must summarize the unburdened payroll by Workers' Compensation Class Code. Certified payroll is not a requirement of the OCIP and cannot be accepted.
- If Monthly Payroll Report is not submitted to Program Administrator on a monthly basis, the Construction Manager and/or Owner can withhold payment until the report is received.

- For those Enrolled Parties performing Work under multiple contracts, for each contract, a Monthly Payroll Report is required each month until contract is finalized.
- All reported project site monthly payroll reported from October through the end of September is submitted by Program Administrator to the OCIP Insurance Carrier for auditing.
- Subcontractor shall keep and maintain accurate and classified records of their payroll for operations at the Project Site.
- A carrier audit may be performed using the reported payroll and other supporting documents. Contractor / Subcontractor agrees to cooperate with the OCIP insurance carrier(s) or their third-party auditors by responding to and providing documents as requested in a timely manner.

Workers' Compensation Insurance Rating Bureau Requirements

- **Payroll Reporting for Each Workers' Compensation Policy Issued** – Once an Eligible Contractor/Subcontractor is enrolled into the OCIP, the Program Administrator will issue a separate Workers' Compensation Policy. All Enrolled Subcontractors will need to comply with the rules and regulations of the California Workers Compensation Insurance Rating Bureau (WCIRB). This requires each Enrolled Party to maintain payroll records for each Contract under the policy issued. Such records will allocate the payroll by Workers' Compensation classification(s) and exclude the excess or premium paid for overtime (i.e., only the straight-time rate will apply to overtime hours worked).
- **Insurance Company Payroll Audit** - Each Enrolled Party must properly classify payrolls, as these are reported to the rating bureau for calculation of future Experience Modifiers for the Enrolled Party's firm. All Enrolled Parties shall make available for inspection and copying their respective company books, vouchers, contracts, documents, and records, of any and all types, for physical inspection by the auditors of the OCIP insurance carrier(s) or Owner's representatives. Availability of records must be for a reasonable time during the policy period, any extension, or during a final audit period, as required by the OCIP Insurance Policies.

5.5 Contract Completion / Closeout Compliance

Contractor's Completion Notice

- Contractor's Completion Notice must be submitted to the Program Administrator via WrapPortal, (www.keenanwrap.com) upon completion of contract work at the Project Site, which includes punch list items, but not warranty or service contract work.
- This form evidences all enrolled Contractors'/Subcontractors' actual start and completion dates, per each contract.
- Completion Notice information is reported to OCIP Insurance carrier to confirm coverage and payroll reporting requirements has ended for the contract.

6.0 Safety

It is the responsibility of each Subcontractor to maintain an environment free of recognized hazards. All Subcontractors shall exercise reasonable care to prevent work-related injuries; property and equipment damage at the Project, as well as minimize risk to the public and third-party property.

In the event of an accident, it shall be the responsibility of the employer and/or responsible Subcontractor to see that injured workers or members of the public are provided immediate

medical treatment. All appropriate medical and claim forms must be filed in accordance with the claim procedures developed for this Project by the Program Administrator. This includes notification to the appropriate state authorities, if necessary.

The Program Administrator shall conduct periodic loss control surveys on behalf of the District. These surveys will focus on evaluating the Subcontractors' efforts to minimize loss, assist in identifying loss exposures, and to recommend appropriate corrective measures. The Program Administrator is a resource to supplement the safety and loss prevention activity of Subcontractors. Its loss control survey activities or other activities of the Program Administrator and/or OCIP insurers do not in any way relieve the Contractors/Subcontractors of their responsibilities for Project safety.

6.1 Occupational Safety and Health Compliance

All Contractors/Subcontractors are expected to comply with all applicable local, state, and federal occupational safety and health. If additional safety and health requirements are set forth in the contract specifications, all contractors shall comply with these requirements

In addition, local, state, and federal occupational safety and health laws, the following standards apply to all OCIP Enrolled and Non-Enrolled Contractors/Subcontractors.

6.2 Safety Orientation

- a. Subcontractor employees shall be provided with a project specific safety orientation prior the start of the project. At a minimum, the orientation will address the following items:
 - i. The District's site safety requirements.
 - ii. Site specific safety hazards and protective measures for these hazards.
 - iii. Emergency telephone numbers and procedures.
 - iv. Local medical clinic/hospital information within the Medical Provider Network (MPN).

6.3 Program Management

- a. Each Subcontractors shall have the following safety programs:
 - i. Injury and Illness Prevention Plans
 - ii. Hazard Communication Programs
 - iii. Heat Illness Prevention Plans
- b. Each Contractor/Subcontractor shall have an onsite competent person responsible for occupational safety and health. **A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.**

6.4 Site Safety

According to industry practices, it is the responsibility of contractors of all tiers to exercise reasonable care to prevent work-related injuries; property and equipment damage at the project site, as well as minimize risk to the third-party persons and property. Subcontractors of all tiers shall be expected to comply with the following safety and loss control requirements:

- a. All Subcontractors shall identify their contact person(s) to the General or Prime Contractor.
- b. All Contractors/Subcontractors shall follow District procedures for dealing with the media.

- c. At all times, hard hats shall be worn in the construction environment. Hard hats shall meet the requirements of ANSI Z89.1. No modification to the shell or suspension is allowed except when such changes are approved by the manufacturer.
- d. 100% protective eyewear with side shield protection is required while in the construction environment, shop, or anytime eye hazards exist. Protective eyewear shall bear a legible and permanent "Z87" logo to indicate compliance with applicable ANSI/ASSE Standard.
- e. All construction employees shall wear clothing suitable for the weather and work conditions. At a minimum, this shall be short sleeved shirts, long pants, and leather or other protective work shoes or boots.
- f. Alcohol is prohibited on District property at all times.
- g. Contractors/Subcontractors will be required to respond to all District complaints about objectionable levels of dust or noise and will be required to provide prompt and appropriate abatement.
- h. Construction personnel cannot enter District grounds other than the construction site unless accompanied by District personnel and are allowed only "incidental" contact with students. Violations of these requirements by any construction employee will result in a mandatory background check of that employee – including fingerprinting – as required by state law.
- i. All prime contractors must attend the site-specific pre-construction meeting.
- j. No sexual reference or preference shall be permitted on any piece of clothing or the hardhat. Any employee observed disregarding this policy shall be removed from the job site until further notice.
- k. Contractors and subcontractors at all times shall keep premises free from debris such as waste, rubbish, and excess materials and equipment caused by contract work. Contractors and subcontractors shall not leave debris under, in, or about the premises. Upon completion of the contract work, contractors and subcontractors shall clean the interior and exterior of the building or improvement including fixtures, equipment, walls, floors, ceilings, roofs, windowsills and ledges, horizontal projections, and any areas where debris has collected so surfaces are free from foreign material or discoloration. Contractors and subcontractors shall clean and polish all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment and contractor shall also remove temporary fencing, barricades, planking and construction toilet and similar temporary facilities from the site. No glass containers are permitted on the site.
- l. Theft or willful damage to any property of the District, student, or other contractors will be prosecuted fully.
- m. All Contractors/Subcontractors will advise non-English speaking employees in their native language either in a written format or via an interpreter of these policies.

6.5 Mandatory 6 Foot Fall Protection

- a. Contractor/Subcontractor employees shall be protected from fall exposures of 6 feet or greater. Activities include but are not limited to:
 - i. Steel erection
 - ii. Decking
 - iii. Roofing
 - iv. Framing

- v. Work performed from scaffolds
- vi. Work performed from ladders

Exceptions: The following exceptions apply only to framers and wood frame activities

- i. When installing or “rolling” the joists, Cal/OSHA fall protection requirements shall govern.
 - ii. When framers are walking/working on securely braced joists, rafters, or roof trusses on center spacing not exceeding 24 inches, and more than 6’ from an unprotected side or edge, they shall be considered protected from falls between the joists, rafters, or roof trusses
- b. A safety monitor as means of fall protection is prohibited.
 - c. Ladder jacks, lean-to, and prop-scaffolds are prohibited.
 - d. Contractor/Subcontractors are required to provide training to their employees who might be exposed to a fall hazard prior to the exposure or upon hiring. This training shall be documented and available for review.
 - e. Methods of fall protection include but are not limited to the following:
 - i. Railings
 - ii. Covers for Floor, Roof, and Wall Openings
 - iii. Personal Fall Arrest Systems, Personal Fall Restraint Systems, and Positioning Devices
 - iv. Controlled Access Zones
 - f. The design and construction of railings shall conform to the Cal/OSHA Construction Safety Orders.
 - g. The use of wire ropes as top rails and intermediate rails of guardrail systems used for perimeter protection, or at interior openings such as stairways and elevator shafts, shall be installed in accordance with Cal/OSHA requirements. Additionally, wire ropes shall be secured to each support and taut at all times. The maximum deflection of the top rail when a load of 200 pounds is applied in any direction at any point of the top rail shall not exceed 3 inches in one direction which includes the free hanging sag in the wire rope.
 - h. The minimum parapet height allowed for fall protection is 42 inches or greater.
 - i. Covers used to cover floor, roof, and wall openings shall be secured in place to prevent accidental removal or displacement and shall be marked in accordance with Cal/OSHA Construction Safety Orders.
 - j. Covers used to cover floor and roof openings shall be capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time.
 - k. Controlled access zones shall be defined by a control line or other means that restricts access. Each line shall have a minimum breaking strength of 200 pounds. Signs shall be posted to warn unauthorized employees to stay out of the controlled access zone.
 - l. Control lines shall consist of ropes, wires, tapes, or equivalent materials. Control lines shall be erected and supported in accordance with Cal/OSHA Construction Safety Orders.
 - m. Scaffold Access/Egress. An internal ladder system with hatches and drop-down ladders or temporary stairs shall be provided for safe access/egress on all scaffolds 20 feet or

greater in height. External straight ladders are prohibited on all scaffolds if it exposes a user to a fall of 20 feet or greater in height.

- n. Exception: When adjustable scaffolds are utilized, test platforms shall not exceed 20' vertical intervals.

6.6 Crane Safety

- a. In accordance with Title 8, California Code of Regulations, section 5006.1, employers shall only permit operators who have a valid certificate (license) of competency to operate cranes. The operator shall have his license on his person, readily available for review.
- b. All cranes used in lifting service, exceeding 3 tons rated capacity, and their accessory gear shall not be used until the employer has ascertained that such equipment has been certificated in accordance with Cal/OSHA as evidenced by current and valid documents. Certificates (annual and quadrennial) attesting to current compliance with testing and examination standards shall be maintained, readily available for each crane.

6.7 Fire Prevention During Welding, Cutting, and Other Hot Work

- a. Contractors engaged in welding and allied processes, heat treating, grinding, cutting, thawing pipe, powder-driven fasteners, hot riveting, torch-applied roofing in conjunction with the requirements of NFPA 241, and similar applications producing or using a spark, flame, or heat shall adhere to National Fire Protection Association Standard 51B entitled "Standard for Fire Prevention During Welding, Cutting, and Other Hot Work."

6.8 Incident Investigation Requirements

- a. The contractor shall perform thorough, in-depth investigations and evaluations of all incidents. A formal incident investigation shall be conducted whenever any incident occurs, including, without limitation, both non-injury incidents and incidents involving first aid. Additionally, near miss accidents and/or incidents must be reported and undergo the same in-depth investigation, root cause analysis and lessons learned process. The incident investigation report shall be e-mailed to Keenan and Associates within 5 working days.
- b. Recommendations and lessons learned to prevent recurrence of incidents shall be documented and communicated to all employees of contractor and subcontractors through safety meetings

6.9 Return to Work

The District and OCIP Carrier are committed to working with all Enrolled Contractors and Subcontractors to promote the successful & timely return to work of injured employees following a work-related injury. The purpose of this policy is to ensure that Enrolled Contractor/Subcontractor employees who temporarily cannot return to their normal duties due to job-related injury or illness but can safely perform transitional duties while recovering is offered appropriate transitional duties for a limited time only.

- a. An employee who has experienced a job-related injury requiring medical treatment must provide a proper medical release prior to returning to work.
- b. An employee who has been removed from the jobsite ambulatory must provide a proper medical release prior to returning to work.
- c. Each Enrolled Contractor/Subcontractor will cooperate with the OCIP Carrier to facilitate the return to work of any injured employee capable of safely performing transitional duties.

- d. When the employee is released to transitional duties, it is the Enrolled Contractor/Subcontractor's responsibility to facilitate the injured employee's return to work.
- e. The Enrolled Contractor/Subcontractor is fully expected to accommodate the injured employee and facilitate the return to work.
- f. It will be the responsibility of the Insurance Carrier to maintain communication with the treating physician and the Enrolled Contractor/Subcontractor to facilitate the prompt return of an employee to full work status.

6.10 Conflicting Safety Requirements:

Contractors and subcontractors shall adhere to all applicable federal, state, local, and contractual safety and health requirements. If there is a conflict between any of these safety and health requirements, the most stringent requirement shall apply.

6.11 Noncompliance and Unsafe Practices

Owner or their representative shall have the authority to immediately cease any and all operation (s) on the jobsite that is deemed by Owner or their representative to be unsafe to property or has the potential to cause Bodily Injury, pursuant to Title VIII California Code of Regulation, Section 1511. Any such cession of work shall not constitute recoverable delay or other contractual remedies for liquidated damages and may expose the offending contractor to any such losses to the District or other trades.

6.12 Professional Conduct Clause

Contractors and subcontractors shall at all times adhere to safety requirements (contractual and regulatory) and shall encourage safe and professional behavior among their employees. Contractor and subcontractors shall not allow on the job site any unfit person, unsafe person, anyone unskilled and unqualified to perform the work assigned to them, or anyone exhibiting such qualities. Any person in the employ of the contractor or subcontractor whom the District or the District's agent/representative may deem incompetent, unsafe, or unfit shall be immediately dismissed from the OCIP job site and shall not again be allowed on the OCIP the job site except with the written consent of District or the District's agent/representative. The District reserves the right to request that the contractor or subcontractor's assigned Project Supervisor/Manager be replaced immediately.

7.0 Claims Reporting

Accident/Claims Reporting Procedures - Overview

This section describes the basic procedures for reporting SEWUP claims: Workers' Compensation, General Liability, Pollution Liability, and Damage to the Project (Builder's Risk).

The OCIP Administrator provides an Accident Claims Reporting Guide to Enrolled Contractors and Subcontractors. The Accident Claims Reporting Guide provides instructions and necessary information for reporting a claim, including policy numbers and site location codes. This manual includes the required claim forms and postings. Additional claim forms can be obtained from the OCIP Administrator upon request.

7.1 Workers' Compensation Claim Reporting & Procedures

If the injury requires a doctor (or medical office) visit or involves lost time, please follow the procedures listed below.

Contractors'/Subcontractors' on-site personnel must follow these procedures if any employee is involved in an accident or occurrence resulting in bodily injury or death:

The main responsibility for any Contractor and Subcontractor is first to see that the injured worker receives immediate medical care. Immediately contact 911 for any serious, traumatic, and life-threatening injuries.

If an employee reports a work injury or illness that is minor and does not require a doctor visit or time off from work, the supervisor should refer the employee to the nearest **First Aid Treatment** available at the jobsite.

Call Liberty Mutual Insurance Company at **1-800-362-0000** or email them at CLclaimsreports@libertymutual.com to report the injury. Access the Workers' Compensation Claim Kit, sent to you by the Program Administrator, which contains forms to be completed by employee and employer, as well as accident reporting guidelines. Have the following items ready when reporting the claim:

- SEWUP Workers' Compensation Policy Number (Provided at time of enrollment)
- SEWUP Site Location Code

Medical Provider Network (MPN)

Liberty Mutual Insurance, the Statewide Educational Wrap Up Program's insurance carrier, has implemented the following Medical Provider Network (MPN):

Liberty Mutual Insurance MPN

The above MPN is to be utilized for the medical treatment of injured employees, unless the employee has pre-designated their medical provider prior to the date of loss. In emergency situations, it is always recommended that the injured worker be treated at an emergency medical facility first, and then sent to a physician in the Medical Provider Network (MPN).

MPN Regulations & Guidelines:

- California MPN rules and regulations require that the injured worker must receive the Full Written MPN Notification when an injury is reported, or at the time of injury. The English version is given to English speaking employees and the Spanish version is given to Spanish speaking employees. The Full Written MPN Notification must also be given to the injured worker when changing to and transferring open claims to the Gallagher Bassett Platinum MPN.
- The MPN regulations are silent about Employee Acknowledgement Letters. As an employer, you have the right to use acknowledgement letters for your employees to sign when you give your employee the Full Written MPN Notification.
- An MPN Panel Card shall be posted at SEWUP Project Jobsite, Displaying the Name, Address and a Map of Designated Medical Clinic close to the jobsite.
- **For locating participating medical providers** within the Liberty Mutual Insurance MPN, use your Internet Browser to access the below website, which will provide links for locating a medical provider within the network by specialty and by location,

<https://lmi.co/LMnetworks>

State Required Workers' Compensation Forms

The Labor Code requires that an employee report any injury immediately to the employer. There are essential requirements for both the employer and employee to after the injury has been reported.

The Labor Code provides for possible penalties to be assessed if the following timelines are not met:

- Provision of the Employee Claim Form, DWC-1; report within one (1) working day of the employer's knowledge of a disability or injury beyond first aid. Each employer is responsible for providing this form to an injured employee. Should the employee not be available for hand delivery, mail the DWC-1 to the employee at their home address.
- Provision of the Employer's Report of Injury, Form 5020; report, within five (5) days of knowledge, every occupational injury or illness which results in lost time beyond the date of the incident or requires medical treatment at a medical facility. In addition, every serious illness/injury or death must be reported immediately by telephone or fax to the nearest office of the California Division of Occupational Safety and Health.

7.2 General Liability Claim Reporting

Contractors/Subcontractor must immediately report all known or suspected First Party, Third Party or Pollution Liability incidents occurring at the Project Site involving bodily injury, death, or any damage to property to the following:

- Keenan & Associates - 1-310-212-0363 x.2116. Have the following information ready when reporting claim
 - SEWUP General Liability Policy Number
 - SEWUP Site Location Code
- Program Administrator (SEWUP) – Email: TMyer@Keenan.com & SEWUP@keenand.com, Phone: (800) 654-8102. Notice of Occurrence - Accident/Incident Report may be email or faxed.

Note:

Always take appropriate emergency measures to prevent additional injury or damage, including contacting police and fire authorities as required by law.

7.3 Builder's Risk Claim Reporting

Contractors/Subcontractors must immediately report all property damage to your work or work of any other Contractor/Subcontractor at the Project Site, to the following:

- Keenan & Associates - 1-310-212-0363 x.2116
- Ace USA Property Claims – Email: Propertyfirstnotices@acegroup.com, Phone: (800) 433-0385
- Program Administrator (SEWUP) – Email: TMyer@Keenan.com & SEWUP@keenand.com, Phone: (800) 654-8102.

Note:

Always take appropriate emergency measures to prevent additional injury or damage, including contacting police and fire authorities as required by law.

7.4 Contractor's Pollution Liability Claim Reporting

Contractors/Subcontractors must immediately report all third-party accidents related to a known or suspected pollution incident at the Project Site involving bodily injury, death, or any damage to property to the following:

- Keenan & Associates - 1-310-212-0363 x.2116
- Berkley Assurance Company - Electronic Reporting - BCPclaims@BerkleyCP.com
- Program Administrator (SEWUP) – Email: TMyer@Keenan.com & SEWUP@keenan.com, Phone: (800) 654-8102.

7.5 Automobile Claim Reporting

NO coverage is provided for automobile use by Contractors/Subcontractors under the OCIP. It is the sole responsibility of each Contractor and Subcontractor to report claims involving their automobiles to their own insurance carrier.

7.6 Instructions and Procedures – Litigation Papers, Legal Documents, etc.

If your firm is served with a lawsuit arising out of your involvement with the Owner's Project, or if receipt of litigation papers or legal documents is your first notice of a claim, forward to the following:

- Program Administrator (SEWUP) – Email: SEWUP@keenan.com, Phone: (800) 654-8102

7.7 Investigation Assistance/Confirmation of Claim Receipt

All Contractors/Subcontractors will assist in the investigation of any accident or occurrence involving injury to persons or property. All Contractors/Subcontractors must cooperate with the companies involved in adjusting any claim by securing and giving evidence and obtaining the participation and attendance of witnesses required for the investigation and defense of any claim or suit.

Upon receipt of the claim or incident from the Contractor, the respective OCIP insurance carrier will send a claims acknowledgment letter with the assigned claims file number. Always cooperate with the Owner or the OCIP insurer representatives in the accident investigation.

8.0 Required Project Forms

- **8.1 First Report of Injury (5020)**
- **8.2 Workers' Compensation Claim Form (DWC-1)**
- **8.3 Notice of Occurrence - Accident/Incident Report – General Liability, Pollution, Builders Risk**

8.1 First Report of Injury (5020)

District Name: _____

Project Name: _____

State of California EMPLOYER'S REPORT OF OCCUPATIONAL INJURY OR ILLNESS		PLEASE COMPLETE (TYPE, IF POSSIBLE). MAIL TWO COPIES TO:		OSHA CASE NO. ☐ FATALITY	
Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers compensation benefits or payments of guilty of a felony.		NOTICE: California law requires employers to report within five days of knowledge every occupational injury or illness which results in lost time beyond the date of the incident OR requires medical treatment beyond first aid. If an employee subsequently dies as a result of a previously reported injury or illness, the employer must file within five days of knowledge an amended report indicating death. In addition, every serious illness/injury or death must be reported immediately by telephone or telegraph to the nearest office of the California Division of Occupational Safety and Health			
E M P L O Y E R	1. FIRM NAME		1A. POLICY NUMBER		DO NOT USE THIS COLUMN
	2. MAILING ADDRESS (Number and Street, City, ZIP)		2A. PHONE NUMBER		Case No.
	3. LOCATION, IF DIFFERENT FROM MAILING ADDRESS (Number and Street, City, ZIP)		3A. LOCATION CODE		Ownership
	4. NATURE OF BUSINESS, e.g., painting contractor, wholesale grocer, sawmill, hotel, etc.		5. STATE UNEMPLOYMENT INSURANCE ACCT NUMBER		Industry
E M P L O Y E E	6. TYPE OF EMPLOYER ☐ PRIVATE ☐ STATE ☐ CITY ☐ COUNTY ☐ SCHOOL DIST. ☐ OTHER GOV. - SPECIFY _____				Occupation
	7. EMPLOYEE NAME		8. SOCIAL SECURITY NUMBER	9. DATE OF BIRTH (mm dd yy)	Sex
	10. HOME ADDRESS (Number and Street, City, ZIP)		10A. PHONE NUMBER		Age
	11. SEX ☐ MALE ☐ FEMALE		12. OCCUPATION (Regular job title - NO initials, abbreviations or numbers)		13. DATE OF HIRE (mm dd yy)
I N J U R Y O R I L L N E S S	14. EMPLOYEE USUALLY WORKS hours _____ days _____ total per day per week wky. hrs		14A. EMPLOYMENT STATUS (check applicable status at time of injury) regular full-time part time temp. seasonal		14B. Under what class code of your policy were wages assigned
	15. GROSS WAGES/SALARY \$ _____ PER _____		16. OTHER PAYMENTS NOT REPORTED AS WAGES/Salary (e.g., tips, meals, lodging, overtime, bonuses, etc.)? ☐ YES \$ _____ ☐ NO		Weekly Hours
	17. DATE OF INJURY OR ONSET OF ILLNESS (mm dd yy)		18. TIME INJURY ILLNESS OCCURRED A.M. P.M.		19. TIME EMPLOYEE BEGAN WORK A.M. P.M.
	20. IF EMPLOYEE DIED, DATE OF DEATH (mm dd yy)		21. UNABLE TO WORK FOR AT LEAST ONE FULL DAY AFTER DATE OF INJURY ☐ YES ☐ NO		Weekly Wage
	22. DATE LAST WORKED (mm dd yy)		23. DATE RETURNED TO WORK (mm dd yy)		24. IF STILL OFF WORK CHECK THIS BOX ☐
	25. PAID FULL WAGES FOR DAY OF INJURY OR LAST DAY WORKED ☐ YES ☐ NO		26. SALARY BEING CONT'D? ☐ YES ☐ NO		27. DATE OF EMPLOYER'S KNOWLEDGE NOTICE OF INJURY/ILLNESS (mm dd yy)
	28. DATE EMPLOYEE WAS PROVIDED EMPLOYEE CLAIM FORM (mm dd yy)		29. SPECIFIC INJURY/ILLNESS AND PART OF BODY AFFECTED, MEDICAL DIAGNOSIS, if available, e.g., second degree burns on right arm, tendonitis of left elbow, lead poisoning		Nature of Injury
	30. LOCATION WHERE EVENT OR EXPOSURE OCCURRED (Number and Street, City)		30A. COUNTY		30B. ON EMPLOYER'S PREMISES ☐ YES ☐ NO
	31. DEPARTMENT WHERE EVENT OR EXPOSURE OCCURRED, e.g. shipping department, machine shop.		32. OTHER WORKERS INJURED/ILL IN THIS EVENT? ☐ YES ☐ NO		Source
	33. EQUIPMENT, MATERIALS AND CHEMICALS THE EMPLOYEE WAS USING WHEN EVENT OR EXPOSURE OCCURRED, e.g., acetylene, welding torch, farm tractor, scaffold		34. SPECIFIC ACTIVITY THE EMPLOYEE WAS PERFORMING WHEN EVENT OR EXPOSURE OCCURRED, e.g., welding seams of metal forms, loading boxes into truck		Event
35. HOW INJURY/ILLNESS OCCURRED. DESCRIBE SEQUENCE OF EVENTS SPECIFY OBJECT OR EXPOSURE WHICH DIRECTLY PRODUCED THE INJURY/ILLNESS (e.g., worker stepped back to inspect work and slipped on scrap material. As he fell, he brushed against fresh weld and burned right hand). USE SEPARATE SHEET IF NECESSARY					
36. NAME AND ADDRESS OF PHYSICIAN (Number and Street, City, ZIP)				36A. PHONE NUMBER	
37. IF HOSPITALIZED AS AN INPATIENT, NAME AND ADDRESS OF HOSPITAL (Number and Street, City, ZIP)				37A. PHONE NUMBER	
COMPLETED BY (type or print)		SIGNATURE		TITLE	DATE

8.2 Workers' Compensation Claim Form (DWC-1)

Formulario de Reclamo de Compensación para Trabajadores (DWC 1) y Notificación de Posible Elegibilidad

If you are injured or become ill, either physically or mentally, because of your job, including injuries resulting from a workplace crime, you may be entitled to workers' compensation benefits. Attached is the form for filing a workers' compensation claim with your employer. **You should read all of the information below.** Keep this sheet and all other papers for your records. You may be eligible for some or all of the benefits listed depending on the nature of your claim. If required you will be notified by the claims administrator, who is responsible for handling your claim, about your eligibility for benefits.

To file a claim, complete the "Employee" section of the form, keep one copy and give the rest to your employer. Your employer will then complete the "Employer" section, give you a dated copy, keep one copy and send one to the claims administrator. Benefits can't start until the claims administrator knows of the injury, so complete the form as soon as possible.

Medical Care: Your claims administrator will pay all reasonable and necessary medical care for your work injury or illness. Medical benefits may include treatment by a doctor, hospital services, physical therapy, lab tests, x-rays, and medicines. Your claims administrator will pay the costs directly so you should never see a bill. For injuries occurring on or after 1/1/04, there is a limit on some medical services.

The Primary Treating Physician (PTP) is the doctor with the overall responsibility for treatment of your injury or illness. Generally your employer selects the PTP you will see for the first 30 days, however, in specified conditions, you may be treated by your predesignated doctor. If a doctor says you still need treatment after 30 days, you may be able to switch to the doctor of your choice. Special rules apply if your employer offers a Health Care Organization (HCO) or after 1/1/05, has a medical provider network. Contact your employer for more information. If your employer has not put up a poster describing your rights to workers' compensation, you may choose your own doctor immediately.

Within one working day after an employee files a claim form, the employer shall authorize the provision of all treatment, consistent with the applicable treating guidelines, for the alleged injury and shall continue to provide treatment until the date that liability for the claim is accepted or rejected. Until the date the claim is accepted or rejected, liability for medical treatment shall be limited to ten thousand dollars (\$10,000).

Disclosure of Medical Records: After you make a claim for workers' compensation benefits, your medical records will not have the same privacy that you usually expect. If you don't agree to voluntarily release medical records, a workers' compensation judge may decide what records will be released. If you request privacy, the judge may "seal" (keep private) certain medical records.

Payment for Temporary Disability (Lost Wages): If you can't work while you are recovering from a job injury or illness, you will receive temporary disability payments. These payments may change or stop when your doctor says you are able to return to work. These benefits are tax-free. Temporary disability payments are two-thirds of your average weekly pay, within minimums and maximums set by state law. Payments are not made for the first three days you are off the job unless you are hospitalized overnight or cannot work for more than 14 days.

Si Ud. se lesiona o se enferma, ya sea física o mentalmente, debido a su trabajo, incluyendo lesiones que resulten de un crimen en el lugar de trabajo, es posible que Ud. tenga derecho a beneficios de compensación para trabajadores. Se adjunta el formulario para presentar un reclamo de compensación para trabajadores con su empleador. **Ud. debe leer toda la información a continuación.** Guarde esta hoja y todos los demás documentos para sus archivos. Es posible que usted reúna los requisitos para todos los beneficios, o parte de éstos, que se enumeran, dependiendo de la índole de su reclamo. Si se requiere, el/la administrador(a) de reclamos, quien es responsable del manejo de su reclamo, le notificará a usted, lo referente a su elegibilidad para beneficios.

Para presentar un reclamo, complete la sección del formulario designada para el "Empleado", guarde una copia, y déle el resto a su empleador. Entonces, su empleador completará la sección designada para el "Empleador", le dará a Ud. una copia fechada, guardará una copia, y enviará una al/a la administrador(a) de reclamos. Los beneficios no pueden comenzar hasta, que el/la administrador(a) de reclamos se entere de la lesión, así que complete el formulario lo antes posible.

Atención Médica: Su administrador(a) de reclamos pagará toda la atención médica razonable y necesaria, para su lesión o enfermedad relacionada con el trabajo. Es posible que los beneficios médicos incluyan el tratamiento por parte de un médico, los servicios de hospital, la terapia física, los análisis de laboratorio y las medicinas. Su administrador(a) de reclamos pagará directamente los costos, de manera que usted nunca verá un cobro. Para lesiones que ocurren en o después de 1/1/04, hay un límite de visitas para ciertos servicios médicos.

El Médico Primario que le Atiende-Primary Treating Physician **PTP** es el médico con toda la responsabilidad para dar el tratamiento para su lesión o enfermedad. Generalmente, su empleador selecciona al PTP que Ud. Verá durante los primeros 30 días. Sin embargo, en condiciones específicas, es posible que usted pueda ser tratado por su médico predesignado. Si el doctor dice que usted aún necesita tratamiento después de 30 días, es posible que Ud. pueda cambiar al médico de su preferencia. Hay reglas especiales que son aplicables cuando su empleador ofrece una Organización del Cuidado Médico (HCO) o después de 1/1/05 tiene un Sistema de Proveedores de Atención Médica. Hable con su empleador para más información. Si su empleador no ha colocado un poster describiendo sus derechos para la compensación para trabajadores, Ud. puede seleccionar a su propio médico inmediatamente.

El empleador autorizará todo tratamiento médico consistente con las directivas de tratamiento aplicables a la lesión o enfermedad, durante el primer día laboral después que el empleado efectúa un reclamo para beneficios de compensación, y continuará proveyendo este tratamiento hasta la fecha en que el reclamo sea aceptado o rechazado. Hasta la fecha en que el reclamo sea aceptado o rechazado, el tratamiento médico será limitado a diez mil dólares (\$10,000).

Divulgación de Expedientes Médicos: Después de que Ud. presente un reclamo para beneficios de compensación para los trabajadores, sus expedientes médicos no tendrán la misma privacidad que usted normalmente espera. Si Ud. no está de acuerdo en divulgar voluntariamente los expedientes médicos, un(a) juez de compensación para trabajadores posiblemente decida qué expedientes se revelarán. Si Ud. Solicita privacidad, es posible que el/la juez "selle" (mantenga privados) ciertos expedientes médicos.

Pago por Incapacidad Temporal (Sueldos Perdidos): Si Ud. no puede trabajar, mientras se está recuperando de una lesión o enfermedad relacionada con el trabajo, Ud. recibirá pagos por incapacidad temporal. Es posible que estos pagos cambien o paren, cuando su médico diga que Ud. está en condiciones de regresar a trabajar. Estos beneficios son libres de impuestos. Los pagos por incapacidad temporal son dos tercios de su pago semanal promedio, con cantidades mínimas y máximas establecidas por las leyes estatales. Los pagos no se hacen durante los primeros tres



Return to Work: To help you to return to work as soon as possible, you should actively communicate with your treating doctor, claims administrator, and employer about the kinds of work you can do while recovering. They may coordinate efforts to return you to modified duty or other work that is medically appropriate. This modified or other duty may be temporary or may be extended depending on the nature of your injury or illness.

Payment for Permanent Disability: If a doctor says your injury or illness results in a permanent disability, you may receive additional payments. The amount will depend on the type of injury, your age, occupation, and date of injury.

Vocational Rehabilitation (VR): If a doctor says your injury or illness prevents you from returning to the same type of job and your employer doesn't offer modified or alternative work, you may qualify for VR. If you qualify, your claims administrator will pay the costs, up to a maximum set by state law. VR is a benefit for injuries that occurred prior to 2004.

Supplemental Job Displacement Benefit (SJDB): If you do not return to work within 60 days after your temporary disability ends, and your employer does not offer modified or alternative work, you may qualify for a nontransferable voucher payable to a school for retraining and/or skill enhancement. If you qualify, the claims administrator will pay the costs up to the maximum set by state law based on your percentage of permanent disability. SJDB is a benefit for injuries occurring on or after 1/1/04.

Death Benefits: If the injury or illness causes death, payments may be made to relatives or household members who were financially dependent on the deceased worker.

It is illegal for your employer to punish or fire you for having a job injury or illness, for filing a claim, or testifying in another person's workers' compensation case (Labor Code 132a). If proven, you may receive lost wages, job reinstatement, increased benefits, and costs and expenses up to limits set by the state.

You have the right to disagree with decisions affecting your claim. If you have a disagreement, contact your claims administrator first to see if you can resolve it. If you are not receiving benefits, you may be able to get State Disability Insurance (SDI) benefits. Call State Employment Development Department at (800) 480-3287.

You can obtain free information from an information and assistance officer of the State Division of Workers' Compensation, or you can hear recorded information and a list of local offices by calling (800) 736-7401. You may also go to the DWC web site at www.dir.ca.gov. Link to Workers' Compensation.

You can consult with an attorney. Most attorneys offer one free consultation. If you decide to hire an attorney, his or her fee will be taken out of some of your benefits. For names of workers' compensation attorneys, call the State Bar of California at (415) 538-2120 or go to their web site at www.californiaspecialist.org.

as en que Ud. no trabaje, a menos que Ud. sea hospitalizado(a) de noche, o no pueda trabajar durante más de 14 días.

Regreso al Trabajo: Para ayudarle a regresar a trabajar lo antes posible, Ud. debe comunicarse de manera activa con el médico que le atiende, el/la administrador(a) de reclamos y el empleador, con respecto a las clases de trabajo que Ud. puede hacer mientras se recupera. Es posible que ellos coordinen esfuerzos para regresarle a un trabajo modificado, o a otro trabajo, que sea apropiado desde el punto de vista médico. Este trabajo modificado, u otro trabajo, podría extenderse o no temporalmente, dependiendo de la índole de su lesión o enfermedad.

Pago por Incapacidad Permanente: Si el doctor dice que su lesión o enfermedad resulta en una incapacidad permanente, es posible que Ud. reciba pagos adicionales. La cantidad dependerá de la clase de lesión, su edad, su ocupación y la fecha de la lesión.

Rehabilitación Vocacional: Si el doctor dice que su lesión o enfermedad no le permite regresar a la misma clase de trabajo, y su empleador no le ofrece trabajo modificado o alterno, es posible que usted reúna los requisitos para rehabilitación vocacional. Si Ud. reúne los requisitos, su administrador(a) de reclamos pagará los costos, hasta un máximo establecido por las leyes estatales. Este es un beneficio para lesiones que ocurrieron antes de 2004.

Beneficio Suplementario por Desplazamiento de Trabajo: Si Ud. No vuelve al trabajo en un plazo de 60 días después que los pagos por incapacidad temporal terminan, y su empleador no ofrece un trabajo modificado o alterno, es posible que usted reúna los requisitos para recibir un vale no-transferible pagadero a una escuela para recibir un Nuevo entrenamiento y/o mejorar su habilidad. Si Ud. reúne los requisitos, el administrador(a) de reclamos pagará los costos hasta un máximo establecido por las leyes estatales basado en su porcentaje de la incapacidad permanente. Este es un beneficio para lesiones que ocurren en o después de 1/1/04.

Beneficios por Muerte: Si la lesión o enfermedad causa la muerte, es posible que los pagos se hagan a los parientes o a las personas que vivan en el hogar, que dependían económicamente del/de la trabajador(a) difunto(a).

Es ilegal que su empleador le castigue o despidan, por sufrir una lesión o enfermedad en el trabajo, por presentar un reclamo o por atestiguar en el caso de compensación para trabajadores de otra persona. (El Código Laboral sección 132a). Si es probado, puede ser que usted reciba pagos por pérdida de sueldos, reposición del trabajo, aumento de beneficios, y gastos hasta un límite establecido por el estado. Ud. tiene derecho a estar en desacuerdo con las decisiones que afecten su reclamo. Si Ud. tiene un desacuerdo, primero comuníquese con su administrador(a) de reclamos, para ver si usted puede resolverlo. Si usted no está recibiendo beneficios, es posible que Ud. pueda obtener beneficios de Seguro Estatal de Incapacidad (SDI). Llame al Departamento Estatal del Desarrollo del Empleo (EDD) al (800) 480-3287.

Ud. puede obtener información gratis, de un oficial de información y asistencia, de la División estatal de Compensación al Trabajador (*Division of Workers' Compensation - DWC*), o puede escuchar información grabada, así como una lista de oficinas locales, llamando al (800) 736-7401. Ud. también puede ir al sitio electrónico en el Internet de la DWC en www.dir.ca.gov. Enlázese a la sección de Compensación para Trabajadores.

Ud. puede consultar con un(a) abogado(a). La mayoría de los abogados ofrecen una consulta gratis. Si Ud. decide contratar a un(a) abogado(a), sus honorarios se tomarán de sus beneficios. Para obtener nombres de abogados de compensación para trabajadores, llame a la Asociación Estatal de Abogados de California (*State Bar*) al (415) 538-2120, ó vaya a su sitio electrónico en el Internet en www.californiaspecialist.org.

DIVISION OF WORKERS' COMPENSATION

WORKERS COMPENSATION CLAIM FORM (DWC 1)

Employee: Complete the "Employee" section and give the form to your employer. Keep a copy and mark it "Employee's Temporary Receipt" until you receive the signed and dated copy from your employer. You may call the Division of Workers' Compensation and hear recorded information at (800) 736-7401. An explanation of workers' compensation benefits is included as the cover sheet of this form.

You should also have received a pamphlet from your employer describing workers' compensation benefits and the procedures to obtain them.

Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of a felony.

Estado de California

Departamento de Relaciones Industriales

DIVISION DE COMPENSACIÓN AL TRABAJADOR

PETITION DEL EMPLEADO PARA DE
COMPENSACIÓN DEL TRABAJADOR (DWC 1)

Empleado: Complete la sección "Empleado" y entregue la forma a su empleador. Quedese con la copia designada "Recibo Temporal del Empleado" hasta que Ud. reciba la copia firmada y fechada de su empleador. Ud. puede llamar a la División de Compensación al Trabajador al (800) 736-7401 para oír información grabada. En la hoja cubierta de esta forma esta la explicación de los beneficios de compensación al trabajador.

Ud. también debería haber recibido de su empleador un folleto describiendo los beneficios de compensación al trabajador lesionado y los procedimientos para obtenerlos.

Toda aquella persona que a propósito haga o cause que se produzca cualquier declaración o representación material falsa o fraudulenta con el fin de obtener o negar beneficios o pagos de compensación a trabajadores lesionados es culpable de un crimen mayor "felonía".

Employee—complete this section and see note above. *Empleado—complete esta sección y note la notación arriba.*

1. Name. *Nombre.* _____ Today's Date. *Fecha de Hoy.* _____
2. Home Address. *Dirección Residencial.* _____
3. City. *Ciudad.* _____ State. *Estado.* _____ Zip. *Código Postal.* _____
4. Date of Injury. *Fecha de la lesión (accidente).* _____ Time of Injury. *Hora en que ocurrió.* _____ a.m. _____ p.m.
5. Address and description of where injury happened. *Dirección/lugar dónde ocurrió el accidente.* _____
6. Describe injury and part of body affected. *Describe la lesión y parte del cuerpo afectada.* _____
7. Social Security Number. *Número de Seguro Social del Empleado.* _____
8. Signature of employee. *Firma del empleado.* _____

Employer—complete this section and see note below. *Empleador—complete esta sección y note la notación abajo.*

9. Name of employer. *Nombre del empleador.* _____
10. Address. *Dirección.* _____
11. Date employer first knew of injury. *Fecha en que el empleador supo por primera vez de la lesión o accidente.* _____
12. Date claim form was provided to employee. *Fecha en que se le entregó al empleado la petición.* _____
13. Date employer received claim form. *Fecha en que el empleado devolvió la petición al empleador.* _____
14. Name and address of insurance carrier or adjusting agency. *Nombre y dirección de la compañía de seguros o agencia administradora de seguros.* _____
15. Insurance Policy Number. *El número de la póliza de Seguro.* _____
16. Signature of employer representative. *Firma del representante del empleador.* _____
17. Title. *Título.* _____ 18. Telephone. *Teléfono.* _____

Employer: You are required to date this form and provide copies to your insurer or claims administrator and to the employee, dependent or representative who filed the claim within one working day of receipt of the form from the employee.

SIGNING THIS FORM IS NOT AN ADMISSION OF LIABILITY

☐ Employer copy
Copia del Empleador

☐ Employee copy
Copia del Empleado

☐ Claims Administrator
Administrador de Reclamos

☐ Temporary Receipt/
Recibo del Empleado

Empleador: Se requiere que Ud. feche esta forma y que provée copias a su compañía de seguros, administrador de reclamos, o dependiente/representante de reclamos y al empleado que hayan presentado esta petición dentro del plazo de un día hábil desde el momento de haber sido recibida la forma del empleado.

EL FIRMAR ESTA FORMA NO SIGNIFICA ADMISION DE RESPONSABILIDAD

8.3 Notice of Occurrence - Accident/Incident Report – General Liability, Pollution, Builder's Risk



Notice of Occurrence ACCIDENT / INCIDENT REPORT – GENERAL LIABILITY/POLLUTION/BUILDERS RISK

Keenan & Associates 2355
Crenshaw Blvd. Torrance, CA 90501
www.SEWUP.ORG
Licence No. 0451271

Contact:		Project Location Code:		Date of Loss & Time:		Date:	
Phone:						☐ AM	
Cell:		Carrier:				☐ PM	
Fax:				NAIC Code:			
Email:		Policy No.:		Client ID No.:			

School District

Name of Insured:		Insured's Mailing Address:	
Contact Name:	Title:		
Primary Phone: ☐ Bus ☐ Cell	Secondary Phone: ☐ Bus ☐ Cell	Primary Email:	Secondary Email:

Contractor

Name of Insured:		Insured's Mailing Address:	
Contact Name:	Title:		
Primary Phone: ☐ Bus ☐ Cell	Secondary Phone: ☐ Bus ☐ Cell	Primary E-mail:	Secondary E-mail:

Occurrence

Location of Occurrence / Address (Describe Location if No Specific Address):	Police or Fire Dept. Contacted?
	Report No.:
Description of Occurrence:	

Property

Premises: Claimant (1) is: ☐ Owner ☐ Tenant ☐ Insured Party		Premises: Claimant (2) is: ☐ Owner ☐ Tenant ☐ Insured Party	
Type of Damage:		Type of Damage:	
Damaged Party (1) Name & Address (If not insured):		Damaged Party (2) Name & Address (If not insured):	
Primary Phone:	☐ Home ☐ Bus. ☐ Cell	Primary Phone:	☐ Home ☐ Bus. ☐ Cell
Secondary Phone:	☐ Home ☐ Bus. ☐ Cell	Secondary Phone:	☐ Home ☐ Bus. ☐ Cell
Primary Email:		Primary Email:	
Secondary Email:		Secondary Email:	
Location of Property for Inspection:		Location of Property for Inspection:	

Injured Party

Damaged Party (1) Name & Address (If not insured):			Damaged Party (2) Name & Address (If not insured):		
Primary Phone:			Primary Phone:		
☐ Home ☐ Bus ☐ Cell			☐ Home ☐ Bus ☐ Cell		
Secondary Phone:			Secondary Phone:		
☐ Home ☐ Bus ☐ Cell			☐ Home ☐ Bus ☐ Cell		
Primary E-mail:			Primary E-mail:		
Secondary E-mail:			Secondary E-mail:		
Age:	Sex:	Occupation:	Age:	Sex:	Occupation:
Where Taken:			Where Taken:		
Describe Injury:			Describe Injury:		
What Was Injured Doing:			What Was Injured Doing:		

Witnesses

Damaged Party (1) Name & Address (If not insured):			Damaged Party (2) Name & Address (If not insured):		
Primary Phone:			Primary Phone:		
☐ Home ☐ Bus ☐ Cell			☐ Home ☐ Bus ☐ Cell		
Secondary Phone:			Secondary Phone:		
☐ Home ☐ Bus ☐ Cell			☐ Home ☐ Bus ☐ Cell		
Primary E-mail:			Primary E-mail:		
Secondary E-mail:			Secondary E-mail:		

Remarks

Reported By:		Reported To:	

9.0 Frequency Asked Questions (FAQs)

General

1. Who is insured under an Owner Controlled Insurance Program?

The Owner and all enrolled Contractors and their enrolled Subcontractors of any tier who perform operations at the Project Site described in the Contract Documents are insured under the OCIP.

2. Who is managing the Owner Controlled Insurance Program?

Keenan & Associates is the Program Administrator for this Owner Controlled Insurance Program, otherwise known as Statewide Educational Wrap Up Program (SEWUP).

3. Is Project Site Defined?

Yes. Project Site is on file with the insurance company, as described in the applicable Contract Documents.

4. What insurance is provided to Contractors/Subcontractors under the Owner Controlled Insurance Program (OCIP)?

The Owner has agreed to procure the following insurance:

- a. Workers' Compensation and Employer's Liability
- b. General Liability Insurance for Personal Injury, Bodily Injury and Property Damage Liability
- c. Builder's Risk
- d. Contractor's Pollution Liability (course of construction only)

5. Does the OCIP cover any contractor's equipment?

No. Contractors and Subcontractors must maintain this coverage.

6. Are there other types of insurance normally purchased by Contractors, which are not included?

Yes. Examples are:

- a. Bonds, if required by contract
- b. Contractor's Automobile Liability and Physical Damage Insurance
- c. Contractor's Equipment Floater

7. Does the Contractor/Subcontractor insured under the OCIP have to provide evidence of insurance?

Yes. The contract requires that, prior to commencement of on-site activities; each Contractor/Subcontractor shall furnish a Certificates of Insurance evidencing coverage for:

- a. Workers' Compensation
- b. General Liability

Certificates of Insurance and Additional Named Insured Endorsements, specifically naming the Owner, are also required for:

- a. Automobile Liability
- b. Any other required coverages outlined in the Contract and the Project Insurance Manual.

8. How is the Contractor/Subcontractor's bid to be submitted?

The Contractor/Subcontractor needs to submit their bid excluding certain insurance costs, as outlined in the Contract. Change Orders also need to be submitted without insurance costs.

9. When will the Contractor/Subcontractor receive a Certificate of Insurance insuring them under the OCIP?

Eligible Contractors/Subcontractors awarded a contract will be furnished a Certificate of Insurance upon Program Administrator's review and acceptance of the Contract Enrollment via WrapPortal.

10. Will all Contractors/Subcontractors receive information concerning their loss experience?

This information is available, upon request, from the Program Administrator.

11. How long are the policies kept in-force for the Contractor/Subcontractor?

The policy periods commence on the date of "Award" and terminate as defined in the Contract Documents. The only extension is for General Liability "Completed Operations" which is for ten (10) years after Notice of Completion filed by the District.

12. Does the OCIP provide coverage for truckers, vendors and suppliers?

No. Contractors/Subcontractors, whose sole duties are as truckers, vendors, or suppliers are not included in the program. If contracted with an on-site installer, vendors and/or suppliers should be enrolled in the OCIP for General Liability only, as it pertains to the contractual relationship of the installer's on-site work.

13. Are all Contractors/Subcontractors, of any tier, required to complete their own OCIP enrollment before they will be allowed to begin job site activity?

All Contractors/Subcontractors, regardless of tier, must complete a Contract Enrollment via WrapPortal, prior to commencement of on-site activities. Upon acceptance by the OCIP Administrator, each Contractor/Subcontractor will receive an enrollment confirmation packet, which includes a Certificate of Insurance evidencing the OCIP coverages.

14. What document do I use to show my Agent/Broker and Insurer that I'm covered under the OCIP?

All contractors enrolled under the OCIP program receive individual workers' compensation policies and Certificates of Insurance evidencing coverage under the OCIP program.

Workers' Compensation and Employers' Liability Insurance Questions

1. What insurance company writes the Workers' Compensation and Employer's Liability coverage?

Liberty Mutual Insurance Company.

2. What is the coverage term?

The coverage term for each Contractor/Subcontractor will coincide with the Start Date provided at OCIP enrollment. OCIP Workers' Compensation policies are renewed each year until receipt of OCIP Contractor's Completion Notice.

3. How will the Contractor/Subcontractor's payroll be classified?

Insurance Company will classify payrolls in accordance with California law under the Workers' Compensation Insurance Rating Bureau regulations, classifications, rates and rating plans. The Monthly Project Site Payroll Form will be used for Contractors/Subcontractors' monthly payroll submissions.

4. Will Program Administrator inspect the job and make recommendations regarding loss control and safety?

Yes. The Program Administrator will conduct periodic loss control surveys on behalf of the Owner. These surveys will focus on evaluating the contractors' efforts to control Workers' Compensation, General Liability, and Builders Risk exposures. These surveys are intended to assist contractors in identifying these exposures and take the appropriate actions to minimize the likelihood of loss.

5. Will there be other people who will make job site inspections?

Yes. The insurance company's Risk Engineer may conduct periodic site inspections to verify compliance with State requirements. State, City and Federal inspectors may also make inspections.

General Liability Insurance for Personal Injury, Bodily Injury and Property Damage Liability Questions

1. What insurance company writes the primary coverage for Personal Injury, Bodily Injury, and Property Damage Liability coverage?

Certain Underwriters at Lloyd's of London

2. Is Completed Operations coverage provided beyond acceptance of the work performed under the Contract?

Yes. The extension for General Liability "completed operations" is for ten (10) years after Notice of Completion is filed by the Owner, or date Occupancy is taken.

10.0 Known Policy Exclusions

Workers' Compensation

Bodily Injury Outside US or Canada
Bodily Injury To Any Member of Flying Crew
Bodily Injury To Person Subject To Federal Workers' Compensation
Bodily Injury To Person Subject To Occupational Disease Laws
Contractual Liability
Employees Knowingly Employed Illegally
Employment Related Practices
Intentional or Aggravated Bodily Injury
Obligations Imposed By Disability Benefits or Any Similar Law
Obligations Imposed By Occupational Disease Laws
Obligations Imposed By Unemployment Compensation Laws
Obligations Imposed By Workers' Compensation Laws
State or Federal Law Violation Fines, Penalties

General Liability

Aircraft, Auto or Watercraft
Asbestos
Medical Payments Coverage
Certain Exclusions to Personal and Advertising Injury Liability
Certified Acts of Terrorism
Communicable Disease
Contractual Liability (Limited Coverage Provided)
Cross Suits – Limited
Cyber and Data
Employers Liability
Employment Related Practices
Expected or Intended Injury
Fungi Or Bacteria
Lead
Certain exclusions for transportation or use of
Mobile Equipment
Nuclear
Personal and Advertising Bodily Injury
Pollution and Hazardous Materials
Prior Continuous, or Progressively Deteriorating Injury or Damage
Professional Liability
Property Damage to the Project During the Course of Construction
Punitive Damages
Residential and Condominium Conversion
Recall of Products, Work Or Impaired Property

Silica or Silica Mixed Dust

Subsidence - Conditional Warranty – So long as Contractor/Subcontractors follows specifications of geotechnical/environmental reports then the exclusion will be waived; if not, exclusion will be fully implemented

Violation of Statutes Governing Collecting, Transmitting Information

Violation of Statutes Governing Email, Fax, Phone Calls

War

Workers Compensation and Similar Laws

Builder's Risk

Asbestos

Certain Offsite Property

Certain Release, Discharge, Escape, or Dispersal of Contaminants or Pollutants

Certified Acts of Terrorism (Optional Coverage)

Cessation of Work

Consequential Loss (except as provided in Delay in Opening Coverage)

Communicable Disease

Contractor's Tools, Machinery, Plans, Equipment

Cost of Making Good (Optional Coverage)

Damage to Existing Property (Optional Coverage)

Damage While Testing Prototype or Used Machinery/Equipment

Damages, Fines, Penalties at Government Agency or Court Order

Disappearance or When Revealed by Inventory Shortage Alone

Earth Movement (Optional Coverage)

Electrical, Magnetic, or Errors Related to Electronic Records

Financial Accounts, Instruments, Stamps, Deeds, Precious Material

Flood (Optional Coverage) (rain and the accumulation of rainwater included in Flood definition)

Foreign Terrorism

Infidelity, Dishonesty, Fraudulent Activity of Insured

Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement

Loss Under Any Manufacturer or Supplier Guarantee/Warranty

Normal Subsidence

Nuclear

Offshore or Barrier Island Property

Property That Stores, Processes, or Handles Radioactive Materials

Rolling Stock, Aircraft, Watercraft

Software Loss, unless results from an Open Peril

Standing Timber, Growing Crops, Animals

Vehicles or Equipment Licensed For Highway Use

War and Military Action

Contractors Pollution Liability

Auto, Aircraft, Vessel Or Rolling Stock

Claims Between Certain Insureds

Contractual Liability

Damage To Property
Fines, Penalties, and Treble Damages
Employment Related Practices
Owned Hazardous Materials Facility
Nuclear
Other Entities
Pre-Existing Conditions
Products
Terrorism
War
Workers Compensation and Similar Laws

EXHIBIT C: Milestone Schedule

EXHIBIT D: Logistics Plan

EXHIBIT E: Alternate Bid Descriptions

Alternate No. 1 – ***TBD***

Alternate No. 2 – ***TBD***

DOCUMENT 00 7300
SUPPLEMENTAL GENERAL CONDITIONS

1.01 GENERAL

A. The conditions hereinafter specified shall apply to the performance of the Work of this project, the Contractor awarded the Work of the Project and all Subcontractors and Suppliers contracted or hired for the work of this Project and any other contractors the District may choose to hire for this Project.

B. All conditions set forth in Document 00 7200 - General Conditions, or any other portion of the Contract Documents, shall apply to the fullest extent except where they are in conflict with these Supplemental Conditions. In the event of such conflict, these Supplemental Conditions shall take precedence.

C. Governing Codes: Title 24, C.C.R.: A copy of Part I through Part V of California Title 24 shall be kept on the jobsite in the office of the Contractor's Project Superintendent.

D. All work performed under this contract shall comply in every respect to the rules and regulations of all agencies having jurisdiction for this classification of construction and design. These rules and regulations include California Code of Regulations, Title 24 and the latest edition of the National Electric Code.

E. Work shall not begin before nor more than one year after Division of State Architect (DSA) approval of plans and specifications per Title 24, Part I, Article 5, Section 4-330.

F. The School District shall have a DSA approved project inspector of record per Title 24, Part I, Article 5, Section 4-333. This inspector shall inspect every part of the work and shall make other notifications per Title 24, Part I, Section 4-342.

G. All required tests and inspections necessary to comply with statutory requirements shall be paid for by the District and reports shall be forwarded to DSA, the Architect, the Contractor and the Inspector of Record in accordance with Title 24, Part I, Section 4-335.

H. Semimonthly reports shall be submitted by the Inspector of Record to the Architect per Title 24, Part I, Section 4-337.

I. No changes or alterations of the approved plans and specifications shall be made without a DSA approved Construction Change Document in accordance with Title 24, Part I, Sections 4-343(c) and 4-336. All Addenda, change orders shall be approved by DSA per Section 4-338 (a). Any modification to DSA approved plans and specifications that affect structural safety, fire and life safety, access compliance or energy (as applicable) shall be submitted to the Division of State Architect for review and approval.

J. The intent of the drawings and specifications is that the work of alteration, rehabilitation or reconstruction is to be in accordance with Title 24, C.C.R. should any existing conditions such as deterioration or non-complying construction be discovered which are not covered by the contract documents wherein the finished work will not comply with Title 24 C.C.R. a construction change document (CCD), or separate set of plans and specifications, detailing and specifying the required work shall be submitted to and approved by DSA before proceeding with the work. (Section 4-317(c), Part 1, Title 24, CCR)

K. Supervision shall be performed by DSA in accordance with Title 24, Part I, Section 4-334.

L. Contractor(s) shall be required to submit regular and final Verified Report form DSA 6, current version. Contractor to provide copies of each submitted Verified Report to the Architect and the Division of State Architect. The duties of the Contractor under this contract shall be as enumerated in Part I, Title 24, C.C.R., Section 4-343.

M. Deferred approval items are indicated on the drawings. These items cannot be fabricated prior to DSA approval. Submission to DSA will not be permitted without prior approval of Architect. Contractor is hereby notified that it has the express responsibility for submission of shop drawings, submittals, product data and samples to DSA, as well as responsibility for obtaining DSA approval of deferred approval item.

N. Weekly job foreman / job superintendent meetings will be conducted by the Contractor to coordinate on-going construction issues. The Contractor shall require each subcontractor shall cause its designated job foreman or job superintendent to attend each coordination meeting, as scheduled by the Contractor.

O. The Contractor shall attend progress meetings as scheduled by the Architect for discussion of issues of administrative or design consideration with the District's Representative(s), the Inspector of Record and the Architect. The Contractor shall cause its project manager or project administrator to attend each progress meeting.

P. Division 1 of the Specifications further defines the intent of the General and Supplemental Conditions with respect to but not limited to: Summary of Work, Administrative Procedures, Definitions, Reference Standards, Quality Control, Temporary Facilities and Controls, Temporary Signage, Project Closeout. The requirements of Division 1 complement those of the Supplemental and General Conditions.

Q. DSA is not subject to arbitration.

1.02 TESTING

A. To assist the District in the process of obtaining qualified and responsive quotations for testing and inspection services for the Project, Contractor shall submit with Contractor's baseline schedule, a schedule of required inspections and tests which includes the following information as a minimum:

- 1) Name of Special Inspection or Test;
- 2) Quantity or frequency of Special Inspections or Tests;
- 3) Projected Dates upon which Special Inspections and Tests are required.

B. The Contractor(s) shall furnish said schedule of required inspections and tests, based on the requirements of the Contract Documents, local regulatory codes and the Contractor's expertise in its field, at the same time required for submission of Contractor's Baseline Schedule in accordance with specification Section 01 3200. The District will provide all submitted schedules to the Testing Agency in accord with governing codes. The Contractor hereby acknowledges and agrees that, in the event additional testing and inspection costs are incurred due to failure of initial tests, cost for same shall be reimbursed to the Owner by the Contractor.

C. Testing will be performed by the Owner's Testing Agency in accordance with Title 24, Part I Section 4-335.

D. Special Inspection will be performed by the Owner's Testing Agency in accordance with Title 24, Part I Section 4-333 (c).

1.03 SURVEYING, LINES AND GRADES

A. Each Contractor awarded Work for this Project shall provide all necessary surveying, layout, lines and grades required for the proper location of the Work.

B. Contractor agrees to provide any and all false-work, templates, batter-boards and other such structures or devices necessary to provide for the Contractor's layout, lines and grades. Work installed in an incorrect location or elevation shall be removed and re-installed at the expense of the Contractor.

1.04 FIRE MARSHAL REQUIREMENTS

A. Contractors must provide and maintain safe access for emergency vehicle traffic in accord with local fire marshal regulations.

1.05 CONTRACT DOCUMENTS

A. The Owner will provide Initial Reprographic Costs requisite to provide the Contractor with at least two full sets of Contract Documents including any Addenda issued prior to Bid Submission Date. Contractors interested in additional sets may purchase them from the Printing Firm where the Contract Documents are on file at actual cost of reproduction.

B. Electronic copies of Contract Documents will be made available as described below.

C. No "conformed" sets of Contract Documents will be made available. The Contractor is responsible for reviewing and incorporating all addendum changes into the Contract Documents used by him for construction. All sums necessary for the performance of this work shall be included in the Bid Proposal.

D. No reduced-size sets of Contract Documents will be made available.

E. Documents Valid at Full Size Only in Original Formats:

1. The Drawings, Specifications, or other documents prepared or supplied by Quattrocchi Kwok Architects for this project were prepared and intended to be prepared for viewing and use at the full original document sizes of 42 by 30 inches, 36 by 24 inches, 17 by 11 inches, and 8.5 by 11 inches, and that specifically, the line types / thicknesses, hatch patterns, textures, typeface designs, font sizes and any and all other forms of written or graphic communications and formats included therein were selected specifically by the authors of the documents to be read only at the full original document size.
2. Modifications such as enlargement, reduction, automated conversion, scanning and/or translation, or transition of information and data from the system and format used by Quattrocchi Kwok Architects to an alternate size, whether enlarged or reduced, or to another system format such as scanning to electronic format or media may result in the introduction of inexactitudes, anomalies and errors.
3. Modification of any of the Drawings, Specifications, or other documents or data prepared or supplied by Quattrocchi Kwok Architects, denotes assumption of all responsibility and risk for such errors and for the proper use of the modified document(s) by the modifying party.
4. Originals of all Drawings, Specifications or other documents and data prepared for this Project are originals retained by Quattrocchi Kwok Architects, and in whatever medium, shall be referred to and shall govern in the event of any inconsistency between them and any Drawings, Specifications, or other documents and data modified by any party.

F. Electronic Files shall be made available to the Contractor only following receipt of the attached QKA provided Electronic File Release Form signed by authorized representative of the Contractor attesting to agreement with terms of the release form. Electronic files are not contract documents and therefore are non-binding. Computer-Aided Drafting (CAD) and Building Information Modeling (BIM) files developed by Architect and Architect's consultants are design communication tools, not construction or fabrication tools. Architect and Architect's consultant developed CAD and BIM files do not represent all the components of a building, nor are the components represented in full detail. As stated in by the Electronic Release Form and represent above the files provided are a working product, may not fully conform to the Contract Documents and are utilized by the Contractor at Contractor's sole risk.

G. Contractor shall utilize web-resident data base administered through the Architect for construction clarifications, modifications and submittal review. Architect will provide required program training and access to Project data base. Further directions in regard to establishment and use of data base is found in corresponding Division 01 General Requirements.

1.06 SUBSTITUTIONS

A. The materials, products, and equipment described in the Contract Documents establish a standard of required function, dimension, appearance, and quality. Architect may consider requests for substitutions of specified equipment, materials, or products and then only when requests are submitted in accordance with the provisions of the Contract Documents governing substitutions and are received by Architect within the time period therein established. No substitutions will be considered after the date or receipt of the bid or contract award unless there is cause for a substitution which complies in every respect to the provisions of the Contract Documents governing substitutions. Refer to Division 01 Section specifying Product Requirements, for detailed instructions regarding substitution limitations and procedures.

1.07 SCHEDULING

A. Submittal of monthly schedule updates are a condition precedent for processing of each Application for Progress Payment. Refer to the Division 01 Section specifying the Construction Schedule, for detailed instructions regarding scheduling requirements.

1.08 FORCE ACCOUNT PROCEDURES

A. In the event the Contractor is required or authorized to perform work on a force account basis, in accord with the GENERAL CONDITIONS Article titled "Modifications of Contract", the Contractor shall comply with the following reporting requirements:

B. Contractor shall, at the end of each day during which Force Account work is performed, submit a detailed and complete time sheet or timecard indicating total labor hours spent and classification, total equipment hours spent and classification, total materials and sales tax, and any other measurable costs associated with the performance of the work. The Contractor shall submit said time sheet to the Owner's Inspector and both parties shall sign the time sheet as evidence that both parties acknowledge and agree to the extent of the work performed. Failure on the part of the Contractor to comply with the foregoing procedures will be cause for the Contractor to forfeit any payment or claim for said Force Account work not signed for. The District and Contractor may, based upon mutual agreement, proceed with Force Account work on a Time and Materials basis, with total cost "not-to-exceed" any quotation tendered for said Force Account item(s).

1.9 DISPUTED WORK PROCEDURES

A. The District may, in case of a disputed work item, direct the Contractor to perform the disputed work at no additional cost to the District, stating its belief that the work is clearly or adequately indicated in the Contract Documents, and therefore may be properly classified as an item for which prices are established in the Contract. In the event the Contractor maintains that the disputed work represents a modification to the Contract, Contractor may pursue reimbursement in accordance with Article titled RESOLUTION OF CONSTRUCTION CLAIMS of the General Conditions.

1.10 CONFLICTS BETWEEN CONTRACTORS

A. Pursuant to Article 25 of the General Conditions, if Contractor is aware of a current or potential conflict between Contractor's work and the work of another Contractor on the site, and is unable to informally resolve the conflict directly with the other Contractor, Contractor shall promptly provide written notice to the District, with a copy to the Architect and the other Contractor, specifying the nature of the conflict, the date upon which the conflict arose, and the steps taken to attempt to resolve the conflict. The District shall issue written instructions to the involved Contractors to address the conflict

B. If Contractor is delayed in proceeding with its work or incurs additional cost, loss, or damage (collectively, "costs") due to another Contractor's negligence, delay, or failure to comply with the Contract or to comply with any written directive from the District or its authorized representatives, Contractor may seek compensation from the responsible Contractor by submitting a written request to the other Contractor, with a copy to the District and Architect, no later than thirty (30) days after the costs have been incurred, explaining the cause for the additional costs and including full documentation of the actual costs incurred. The other Contractor may provide a written response to the request, with a copy to the District and Contractor, within ten (10) days after receiving a copy of the request. The District shall evaluate the request for compensation and any response thereto and shall notify the involved Contractors in writing, within thirty (30) days following receipt of the request, of the District's determination of whether the Contractor is entitled to the requested compensation, in whole or in part. The District's determination shall be final. Contractor agrees to indemnify, defend, and hold harmless, to the full extent permitted by law, District and its Board of Trustees, officers, agents, Architect, and their employees and consultants from and against any and all liability, loss, damage, claims, expenses and costs arising from or related to Contractor's request for additional compensation pursuant to this Supplemental General Condition, including the District's determination.

C. If another Contractor is delayed in proceeding with its work or incurs additional costs, loss, or damage due to Contractor's negligence, delay, or failure to comply with the Contract or to comply with any written directive from the District or its authorized representatives, Contractor shall be responsible for all such additional cost, provided the other Contractor has submitted a written request for compensation, in accordance with the procedures set forth above, but only to the extent that the District determines that this Contractor is responsible for the other Contractor's costs, in whole or in part. If Contractor fails to compensate the other Contractor in the amount determined by the District within thirty (30) days following the District's determination, the District may, at its sole discretion, directly compensate the other Contractor and backcharge this Contractor for the full cost of such compensation.

1.11 THIRD PARTY UTILITIES

A. Should the Contractor encounter a third party owned utility not shown or noted on the drawings, the Contract adjustment allowed the Contractor shall only be for the direct costs of removing, altering or relocating the utility, as needed, and an excusable, non-compensable time extension for the amount of time that such extra work affects the end date of the work. The Contractor shall not be entitled to damages or additional payment for delays attributable to such additional work as is required for removing, relocating, or altering utilities not shown or noted on the drawings. The Owner will not be entitled to assess liquidated damages for this amount of time.

1.12 ACCESS TO THE SITE

A. Contractor is notified that the Site is congested, with limited access. It shall be the Contractor's responsibility to coordinate Contractor's Work with the Work of other Prime Contractors performing work on the site. Areas designated by the Owner shall remain off-limits to construction personnel and equipment during construction.

END OF DOCUMENT

REFER TO SECTION 01 1600 PROJECT FORMS FOR ELECTRONIC FILE RELEASE FORM

**SECTION 01 1100
SUMMARY OF WORK**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Work covered by Contract Documents.
- B. Work under separate contracts.
- C. Execution, correlation and intent.
- D. Acceptance of site.
- E. Related documents.
- F. Contractor's use of premises.
- G. Access.
- H. Existing conditions.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project name is:

Gateway Portable and Shade Structures

as shown on the Contract Documents prepared by Quattrocchi-Kwok Architects and briefly described as :

Pad prep and relocation of a staged portable on site to location shown on the plans. Relocation and installation of an existing District TMP Ramp, including ramp transition at bottom landing. AC paving as shown at New Shade Structure locations. (Shade Structures by others). New bus drop off as shown, including sidewalk work in public way. New ornamentat fencing. New chain link fence and rolling automatic gates. Addition of a second door and fire sprinklers to existing Portable building !.

- B. The Work shall be constructed under single fixed-price Contract.
- C. The Work of the Contract includes but is not necessarily limited to :
 - 1. Grading, Utilities and Paving
 - a. Grade site as indicated. Remove trench and footing spoils from site.
 - b. Storm drainage system as indicated, making connections to existing work where indicated or necessary.
 - c. Fire service lines as indicated, making connections to existing work where indicated or necessary.

- d. Concrete flatwork, mowstrips, curbs, gutters, valley gutters and miscellaneous site concrete as indicated or necessary.
 - e. Asphalt surfacing, final asphalt striping, and signs on parking lot. Sequence this work to avoid all construction traffic on final asphalt lift.
 - f. Construction staking services necessary for the accurate construction of the Work.
- 2. Landscape:
 - a. Make final grade at landscape areas.
 - b. Hydroseed as required in disturbed areas.
- 3. Electrical:
 - a. Electrical work as indicated, including connections to existing work where indicated or necessary.
 - b. Connection of all Division 26, 27 & 28 utilities including but not limited to:
 - c. Electrical site distribution of power and signal systems;
 - d. Power feeder connections to the modular building loadcenters and panelboards;
 - e. Main and distribution power services;
 - f. Incoming telephone, data and cable television services;
 - g. Site lighting.
 - h. Fire Alarm
- D. The Work shall include all labor, materials and equipment necessary for the Contractor to fulfill all of its obligations pursuant to the Contract Documents, including but not limited to:
 - 1. Home office overhead,
 - 2. Off-Site supervision,
 - 3. Project Administration including preparation, research and distribution of project correspondence and submittals,
 - 4. Schedule preparation and maintenance,
 - 5. Guarantees and warranties,
 - 6. On-Site supervision,
 - 7. Temporary protection,
 - 8. Temporary utilities and facilities, including mobilization and demobilization,
 - 9. Material handling and storage,

10. Safety equipment,
 11. Travel time to and from the Site to the Contractor's home office.
- E. Sequence the Work subject to the Owner's use of the site, the requirements of the Construction Phasing, Technical Specifications and the Contract provisions for Liquidated Damages found elsewhere in these documents.
- F. Perform work indicated or required to produce finished results shown.
- G. Contractor shall coordinate all work and shall be responsible for division of work among the various subcontractors.
1. Coordinate the work of this Contract with the activities of the Owner, and with PG&E and other serving utilities.
 2. Coordinate the work of this Contract with the activities of the Owner's separate contractors, including those for removal or abatement of Hazardous Materials.
- H. Laws and Regulations: Intent of the Contract Documents is to construct the Work shown therein, in accordance with applicable codes and regulations.

1.03 WORK UNDER SEPARATE CONTRACTS

- A. Serving Utilities may be performing certain utility work concurrent with this Contract.

1.04 EXECUTION, CORRELATION AND INTENT

- A. Correlation and Intent
1. Documents Complementary and Inclusive:
 - a. The Contract Documents are complementary and are intended to include all items required for the proper execution and completion of the Work.
 - b. Any item of work mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be provided by Contractor as if shown or mentioned in both.
 2. Coverage of the Drawings and Specifications:
 - a. The Drawings and Specifications generally describe the work to be performed by Contractor. Generally, the Specifications describe work which cannot be readily indicated on the Drawings and indicate types, qualities, and methods of installation of the various materials and equipment required for the Work.
 - b. It is not intended to mention every item of Work in the Specifications, which can be adequately shown on the Drawings, or to show on the Drawings all items of Work described or required by the Specifications even if they are of such nature that they could have been shown.
 - c. All materials or labor for Work, which is shown on either by the Drawings or the Specifications (or is reasonably inferable therefrom as being necessary to complete the Work),

shall be provided by the Contractor whether or not the Work is expressly covered in either the Drawings and/or the Specifications.

3. It is intended that the Work be of sound, quality construction, and the Contractor shall be responsible for the inclusion of adequate amounts to cover installation of all items indicated, described, or implied in the portion of the Work to be performed by them.
4. Conflicts. In the event there is a discrepancy between the various Contract Documents, the Owner/Contractor Agreement shall control. Without limiting Contractor's obligation to identify conflicts for resolution by the Architect identified elsewhere in this Article it is intended that the more stringent, higher quality, and greater quantity of Work shall apply.

B. Conformance With Laws:

1. Each and every provision of law required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon application of either party the Contract shall be amended in writing to make such insertion or correction.
2. Before commencing any portion of the Work, Contractor shall check and review the Contract Documents for such portion for conformance and compliance with all laws, ordinances, codes, rules and regulations of all governmental authorities and public utilities affecting the construction and operation of the physical plant of the Project, all quasi-governmental and other regulations affecting the construction and operation of the physical plant of the Project, and other special requirements, if any, designated in the Contract Documents.
3. In the event Contractor observes any violation of any law, ordinance, code, rule or regulation, or inconsistency with any such restrictions or special requirements of the Contract Documents, Contractor shall immediately notify Architect in writing of same and shall cause to be corrected any such violation or inconsistency in the manner provided hereunder.
4. Ambiguity:
 - a. Before commencing any portion of the Work, Contractor shall carefully examine all Drawings and Specifications and other information given to Contractor as to materials and methods of construction and other Project requirements.
 - b. Contractor shall immediately notify Owner and Architect of any perceived or alleged error, inconsistency, ambiguity, or lack of detail or explanation in the Drawings and Specifications in the manner provided herein.
 - c. If the Contractor or its Subcontractors, material or equipment suppliers, or any of their officers, agents, and employees performs, permits, or causes the performance of any Work under the Contract Documents, which it knows or should have known to be in error, inconsistent, or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all costs arising therefrom including, without limitation, the cost of correction thereof without increase or adjustment to the Contract Price or the time for performance.
 - d. If Contractor performs, permits, or causes the performance of any Work under the Contract Documents prepared by or on behalf of Contractor which is in error, inconsistent or

ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all resulting costs, including, without limitation, the cost of correction, without increase to or adjustment in the Contract Price or the time for performance.

- e. In no case shall any Subcontractor proceed with the Work if uncertain without the Contractor's written direction and/or approval.

C. Addenda and Deferred Approvals

1. Addenda. Addenda shall govern over all other Contract Documents. Subsequent addenda issued shall govern over prior addenda only to the extent specified. In accordance with Title 24, California Code of Regulations, addenda shall be approved by the DSA.
2. Deferred Approvals. The requirements approved by the DSA on any item submitted as a deferred approval in accordance with Title 24, California Code of Regulations, shall take precedence over any previously issued addenda, drawing or specification.

D. Specification Interpretation and Application:

1. Titles. The Specifications are separated into titled sections for convenience only and not to dictate or determine the trade or craft involved.
2. As Shown, Etc. Where "as shown," "as indicated," "as detailed," or words of similar import are used, reference is made to the Drawings accompanying the Specifications unless otherwise stated. Where "as directed," "as required," "as permitted," "as authorized," "as accepted," "as selected," or words of similar import are used, the direction, requirement, permission, authorization, approval, acceptance, or selection by Architect is intended unless otherwise stated.
3. Provide. "Provide" means "provided complete in place," that is, furnished, installed, tested, and ready for operation and use.
4. General Conditions. The General Conditions and supplementary general conditions are a part of each and every section of the Specifications.
5. Abbreviations.
 - a. In the interest of brevity, the Specifications are generally written in an abbreviated form in the imperative tense and may not include complete sentences.
 - b. Omission of words or phrases such as "Contractor shall," "shall be," etc., are intentional. Nevertheless, the requirements of the Specifications are mandatory and directed to the Contractor.
 - c. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings.
6. Plural. Words in the singular shall include the plural whenever applicable or the context so indicates.
7. Metric. The Specifications may indicate metric units of measurement as a supplement to U.S. customary units. When indicated thus: 1" (25 mm), the U. S. customary unit is specific, and the metric unit is nonspecific. When not shown with parentheses, the unit is specific. The metric units

correspond to the "International System of Units" (SI) and generally follow ASTM E 380, "Standard for Metric Practice."

8. Standard Specifications. Any reference to standard specifications of any society, institute, association, or governmental authority is a reference to the organization's standard specifications, which are in effect at the date of the Contractor's proposal.
 - a. If applicable specifications are revised prior to completion of any part of the Work, the Contractor may, if acceptable to Architect, perform such Work in accordance with the revised specifications.
 - b. The standard specifications, except as modified in the Specifications for the Project, shall have full force and effect as though printed in the Specifications. Architect will furnish, upon request, information as to how copies of the standard specifications referred to may be obtained.
 - c. Procurement of reference standards and standard specifications is the sole responsibility of the Contractor.
9. Absence of Modifiers. In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another shall not affect the interpretation of either statement.

E. Rules of Document Interpretation

1. In the event of conflict or ambiguity within the drawings, the following rules shall apply:
 - a. General Notes, when identified as such, shall be incorporated into other portions of Drawings.
 - b. Schedules, when identified as such, are complementary with other notes and other portions of Drawings including those identified as General Notes.
 - c. Larger scale drawings shall take precedence over smaller scale drawings.
 - d. General or Typical Details and Symbols apply at all locations where specifically noted; at all locations conforming to the title of the Detail; at all locations of similar or identical graphic indication; at all locations where similar conditions are not fully or specifically shown or identified and complement similar details of specific conditions.
 - e. Details and Notes apply at all locations of similar or identical graphic indications and at all locations where similar conditions are not fully or specifically shown or identified.
 - f. Limitation of Indication does not affect Extent of Application: Indications of notes, details, and symbols may be limited to promote clarity. No limitation of application is intended nor shall be construed unless specifically noted.
 - g. Figured, derived, or numerical dimensions shall govern. At no time shall the Contractor base construction on scaled drawings.
2. Specifications shall govern as to materials, workmanship, and installation procedures.

3. In the case of disagreement or conflict between or within standards, specifications, and drawings, the more stringent, higher quality, and greater quantity of Work shall apply.

1.05 ACCEPTANCE OF SITE

- A. Contractor shall accept the site in the condition in which it exists at the time it is given Notice to Proceed.

1.06 RELATED DOCUMENTS

- A. The Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 specifications apply to the Work of this Section.

1.07 CONTRACTOR'S USE OF PREMISES

- A. Confine operations on the site to areas indicated in the Contract Documents. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the Work while engaged in project construction.
- B. Contractor shall limit its use of the premises for work and storage to allow for work by other contractors.
- C. Maintain existing driveways and entrances serving the premises clear and available to the Owner and its employees at all times. Do not use these areas for parking or storage of materials.
- D. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to area approved by the Architect. If additional storage is necessary, Contractor shall obtain and pay for such storage off site without additional expense to the Owner.
- E. Do not overload structures with weight that will endanger them.
- F. Assume full responsibility for protection and safekeeping of materials and tools stored at the site. Lock automotive type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.
- G. Move any stored products, temporary facilities, controls or fencing, under Contractor's control, which interfere with operations of the Owner or separate contractors, on or off the site, without cost to the Owner.
- H. Contractor shall cooperate with Owner and governing authorities to minimize disturbance. Observe all local ordinances for timing of work.
- I. In entrance and exit of all workmen and in bringing in, storing and removal of equipment, Contractor shall avoid unnecessary dust, mud or accumulated debris, or undue interference with the convenience, sanitation or routine of Owner's activities.
- J. In connecting new utilities to existing, and similar operations, Contractor shall time and coordinate such operations so that there will be no interference with Owner's activities.
- K. Protect improvements on adjoining properties as well as those on the Owner's property.
- L. Restore any improvements damaged by this work to their original condition as acceptable to the Owner.

- M. Do not interfere with use of adjacent buildings. Maintain free and safe passage to and from.
- N. Contractor shall be responsible for safety and support of structure. Cease operations and notify Architect immediately if safety of structure appears to be endangered. Take precautions to properly support structure. Do not resume operations until safety is restored. Contractor shall assume liability for such movement, settlement, damage or injury.
- O. Provide, erect and maintain barricades and guard rails as required by governing regulatory agencies to protect occupants of building and workers.
- P. Where demolition, removal or rework occurs, take all necessary precautions to protect existing finished work remaining in place from damage. Finished work damaged by operations under this contract shall be repaired or replaced to the satisfaction of Owner and Architect at no extra cost to the Owner.

1.08 OWNER'S USE OF THE SITE

- A. Owner will remain in continuous occupancy of the site. Summer School, community use of athletic fields, after-hours Daycare and other site programs will be concurrent with this Contract. Owner reserves the right to limit hours of construction access and deliveries to avoid traffic conflicts during peak periods.
- B. Portions of the regular class sessions may be concurrent with this Contract.
- C. Owner's Use of Concurrent or Related Contracts : The Owner may occupy certain portions of the work of other contracts listed above prior to the completion of the work of this Contract. Make all allowances and include all sums necessary in the Bid Proposal to accommodate the Owner's occupancy of these neighboring areas.

1.09 ACCESS

- A. During the life of the Contract, maintain access to the site, and within the site to the building, for fire-fighting equipment, ambulance and police vehicles in accord with local fire marshal regulations.
 - 1. The Work of this Contract shall be performed, and such temporary facilities and phasing of activities provided, so as not to interfere with access to adjacent facilities or new work areas, so as to cause the least possible interference with activities of other contractors, the Owner's personnel or the public, and so as to protect persons and property from harm. Required accessways, and other accessways not required but so designated by the Owner or the Contract Documents, shall not be blocked.
 - 2. No utility service, such as water, gas, sewers, electricity, communication or fire protection system serving the project, or any part of it, shall be interrupted without prior written approval of the Owner.
- B. Contractor is notified that the Site is congested, with limited access. It shall be the Contractor's responsibility to coordinate Contractor's Work with the Work of other Prime Contractors performing work on the site and the Owner's use of the site. Areas designated by the Owner shall remain off-limits to construction personnel and equipment during construction.
- C. Contractor is hereby notified that the project site borders a residential neighborhood. Contractor acknowledges that the Work shall be performed during regular business hours. Contractor shall make

provisions for the safety of residents and the general public adjacent to the site while working in proximity to the these areas or while working off-site.

1.10 EXISTING CONDITIONS

- A. Intent of the Drawings is to show existing conditions with information developed from field surveys and Owner's records, and to generally show the extent and type of work required to prepare the existing areas for new work. The information shown on the Drawings is not a guarantee of existing conditions.

1.11 LIQUIDATED DAMAGES AND CONTRACT COMPLETION

- A. Liquidated Damages will be assessed beginning on the Date contractually required for Completion and shall continue to accrue until each of the listed conditions are fulfilled.
- B. Date of Completion and Beneficial Occupancy is defined as the Date of Completion of all punch list items, including, but not limited to the following:
 - 1. Confirmation of mechanical and electrical systems testing and balancing, control sequences and operations.
 - 2. Completion of final cleaning, paint touch-up and adjusting.
 - 3. Adjustment and Contractor's certification of the finish hardware operation.
 - 4. Removal of Contractor's temporary facilities and materials.
 - 5. Owner's acceptance of the Work.
- C. Owner's occupancy prior to completion of any or all of the above items, or other such missing or incomplete work as may occur, shall not be construed as acceptance of the Work or as Completion when defined for the purposes of assessing Liquidated Damages.

1.12 PRODUCTS

Not Used.

1.13 EXECUTION

Not Used.

END OF SECTION

**SECTION 01 1600
PROJECT FORMS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Forms.

1.02 RELATED REQUIREMENTS

- A. Pertinent sections specifying Administrative procedures for the Project.

1.03 SUBMITTALS

- A. General: Submit project forms for project Contract Administration as required by related Division 01 sections in accordance with Section 01 3300.

PART 2 PRODUCTS

2.01 Not Used

PART 3 EXECUTION

3.01 ATTACHMENTS - PROJECT FORMS FOLLOW THIS SECTION

END OF SECTION

PROJECT FORMS FOR SECTION 00 7300 – SUPPLEMENTAL GENERAL CONDITIONS



0000.00-O-1.1

Electronic Release Form

Contractor Contact**Contractor****Address****Address****Project Name**

Project Number:

DSA Application:

DSA File:

Electronic files listed below will be sent to you, as allowed, upon receipt of a signed copy of this disclaimer.

The following applies to all information whatsoever, whether or not specifically identified below, which is being provided electronically.

Recipient understands and agrees that the information contained within these files is the internal working information of Quattrocchi Kwok Architects. Such internal working information is not intended as a finished product and may contain erroneous, extraneous, or incomplete information. All information contained on therein is preliminary and subject to change or correction without notice. Computer-Aided Drafting (CAD) and Building Information Modeling (BIM) files developed by Architect and design consultants are design communication tools, not construction or fabrication tools. Architect developed CAD and BIM files do not represent all the components of a building, nor are the components represented in full detail. Said information is furnished at the request of Recipient, for his sole convenience, and Recipient agrees to assume all responsibilities and risks of its use.

The Drawings, Specifications, or other documents prepared or supplied by Quattrocchi Kwok Architects for this project, whether in hard copy or machine readable form, are instruments of Quattrocchi Kwok Architects' service for one-time use solely with respect to this project. As such, they shall be deemed the property of Quattrocchi Kwok Architects who shall retain all common law, statutory and other reserved rights, including copyright. No Drawings, Specifications or other documents and data prepared or supplied by Quattrocchi Kwok Architects may be used on this project after Quattrocchi Kwok Architects' involvement is completed or on any other Project without Quattrocchi Kwok Architects' prior written consent.

Quattrocchi Kwok Architects reserves the right to retain originals of all Drawings, Specifications or other documents and data prepared under this agreement in whatever medium Quattrocchi Kwok Architects deems appropriate. Said originals retained by Quattrocchi Kwok Architects and in whatever medium, shall be referred to and shall govern in the event any inconsistency between them and any Drawings, Specifications, or other documents and data prepared or supplied to the Undersigned by Quattrocchi Kwok Architects. If the undersigned uses any of the Drawings, Specifications, or other documents or data prepared or supplied by Quattrocchi Kwok Architects, the undersigned assumes all responsibility and risk for the proper use thereof. For example, the Undersigned acknowledges that the automated conversion and/or transition of information and data from the system and format used by Quattrocchi Kwok Architects to an alternate system format may result in the introduction of inexactitudes, anomalies and errors.

The undersigned further understands that changes or modifications to the Drawings, Specifications, other documents or data prepared or supplied by Quattrocchi Kwok Architects made by anyone other than Quattrocchi Kwok Architects, including any such automated conversion and/or translation as described above, may result in adverse consequences which Quattrocchi Kwok Architects can neither predict nor control. Therefore, and in exchange for the Undersigned obtaining copies of the Drawings, Specifications, other documents or data prepared or supplied by Quattrocchi Kwok Architects, the Undersigned agrees that should the Undersigned, or any of its agents, modify or convert any of the Drawings, Specifications other documents or data prepared or supplied by Quattrocchi Kwok Architects, the Undersigned agrees to indemnify, defend, protect and hold Quattrocchi Kwok Architects harmless from and against any and all claims, liabilities, suits, demands, losses, costs and expenses, including reasonable attorney's fees, accruing or resulting to any and all persons, firms or any other legal entity, on account of any damage or loss to property or persons, including death, arising out of or in any way connected with, the modification or conversion of the Drawings, Specifications, other documents or data prepared or supplied by Quattrocchi Kwok Architects, whether in hard copy or machine readable form, except where Quattrocchi Kwok Architects is found to be solely liable for such damages or losses by a court or forum of competent jurisdiction. The foregoing indemnification applies, without limitation, to any modification or conversion of the Drawings, Specifications, other documents or data prepared or supplied by Quattrocchi Kwok Architects on other projects and for completion of, remodel of, or additions to this project.

List of requested documents and/or data:

Agreed to by CONTRACTOR:

Contractor Name

By: _____

Date: _____

PROJECT FORMS FOR SECTION 01 2600 - MODIFICATION PROCEEDURES



QUATTROCCHI KWOK
ARCHITECTS

Main Office
636 5th Street
Santa Rosa, California 95404
Phone: 707-576-0829

RFI #

Project:
DSA Application #:
DSA File #:

TO:	FROM:
DATE INITIATED:	STATUS:
LOCATION:	DUE DATE:
COST CODE:	REFERENCE:
COST IMPACT:	SCHEDULE IMPACT:
DRAWING NUMBER:	SPEC SECTION:
LINKED DRAWINGS:	
RECEIVED FROM:	IMPORTANCE:
COPIES TO:	

Official Response:
Attachments:

BY	DATE	COPIES TO
----	------	-----------



QUATTROCCHI KWOK
ARCHITECTS

Main Office
636 5th Street
Santa Rosa, California 95404
Phone: 707-576-0829

ASI #

Project:

DSA File #:
DSA Application #:

ISSUE DATE:

TO:

FROM:

REFERENCE DRAWING/DETAIL

ATTACHMENTS

DESCRIPTION

"The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents with no change in Contract Sum or Contract Time. Proceeding with the Work in accordance with these instruction indicates your acknowledgment of these instruction that there will be no change in the Contract Sum or Contract Time."



QUATTROCCHI KWOK
ARCHITECTS

Main Office
636 5th Street
Santa Rosa, California 95404
Phone: 707-576-0829

RFP #

Project:

DSA File #:
DSA Application #:

Request for Proposal

ISSUED DATE:

TITLE:

TO:

FROM:

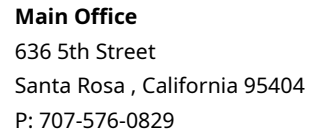
REFERENCE DRAWING/DETAIL

ATTACHMENTS

Please submit an itemized proposal for changes in the Contract Sum or Contract Time for proposed modifications to the Contract Documents described herein. Submit proposal within ten (10) days or notify the Architect in writing of the date on which you anticipate submitting your proposal. Proposal shall include all impacts related to this change and contractor is due no further completion than represented by proposal for change or any impacts related to change.

THIS IS NOT A CHANGE ORDER OR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED IN THE PROPOSED MODIFICATIONS.

DESCRIPTION



Project: 636 5th Street
Santa Rosa , California 95404

Number	Title	Status	Origin
	Enter Title	Open	Select Origin
Type	Change Reason	Scope	Prime Contract for Markup Estimates
	Select Reason	TBD	

B *I* U

or Drag & Drop

Cancel Create



Main Office
636 5th Street
Santa Rosa , California 95404
P: 707-576-0829

Project:
636 5th Street
Santa Rosa , California 95404

CHANGE EVENT

Origin:

Date Created:

Created By:

Status:

Scope:

Type:

Change Reason:

Description:

Attachments:

CHANGE EVENT LINE ITEMS

		Revenue			Cost					
Budget Code	Vendor / Contract	ROM	Prime PCO	Latest Price	ROM	RFQ	Commit.	Latest Cost	Over/ Under	Budget Mod.
00-000.OC	Contract	\$0.00		\$0.00						
Amount.Owner Cost										
Grand Totals		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

SUMMARY OF ATTACHMENTS TO:
PROJECT:

C.E. No.: _____
Project No.: _____
Date: _____
DSA App. No.: _____
Page _____
of _____

Line	TITLE:	ADDED	CREDIT
	ALL LINES SHALL BE FILLED IN, (zero values acceptable).		
	GENERAL CONTRACTOR'S WORK		
1	Material (attach itemized quantity and unit cost <u>excluding</u> sales tax)	_____	_____
2	Labor (attach itemized hours and rates)	_____	_____
3	Equipment (attach invoices)	_____	_____
4	Subtotal	_____	_____
5	General Contractor's Overhead and Profit, not to exceed ten percent (10%) of line 4.	_____	_____
6	Subtotal	_____	_____
7	Liability and Property Damage Insurance, Worker's Compensation Insurance, Social Security, and Unemployment Taxes, not to exceed twenty-five percent (25%) of line 2.	_____	_____
8	Subtotal General Contractor Work (sum of lines 6 and 7.)	_____	_____
	SUBCONTRACT WORK (Provide separate breakdown for each subcontract)*	_____	_____
9	Material (attach itemized quantity and unit cost <u>excluding</u> sales tax)	_____	_____
10	Labor (attach itemized hours and rates)	_____	_____
11	Equipment (attach invoices)	_____	_____
12	Subtotal	_____	_____
13	Subcontractor's overhead and profit on work performed by Sub-contractor, not to exceed fifteen percent (15%) of line 12.	_____	_____
14	Subtotal	_____	_____
15	General Contractor's Overhead and Profit on subcontract work, not to exceed five percent (5%) of line 14.	_____	_____
16	Liability and Property Damage Insurance, Worker's Compensation Insurance, Social Security, and Unemployment Taxes, not to exceed twenty-five percent (25%) of line 10.	_____	_____
17	Total of Subcontract Work (sum of lines 14, 15 and 16)	_____	_____
18	Subtotal General Contractor and Subcontractor Work (sum of lines 8 and 17.)	_____	_____
19	Applicable Taxes (itemized by levy and by contract)	_____	_____
20	Subtotal (sum of lines 18 and 19)	_____	_____
21	Bonds and Insurance not to exceed two percent (2%) of sum of lines 4 and 12.	_____	_____
22	TOTAL (sum of lines 20 and 21.) Copy to cover page.	_____	_____

* Attach additional copies of this page as required to summarize additional subcontracts.



QUATTROCCHI KWOK
ARCHITECTS

Main Office
636 5th Street
Santa Rosa, California 95404
Phone: 707-576-0829

PCO #

Project:
636 5th Street
Santa Rosa, California 95404

Potential Change Order

TO:	FROM:
PCO NUMBER/REVISION:	CONTRACT:
REQUEST RECEIVED FROM:	CREATED BY:
STATUS:	CREATED DATE:
REFERENCE:	PRIME CONTRACT CHANGE ORDER:
FIELD CHANGE:	
LOCATION:	ACCOUNTING METHOD:
SCHEDULE IMPACT:	PAID IN FULL:
	TOTAL AMOUNT:

POTENTIAL CHANGE ORDER TITLE:

POTENTIAL CHANGE ORDER DESCRIPTION: *(The Contract Is Changed As Follows)*

ATTACHMENTS:

The undersigned Contractor approves the foregoing as to the changes in work, if any, and as to the contract price specified for each item and as to the extension of time allowed, if any, for completion of the project as stated herein, and agrees to furnish all labor materials, and service and to perform all work necessary to complete any additional work specified for the consideration stated herein. Submission of claims which have no basis in fact or which Contractor knows are false are made at the sole risk of the Contractor and may be in violation of the False Claims Act, as set forth in Government Code Sections 12650 et seq. It is understood that the changes to the Contract Documents set forth herein shall only be effective upon approval by the governing board of the District.

It is expressly understood that the value of the extra work or changes expressly includes any and all of the Contractor's costs and expenses, both direct and indirect, resulting from additional time required on the project or resulting from delay to the project. Any costs, expenses, damages, or time extensions not included herein are deemed waived.

Any alteration or revision of this Document, it's terms, or this Certification is deemed a waiver of any costs, expenses, damages, or time extensions included herein.

**Jim Theiss (Quattrocchi Kwok
Architects)**

636 5th Street
Santa Rosa California 95404

Procore (Test Companies)

Sample Company

SIGNATURE

DATE

SIGNATURE

DATE

SIGNATURE

DATE



QUATTROCCHI KWOK
ARCHITECTS

Main Office
636 5th Street
Santa Rosa, California 95404
Phone: 707-576-0829

Work Directive

Project:

DSA Application #:
DSA File #:

TO:

FROM:

DATE INITIATED:

To Contractor: You are hereby directed to proceed with the following work:

Attachments: None

The proposed basis of adjustment to the Contract Sum is:

- ☐ Unit Prices of \$0.00 per , as provided in General Conditions Article 28.
- ☐ Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee.
- ☐ Cost of material and labor and percentage of overhead and profit as provided in General Conditions Article 28, and shall comply with reporting requirements as established by Supplemental General Conditions Article 1.09.
- ☐ Work is determined as part of contracted scope and therefore not subject to adjustment to the Contract Sum. Disputed work is to proceed in accordance with Supplemental General Condition Article 1.10, and Contractor shall comply with reporting requirements established by Supplemental General Condition Article 1.09.
- ☐ As follows:

The proposed basis of adjustment to the Contract Time is:

- ☐ Unchanged ☐ Changed by days ☐ To Be Determined

When signed by the Owner and Architect and received by the Contractor, this document becomes effective IMMEDIATELY as a Work Directive (WD) and the Contractor shall proceed with the work described above. Signature of the Contractor indicates the Contractor's agreement with the proposed adjustments in Contract Sum and Contract Time in total for defined work and all work related to defined work set forth in this Work Directive.

ARCHITECT
Main Office

OWNER

CONTRACTOR

By: _____

By: _____

By: _____

Date: _____

Date: _____

Date: _____



QUATTROCCHI KWOK
ARCHITECTS

Main Office
636 5th Street
Santa Rosa, California 95404

Phone: 707-576-0829

Fax:

Project:

Phone:

Fax:

PCCO #

DRAFT

Prime Contract Change Order

DATE CREATED:	REVISION:	0
CONTRACT FOR:	001:	TOTAL AMOUNT: \$ 0.00

The original (Contract Sum)	\$ 0.00
Net change by previously authorized Change Orders	\$ 0.00
The contract sum prior to this Change Order was	\$ 0.00
The contract sum would be changed by this Change Order in the amount of	\$ 0.00
The new contract sum including this Change Order will be	\$ 0.00
The contract time will not be changed by this Change Order	

Not valid until signed by both the Owner and the Architect.

Signature of the contractor indicates his or her approval herewith, including any adjustment in the Contract Sum or Contract Time.

The compensation (time and cost) set forth in this Change Order comprises the total compensation due the Contractor, all Subcontractors and all Suppliers, at all tiers, for the work or change defined in the Change Order, including all impact on unchanged work. By signing this Change Order the Contractor acknowledges and agrees, on behalf of themselves, all Subcontractors and all Suppliers, at all tiers, that the stipulated compensation includes payment for all work contained in the Change Order, plus all payment for the interruption of schedules, extended and unabsorbed overhead costs, delay, disruption, and all impact, ripple impact or cumulative impact on all other work under this Contract. The signing of the Change Order indicates that the Change Order constitutes full mutual accord and satisfaction for the changed work, and that the time and cost under the Change Order constitutes the total equitable adjustment owed the Contractor, all Subcontractors and all Suppliers, at all tiers, as a result of the change. The Contractor, on behalf of themselves, all Subcontractors and all Suppliers, at all tiers, agrees to waive all rights, without exception or reservation of any kind whatsoever to file any further claim related to this Change Order. No further claim or request for equitable adjustment of any kind whatsoever shall arise out of or as a result of this change or the impact of this change on the remainder of the work under this Contract.

By execution of this Change Order the Contractor specifically waives, relinquishes, and releases any and all rights under Section 1542 of the California Civil Code which reads as follows:

"A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY EFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR."

Quattrocchi Kwok Architects

636 5th Street
Santa Rosa California 95404

San Rafael City Schools

310 Nova Albion Way
San Rafael California

BHM Construction, Inc.

221 Gateway Road West, Suite 405
Napa California 94558

SIGNATURE

DATE

SIGNATURE

DATE

SIGNATURE

DATE



QUATTROCCHI KWOK
ARCHITECTS

PCCO #001

No Potential Change Orders

PCO #	Description	Schedule Impact	Amount
TOTAL:			\$0.00

CHANGE ORDER LINE ITEMS:

PROJECT FORMS FOR SECTION 01 2900 – APPLICATIONS FOR PAYMENT

APPLICATION FOR PAYMENT TRANSMITTAL

Distribution to:

☒	OWNER
☒	ARCHITECT
☐	CONTRACTOR
☒	INSPECTOR
☐	

Distribution By:

☒	FAX
☒	MAIL
☐	OVERNIGHT
☐	HAND DELIVERY
☐	

_____ - O - 1.11

A4P

P:\ProjectNo.ProjectName\Files\O-CA\11-A4P\ILCPv2.0\4/2003

PROJECT:	ARCHITECT:	Application No.
0	Quattrocchi Kwok Architects	Date:
0	636 Fifth Street	Arch. Project No.: 0
0	Santa Rosa, CA 95404	Contract For: Increment 1
0	Fax 707-576-0295	Contract Date: 1/0/1900
		DSA File No.: 0.00
OWNER:	Inspector of Record	DSA App. No.: 0
0	0	OPSC App. No.: 0
0	0	Contr. Project No.:
0	0	
Fax: 0	Fax 0	Phone: 0

The following documents are attached to this transmittal, in accordance with Section 01027 - Applications for Payment. This certification must accompany each Application for Payment.

	Completed (signed)
1 Application for Payment and Schedule of Values (AIA Forms G702 and G703)	
2 Contractor's Certified Payroll Report for billing period noted.	
3 Contractor's Complete Daily Logs for billing period noted.	
4 Completed Schedule update for the billing period noted.	
5 Complete Conditional Waiver and and Release upon Progress Payment form.	
6 Complete Unconditional Waiver and Release upon Progress Payment Form for month preceding.	
7 Completed Construction Waste Management Report updatefor the billing period noted.	
8 Completed Deconstruction Report updatefor the billing period noted.	
9 Original signature copies of DSA SSS-6 Verified Report Form (required for Release of Final Payment).	

INSPECTOR:

The undersigned has reviewed the attached Application for Payment and finds it representative of the work completed and material stored at the site. I recommend that the Architect certify and the District process payment to the Contractor as noted on the Application for Payment.

All the above prerequisites for Progress Payment have been met by the Contractor.

0
0
0

By. _____
original signature required

Date:

CONTRACTOR:

The undersigned certifies and declares under penalty of perjury under the laws of the state of California that the attached submittals are complete, true and correct; that the project is on schedule and has experienced no delays or disruption through the date of this transmittal except as shown on the attached Project Schedule of same date; and the Record drawings have been maintained and updated in accordance with the Contract Documents through the period as shown on the attached Application for Payment.

0
0
0

By.

original signature required

Date:

State of:
County of:
Subscribed and sworn to
before me this ____ day of ____

Notary Public:

My Commission expires: _____ Notary Stamp Above

Notary stamp required for projects with Labor Compliance Program

FOR CONTRACTOR:

VIA ARCHITECT:

CONTRACT FOR:

CONTRACT DATE:

PROJECT NOS.:

Architect ☐Contractor ☐Field ☐Other ☐**CONTRACTOR'S APPLICATION FOR PAYMENT**

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet is attached.

1. ORIGINAL CONTRACT SUM..... \$ _____**2. NET CHANGE BY CHANGE ORDERS**..... \$ _____**3. CONTRACT SUM TO DATE** (line 1 ± 2)..... \$ _____**4. TOTAL COMPLETED & STORED TO DATE** (column G) \$ _____**5. RETAINAGE:****a.** ____% of Completed Work

(Columns D & E)

\$ _____

b. ____% of Stored Material

(Column F)

\$ _____

Total Retainage (Lines 5a + 5b)

6. TOTAL EARNED LESS RETAINAGE..... \$ _____

(Line 4 minus Line 5 Total)

7. LESS PREVIOUS CERTIFICATES FOR PAYMENTS..... \$ _____

(Line 6 from prior Certificate)

8. CURRENT PAYMENT DUE..... \$ **9. BALANCE TO FINISH, INCLUDING RETAINAGE**

(Line 3 minus Line 6)

\$ _____

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is due.

CONTRACTOR:

By: _____

Date: _____

State of:

County of:

Subscribed and sworn to before

me this

day of

Notary Public:

My Commission expires:

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED..... \$ _____

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: _____

Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein, Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$	\$
Total approved this month	\$	\$
TOTAL	\$	\$
NET CHANGES by Change Order	\$	

Application and Certificate for Payment, or Application for Payment, Construction Manager as Advisor Edition, containing Contractor's signed certification is attached. In tabulation below, amounts are in US dollars. Use Column I on Contracts where variable retainage for items may apply.

ARCHITECT'S PROJECT NO:

[illegible]

Contractor's Affidavit of Payment of Debts and Claims

PROJECT: (Name and address)

ARCHITECT'S PROJECT NUMBER:

OWNER ☐

ARCHITECT ☐

CONTRACTOR ☐

SURETY ☐

OTHER ☐

CONTRACT FOR:

TO OWNER: (Name and address)

CONTRACT DATED:

STATE OF:
COUNTY OF:
The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1

Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. Consent of Surety, may be used for this purpose.

Indicate Attachment☐ Yes☐ No

CONTRACTOR: (Name and address)

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:

1

Contractor's Release or Waiver of Leins, conditional upon receipt of final payment.

2

Separate Releases of Waivers of Leins from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

3

Contractor's Affidavit of Release of Leins

Contractor's Affidavit of Release of Liens

PROJECT: *(Name and address)*

ARCHITECT'S PROJECT NUMBER:

OWNER ☐

ARCHITECT ☐

CONTRACT FOR:

CONTRACTOR ☐

SURETY ☐

OTHER ☐

TO OWNER: *(Name and address)*

CONTRACT DATED:

STATE OF:

COUNTY OF:

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrance or the right to assert liens or encumbrances against any property of the Owner arising in any number out of the performance of the Contract referenced above.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

CONTRACTOR: *(Name and address)*

1 Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.

2 Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:

Consent of Surety to Final Payment

PROJECT: *(Name and address)*

ARCHITECT'S PROJECT NUMBER:

OWNER ☐

ARCHITECT ☐

CONTRACT FOR:

CONTRACTOR ☐

SURETY ☐

OTHER ☐

TO OWNER: *(Name and address)*

CONTRACT DATED:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

on bond of

(Insert name and address of Contractor)

, SURETY,

, CONTRACTOR,

hereby approves of the final payment to the Contractor, and agrees that the final payment to the Contractor shall not relieve the Surety of any of its obligations to

(Insert name and address of Owner)

, OWNER,

as set forth in said Surety's bond.

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:

(Insert in writing the month followed by the numeric date and year.)

(Surety)

(Signature of authorized representative)

Attest

(Seal):

(Printed name and title)

RELEASE FORM 1
CONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT
(Civil Code Sec. 8132)

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND
PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY
ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Identifying Information

Name of Claimant:

Name of Customer:

Job Location:

Owner:

Through Date:

Conditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job through the Through Date of this document. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check:

Amount of Check: \$

Check Payable to:

Exceptions

This document does not affect any of the following:

- (1) Retentions.
- (2) Extras for which the claimant has not received payment.
- (3) The following progress payments for which the claimant has previously given a conditional waiver and release but has not received payment:
Date(s) of waiver and release:

Amount(s) of unpaid progress payment(s): \$

- (4) Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.

Signature

Claimant's Signature:

Claimant's Title:

Date of Signature:

RELEASE FORM 2

UNCONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT
(Civil Code Sec. 8134)

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Identifying Information

Name of Claimant:

Name of Customer:

Job Location:

Owner:

Through Date:

Unconditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job through the Through Date of this document. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. The claimant has received the following progress payment:

\$

Exceptions

This document does not affect any of the following:

- (1) Retentions.
- (2) Extras for which the claimant has not received payment.
- (3) Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.

Signature

Claimant's Signature:

Claimant's Title:

Date of Signature:

RELEASE FORM.3

CONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT
(Civil Code Sec. 8136)

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND
PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY
ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Identifying Information

Name of Claimant:

Name of Customer:

Job Location:

Owner:

Conditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check:

Amount of Check: \$

Check Payable to:

Exceptions

This document does not affect any of the following:

Disputed claims for extras in the amount of: \$

Signature

Claimant's Signature:

Claimant's Title:

Date of Signature:

RELEASE FORM 4

UNCONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT
(Civil Code Sec. 8138)

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Identifying Information

Name of Claimant:

Name of Customer:

Job Location:

Owner:

Through Date:

Unconditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for all labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. The claimant has been paid in full.

Exceptions

This document does not affect the following:

Disputed claims for extras in the amount of: \$

Signature

Claimant's Signature:

Claimant's Title:

Date of Signature:

PROJECT FORMS FOR SECTION 01 3300 – SUBMITTALS



QUATTROCCHI KWOK
ARCHITECTS

Main Office
636 5th Street
Santa Rosa, California 95404
Phone: 707-576-0829

Submittal

Project:

DSA Application #:
DSA File #:

SPEC SECTION:

SUBMITTAL MANAGER:

STATUS:

DATE CREATED: 02/8/2023

ISSUE DATE:

REVISION: 0

RESPONSIBLE
CONTRACTOR:

RECEIVED FROM:

RECEIVED DATE:

SUBMIT BY:

FINAL DUE DATE:

COST CODE:

TYPE:

APPROVERS:

BALL IN COURT:

DISTRIBUTION:

DESCRIPTION:

ATTACHMENTS:

Distribution Summary

Distributed on by

To:

Message:

Additional Attachments:

NAME	RESPONSE	ATTACHMENTS	COMMENT
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Corrections or comments made on submittals during this review do not relieve the contractor from compliance with the requirements of the Contract Documents. This check is for review of general conformance with the design concept of the project and general compliance with information given in the Contract Documents. The contractor is responsible for confirming and correlating all quantities and dimensions, selection of fabrication processes and techniques of construction, coordinating the work of the trades, and performing the work in a safe and satisfactory manner.

NO DEVIATIONS FROM THE CONTRACT DOCUMENTS ARE INCLUDED IN THIS REVIEW UNLESS SPECIFICALLY NOTED IN WRITING BY THE CONTRACTOR AND APPROVED BY THE ARCHITECT IN WRITING.

BY

DATE

COPIES TO

PROJECT FORMS FOR SECTION 01 3900 – COORDINATION AND MEETINGS



QUATTROCCHI KWOK
ARCHITECTS

Main Office
636 5th Street
Santa Rosa, California 95404
Phone: 707-576-0829

AFR #

Project:

DSA File#:
DSA Application #:

Architect's Field Report

TO:

FROM:

DATE _____

TEMPERATURE RANGE _____

TIME _____

ESTIMATED % COMPLETE _____

WEATHER _____

CONFORM W/SCHEDULE _____

ATTACHMENTS

Work In Progress:

Present At Site:

Observations:

Items To Verify Or Action Required:

PROJECT FORMS FOR SECTION 01 4523 – TESTING AND INSPECTIONS

LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

- ☒ Project has a geotechnical report or construction documents require special inspection by a geotechnical engineer.
☐ Project does NOT have and does NOT require a geotechnical report.

	TYPE	BY		TYPE	BY
S1 SOILS - GENERAL			C1 CAST-IN-PLACE CONCRETE		
☒ S1a: Site Preparation	Periodic	GE	☒ C1a: Mix Design	Continuous	SI
S2 COMPACTION AND FILL			☒ C1b: Reinforcing Steel	Test	LOR
☐ S2a: Fill Materials	Test	LOR*	☒ C1c: Concrete Material	Test	LOR
☐ S2b: Fill Placement	Continuous	GE*	☒ C1d: Strength Test	Test	LOR
☐ S2c: Compaction	Test	LOR	☒ C1e: Batch Plant Inspection	Continuous	SI
S3 DRIVEN DEEP FOUNDATIONS (PIERS)			C2 PRESTRESSED CONCRETE		
☐ S3a: Materials and Members	Continuous	GE*	☐ C2a: Tendons and Anchorage	Test	LOR
☐ S3b: Pile Capacity	Test	LOR*	☐ C2b: Tendon Placement	Periodic	SI
☐ S3c: Driving Operations	Continuous	GE*	☐ C2c: Concrete Strength	Periodic	SI
☐ S3d: Pile Installation	Continuous	GE*	☐ C2d: Stressing Operations	Continuous	SI
☐ S3e: Specialty Tests	*	*	C3 PRECAST CONCRETE		
S4 CAST-IN-PLACE DEEP FOUNDATIONS (PIERS)			☐ C3a: General Fabrication	Continuous	SI
☒ S4a: Drilling Operations	Continuous	GE*	☐ C3b: General Erection	Periodic	SI*
☒ S4b: Pier Construction	Continuous	GE*	☐ C3c: Diaphragm Connections	Continuous	SI
☒ S4c: Bearing Strata	Continuous	GE*	☐ C3d: Diaphragm Tolerances	Periodic	SI
S5 RETAINING WALLS			C4 SHOTCRETE		
☐ S5a: Backfill Placement	Continuous	GE*	☐ C4a: Placement	Continuous	SI
☐ S5b: Soil Reinf. and Drainage	Continuous	GE*	☐ C4b: Shotcrete Material	Test	LOR
☐ S5c: Segmental Retaining Walls	Continuous	GE*	C5 POST-INSTALLED ANCHORS		
S6 OTHER SOILS			☒ C5a: Inspection	See notes	SI*
☐ S6a: Soil Improvement Test	Test	GE*	☒ C5b: Test	Test	LOR
☐ S6b: Soil Improvement Inspection	Continuous	GE*	C6 OTHER CONCRETE		
☐ S6c: Not used.	N/A	N/A	☐ C6a: Not used.	N/A	N/A
☐ S6d: Not used.	N/A	N/A	☐ C6b: Not used.	N/A	N/A
☐ S6e: Not used.	N/A	N/A	☐ C6c: Not used.	N/A	N/A
☐ S6f: Not used.	N/A	N/A	☐ C6d: Not used.	N/A	N/A
☐ S6g: Not used.	N/A	N/A	☐ C6e: Not used.	N/A	N/A
☐ S6h: Not used.	N/A	N/A	☐ C6f: Not used.	N/A	N/A
☐ S6i: Not used.	N/A	N/A	☐ C6g: Not used.	N/A	N/A
☐ S6j: Not used.	N/A	N/A	☐ C6h: Not used.	N/A	N/A
☐ S6k: Not used.	N/A	N/A	☐ C6i: Not used.	N/A	N/A
☐ S6l: Not used.	N/A	N/A	☐ C6k: Not used.	N/A	N/A
☐ S6m: Not used.	N/A	N/A	☐ C6l: Not used.	N/A	N/A
☐ S6n: Not used.	N/A	N/A	Not used.		

* See Appendix for additional information.

* See Appendix for additional information.

Project Name: **Gateway Program**
School District: **Liberty Union High School District**

Application No.: **01-122796** Increment:
File No.: **7-H4**

LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

	TYPE	BY		TYPE	BY
M1 STRUCTURAL MASONRY f'm PSI:			S/A1 STEEL AND ALUMINUM		
☐ M1a: Mill Certificates - Reinf.	Periodic	SI*	☒ S/A1a: Material Identification	Periodic	*
☐ M1b: Material Certificates	Test	LOR	☒ S/A1b: Unidentified Material	Test	LOR
☐ M1c: Strength Test	Test	LOR	☒ S/A1c: Steel Fabrication	Periodic	SI
☐ M1d: Mortar Proportions	Periodic	SI	☐ S/A1d: Buckling Restrained Brace	Test*	LOR
☐ M1e: Grout Proportions	Periodic	SI	S/A2 HIGH-STRENGTH BOLTS		
☐ M1f: Batch Plant Inspection		SI	☐ S/A2a: Product Verification	Periodic	SI
☐ M1g: Core Tests	Test	LOR	☐ S/A2b: Bolts, Nuts, and Washers	Test	LOR
☐ M1h: Prisms	Continuous	SI	☐ S/A2c: Snug Tight	Periodic	SI
☐ M1i: Dowels and Supports	Periodic	SI	☐ S/A2d: Pretensioned / Slip-Critical	*	SI
☐ M1j: Reinforcement and Members	Periodic	SI	S/A3 WELDING		
☐ M1k: Reinforcement Placement	Continuous	SI	☒ S/A3a: Weld Material	Periodic	SI
☐ M1l: Grout Placement	Continuous	SI	☒ S/A3b: Certificate of Compliance	Periodic	SI
☐ M1m: Unit Layup and Joints	Periodic	SI*	☒ S/A3c: WPS and Qualifications	Periodic	SI
☐ M1n: Cold/Hot Weather Work	Periodic	SI	S/A4 SHOP WELDING		
☐ M1o: Anchors and Embeds	Continuous	SI	☒ S/A4a: Weld Category A	Continuous	SI
☐ M1p: Grout Cavity	Continuous	SI	☒ S/A4b: Weld Category B	Periodic	SI
M2 VENEER OR GLASS BLOCK PARTITIONS			☐ S/A4c: Stairs and Railing	Periodic	SI
☐ M2a: Mortar and Grout	Periodic	SI	☐ S/A4d: Reinf. Steel Weldability	Periodic	SI
☐ M2b: Unit Layup and Joints	Periodic	SI	☐ S/A4e: Reinforcing Steel	Continuous	SI
☐ M2c: Wires and Connector	Periodic	SI	S/A5 FIELD WELDING		
☐ M2d: Anchors and Embeds	Periodic	SI	☐ S/A5a: Weld Category A	Continuous	SI
☐ M2e: Cold/Hot Weather Work	Periodic	SI*	☐ S/A5b: Weld Category B	Periodic	SI
☐ M2f: Adhered Veneer Bond	Test	LOR	☐ S/A5c: End Welded Studs	Periodic	SI
M3 POST-INSTALLED ANCHORS			☐ S/A5d: Deck Welds	Periodic	SI
☐ M3a: Inspection	Varies*	SI*	☐ S/A5e: Cold-Formed Steel	Periodic	SI
☐ M3b: Test	Test	LOR	☐ S/A5f: Stairs and Railing	Periodic	SI
M4 OTHER MASONRY			☐ S/A5g: Reinf. Steel Weldability	Periodic	SI
☐ M4a: Not used.	N/A	N/A	☐ S/A5h: Reinforcing Steel	Continuous	SI
☐ M4b: Not used.	N/A	N/A	S/A6 NONDESTRUCTIVE TESTING		
☐ M4c: Not used.	N/A	N/A	☐ S/A6a: Ultrasonic	Test	LOR
☐ M4d: Not used.	N/A	N/A	☐ S/A6b: Magnetic Particle	Test	LOR
☐ M4e: Not used.	N/A	N/A	☐ S/A6c: Not used.	N/A	N/A
☐ M4f: Not used.	N/A	N/A	☐ S/A6d: Not used.	N/A	N/A
☐ M4g: Not used.	N/A	N/A	☐ S/A6e: Not used.	N/A	N/A
☐ M4h: Not used.	N/A	N/A	S/A7 STEEL JOISTS AND TRUSSES		
☐ M4i: Not used.	N/A	N/A	☐ S/A7a: Fabrication	Continuous	SI
☐ M4j: Not used.	N/A	N/A	S/A8 SPRAYED FIRE-RESISTANT MATERIALS		
☐ M4k: Not used.			☐ S/A8a: Surface and Installation	Periodic	SI
☐ M4l: Not used.			☐ S/A8b: Density	Test	LOR
☐ M4m: Not used.			☐ S/A8c: Bond: Adhesion/Cohesion	Test	LOR
* See Appendix for additional information.			* See Appendix for additional information.		

Project Name: **Gateway Program**
School District: **Liberty Union High School District**

Application No.: **01-122796** Increment:
File No.: **7-H4**

LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

	TYPE	BY		TYPE	BY			
S/A9 ANCHOR BOLTS AND ANCHOR RODS			X OTHER					
☐ S/A9a: Anchor Rods and Bolts	Test	LOR	☐ X01: Product Load Test*	Test	LOR			
☐ S/A9b: Other Threaded Rods	Test	LOR	☐ X02: Non-HSB Installation Torque	Continuous	SI*			
S/A10 STORAGE RACK SYSTEMS			☐ X03: Not used.	N/A	N/A			
☐ S/A10a: Material Verification	Periodic	SI	☐ X04: Not used.	N/A	N/A			
☐ S/A10b: Fabrication	Periodic	SI	☐ X05: Not used.	N/A	N/A			
☐ S/A10c: Anchorage	Periodic	SI	☐ X06: Not used.	N/A	N/A			
☐ S/A10d: Completed System	Periodic	SI*	☐ X07: Not used.	N/A	N/A			
S/A11 OTHER STEEL AND ALUMINUM			☐ X08: Not used.	N/A	N/A			
☐ S/A11a: Not used.	N/A	N/A	☐ X09: Not used.	N/A	N/A			
☐ S/A11b: Not used.	N/A	N/A	☐ X10: Not used.	N/A	N/A			
☐ S/A11c: Not used.	N/A	N/A	EXEMPTIONS					
☐ S/A11d: Not used.	N/A	N/A	Those items identified on the DSA-approved construction documents with a note indicating they are not part of the DSA approval or those items checked below are exempt from test and special inspection requirements. The project inspector shall verify all construction complies with the approved construction documents.					
☐ S/A11e: Not used.	N/A	N/A						
☐ S/A11f: Not used.	N/A	N/A						
☐ S/A11g: Not used.	N/A	N/A						
☐ S/A11h: Not used.	N/A	N/A						
☐ S/A11i: Not used.	N/A	N/A						
☐ S/A11j: Not used.	N/A	N/A						
☐ S/A11j: Not used.	N/A	N/A						
W1 PREFABRICATED WOOD TRUSSES								
☐ W1a: Open Web Truss Fabrication	Continuous	SI						
☐ W1b: Metal Plate Truss Fabrication	Continuous	SI						
W2 MANUFACTURED WOOD ELEMENTS								
☐ W2a: GL Timber Fabrication	Continuous	SI						
☐ W2b: CLT Fabrication	Continuous	SI						
☐ W2c: Mass Timber Erection	Periodic	SI						
☐ W2d: Connections Type A	Periodic	SI						
☐ W2e: Connections Type B	Continuous	SI						
☐ W2f: Sealants	Periodic	SI						
W3 OTHER WOOD								
☐ W3a: Not used.	N/A	N/A						
☐ W3b: Not used.	N/A	N/A						
☐ W3c: Not used.	N/A	N/A						
☐ W3d: Not used.	N/A	N/A						
☐ W3e: Not used.	N/A	N/A						
☐ W3f: Not used.	N/A	N/A						
☐ W3g: Not used.	N/A	N/A						
☐ W3h: Not used.	N/A	N/A						
* See Appendix for additional information.			** See Appendix for eligibility requirements.					

Project Name: **Gateway Program**
School District: **Liberty Union High School District**

Application No.: **01-122796** Increment:
File No.: **7-H4**

LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Any items indicated on the approved construction documents with a note stating that the items are not part of the DSA approval are not considered in this form. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The exemption appendix at the end of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of nonstructural components, etc., per Title 24, Part 2, Chapter 17A.

Legend to TYPE and BY Columns:

Continuous - Indicates continuous special inspection is required.

Periodic - Indicates periodic special inspection is required.

Test - Indicates a test is required.

GE - Indicates special inspection shall be performed by a registered geotechnical engineer or his/her authorized representative, usually associated with the Laboratory of Record.

LOR - Indicates test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program (i.e., the Laboratory of Record for the project). See CAC Section 4-335.

PI - Indicates special inspection may be performed by a project inspector when specifically approved by DSA.

SI - Indicates special inspection shall be performed by an appropriately qualified/approved special inspector.

Required Verified Reports:

1. Soils Testing and Inspection: Form DSA 293
2. Structural Testing and Inspection: Form DSA 291
3. Concrete Batch Plant Inspection: Form DSA 291
4. Post-installed Anchors: Form DSA 291 or DSA 292
5. Shop Welding Inspection: Form DSA 291 or DSA 292

Verified reports are required on the following DSA forms:

DSA 291: Laboratory of Record Verified Report
 DSA 292: Special Inspectors Employed Directly by the District Verified Report
 DSA 293: Geotechnical Verified Report

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

Name of Design Professional in General Responsible Charge:

Kevin Chapin

Name of Structural Engineer of Record (when applicable):

Chris Warner

Signature of Architect or Structural Engineer: Date:



01/28/2026

DSA STAMP

Project Name: **Gateway Program**

School District: **Liberty Union High School District**

Application No.: **01-122796** Increment:

File No.: **7-H4**

Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS**NOTE:** Undefined sections and table references found in this appendix are from the CBC, or California Building Code

S1. GENERAL:	
Test or Special Inspection	Code References and Notes
S1a: Site Preparation Verify that: • Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. • Foundation excavations are extended to proper depth and have reached proper material. • Materials below footings are adequate to achieve the design bearing capacity.	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) form for exemptions.)
S2. SOIL COMPACTION AND FILL:	
Test or Special Inspection	Code References and Notes
S2a: Fill Materials Perform classification and testing of fill materials.	* Under the supervision of the geotechnical engineer.
S2b: Fill Placement Verify use of proper materials, densities and inspect lift thicknesses, placement and compaction during placement of fill.	* By geotechnical engineer or his or her qualified representative. (Refer to specific items identified in the Appendix (end of this form) form for exemptions where soils SI and testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil SI and test reporting requirements for the exempt items.)
S2c: Compaction Compaction testing.	* Under the supervision of the geotechnical engineer. (Refer to specific items identified in the Appendix (end of this form) for exemptions where soils testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil test reporting requirements for the exempt items.)
S3. DRIVEN DEEP FOUNDATIONS (PILES):	
Test or Special Inspection	Code References and Notes
S3a: Materials and Members Verify pile materials, sizes and lengths comply with the requirements.	* By geotechnical engineer or his or her qualified representative.
S3b: Pile Capacity Determine capacities of test piles and conduct additional load tests as required.	* Under the supervision of the geotechnical engineer.
S3c: Driving Operations Inspect driving operations and maintain complete and accurate records for each pile.	* By geotechnical engineer or his or her qualified representative.

Project Name: **Gateway Program**
 School District: **Liberty Union High School District**

Application No.: **01-122796** Increment:
 File No.: **7-H4**

Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

S3d: Pile Installation Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and record any pile damage.	* By geotechnical engineer or his or her qualified representative.
S3e: Specialty Piles For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.	* As defined on drawings or specifications.

S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):	
Test or Special Inspection	Code References and Note
S4a: Drilling Operations Inspect drilling operations and maintain complete and accurate records for each pier.	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
S4b: Pier Construction Verify pier locations, diameters, plumbness, bell diameters (if applicable), lengths and embedment into bedrock (if applicable); record concrete or grout volumes.	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
S4c: Bearing Strata Confirm adequate end strata bearing capacity.	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)

S5. RETAINING WALLS:	
Test or Special Inspection	Code References and Notes
S5a: Backfill Placement Placement, compaction and inspection of backfill.	1705A.6.1. * By geotechnical engineer or his or her qualified representative. (See section S2 above).
S5b: Soil Reinf. and Drainage Placement of soil reinforcement and/or drainage devices.	* By geotechnical engineer or his or her qualified representative.
S5c: Segmental Retaining Walls Segmental retaining walls; inspect placement of units, dowels, connectors, etc.	* By geotechnical engineer or his or her qualified representative. See DSA IR 18-2.

Project Name: **Gateway Program**
School District: **Liberty Union High School District**

Application No.: **01-122796** Increment:
File No.: **7-H4**

Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

S6 OTHER SOILS	
Test or Special Inspection	Code References and Notes
S6a Soil Improvements	Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS (California Geological Survey) for final acceptance. * By geotechnical engineer or his or her qualified representative.
S6b Inspection of Soil Improvements	* By geotechnical engineer or his or her qualified representative.
S6c. Not used.	N/A
S6d. Not used.	N/A
S6e. Not used.	N/A
S6f. Not used.	N/A
S6g. Not used.	N/A
S6h. Not used.	N/A
S6i. Not used.	N/A
S6j. Not used.	N/A
S6k. Not used.	N/A
S6l. Not used.	N/A
S6m. Not used.	N/A
S6n. Not used.	N/A

Project Name: **Gateway Program**
School District: **Liberty Union High School District**

Application No.: **01-122796** Increment:
File No.: **7-H4**

Appendix: LIST OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

C1. CAST-IN-PLACE CONCRETE	
Test or Special Inspection	Code References and Notes
C1a: Mix Design Verify use of required design mix.	Table 1705A.3 Item 5, 1903A.5, 1903A.7, 1904A.1, 1904A.2, 1910A.1 ; ACI 318 Ch. 19, 26.4, 26.13.3.2
C1b: Reinforcing Steel Identify, sample, and test reinforcing steel.	Table 1705A.3 Item 1, 1705A.3.9, 1908A.1, 1910A.2; ACI 318 Ch. 20 and Sections 25.2, 25.3, 25.5.1, 26.6.1; DSA IR 17-10 and BU 24-02. (See Appendix (end of this form) for exemptions.)
C1c: Concrete Material During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	Table 1705A.3 Item 6, 1705A.3.9, 1905A.1.17; ASTM C31, ASTM C172; ACI 318 Sections 26.4, 26.5 & 26.12.
C1d: Strength Test Test concrete (f'_c).	1905A.1.17; ACI 318 Section 26.12.
C1e: Batch Plant Inspection Batch plant inspection: Continuous	Default of "Continuous" per 1705A.3.3. If approved by DSA, batch plant inspection may be reduced to "Periodic" subject to requirements in Section 1705A.3.3.1, or not required per 1705A.3.3.2. See IR 17-13. (See Appendix (end of this form) for exemptions.)

C2. PRESTRESSED / POST-TENSIONED CONCRETE (IN ADDITION TO SECTION C1):	
Test or Special Inspection	Code References and Notes
C2a: Tendons and Anchorage Sample and test prestressing tendons and anchorages.	1705A.3.4 Table 1705A.3 Item 1, 1910A.3; ACI 318 Ch. 20 and Sections 25.2, 26.6.1.
C2b: Tendon Placement Inspect placement of prestressing tendons.	1705A.3.4, Table 1705A.3 Items 1 & 9; ACI 318 Ch. 20 and Sections 25.2, 26.6.1-26.6.3.
C2c: Concrete Strength Verify in-situ concrete strength prior to stressing of post-tensioning tendons.	Table 1705A.3 Item 13; ACI 318 Sections 26.10.2, 26.11.2, 26.13.3.3. Special inspector to verify specified concrete strength test prior to stressing.
C2d: Stressing Operations Inspect application of post-tensioning or prestressing forces and grouting of bonded prestressing tendons.	1705A.3.4, Table 1705A.3 Item 9; ACI 318 Sections 26.10.2, 26.13.1, 26.13.3.2.

C3. PRECAST CONCRETE (IN ADDITION TO SECTION C1):	
Test or Special Inspection	Code References and Notes
C3a: General Fabrication 1. Inspect fabrication of precast concrete members. * 2. Inspect reinforcement of the following precast concrete elements or system(s): a. special moment frames. b. boundary elements of special structural walls. c. coupling beams.	1705A.3 Item 1, 7. See Appendix for exemptions. *May be periodic where fabrication occurs in a PCI-certified plant. For underground structures, NPCA plant certification is acceptable. PCI MNL-116-21; PCI MNL-117-13; NPCA Quality Control Manual (QCM) 17th Edition. See IR A-15.

Project Name: **Gateway Program**
School District: **Liberty Union High School District**

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C3b: General Erection Inspect erection of precast concrete members.	Table 1705A.3 Item 10.
C3c: Diaphragm Connections For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category D, E or F, inspect such connections and reinforcement in the field for: 1. Installation of the embedded parts. 2. Completion of the continuity of reinforcement across joints. 3. Completion of connections in the field.	Table 1705A.3 Item 11.
C3d: Diaphragm Tolerances Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	Table 1705A.3 Item 12

C4. SHOTCRETE (IN ADDITION TO SECTION C1):	
Test or Special Inspection	Code References and Notes
C4a: Placement Inspect shotcrete placement for proper application techniques.	1705A.3.9, Table 1705A.3 Item 7, 1908A.1, 1908A.2, 1908A.3. See ACI 506.2 Section 3.4, and ACI 506R.
C4b: Shotcrete Material Sample and test shotcrete (f'_c).	1908A.2 and 1705A.3.9.

C5. POST-INSTALLED ANCHORS:	
Test or Special Inspection	Code References and Notes
C5a: Inspection Inspect installation of post-installed anchors	1617A.1.19, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic), 1705A.3.8 (See Appendix (end of this form) for exemptions). ACI 318 Sections 26.7.2, 26.13.1, 26.13.3.2, 26.13.3.3. * May be performed by the project inspector when specifically approved by DSA.
C5b: Test Test post-installed anchors.	1910A.5. (See Appendix (end of this form) for exemptions.)

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C6. OTHER CONCRETE:	
Test or Special Inspection	Code References and Notes
C6a. Not used.	N/A
C6b. Not used.	N/A
C6c. Not used.	N/A
C6d. Not used.	N/A
C6e. Not used.	N/A
C6f. Not used.	N/A
C6g. Not used.	N/A
C6h. Not used.	N/A
C6i. Not used.	N/A
C6j. Not used.	N/A
C6k. Not used.	Not used.
C6l. Not used.	Not used.

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M1. STRUCTURAL MASONRY:	
Test or Special Inspection	Code References and Notes
M1a: Mill Certificates - Reinf. Mill certificate indicates compliance with requirements for reinforcement, anchors, ties, fasteners and metal accessories. See item C1(b) for identification, sampling and testing of reinforcing steel.	2103A.4 ; TMS 602-16 Article 1.5B.2 & 2.4. * To be performed by qualified LOR representative. Applicable testing by LOR. See IR 17-10 for unidentified reinforcing steel.
M1b: Material Certificates Producer's certificate of compliance for masonry units, mortar and grout materials.	1705A.4, 2103A.2, 2103A.3, 2103A.5 ; TMS 602 Articles 1.5B.2, 2.1, 2.2, 2.6A and 2.6B, and Table 6 footnote 3.
M1c: Strength Test Test masonry (f_m).	1705A.4. For Unit Strength: 2105A.3 ; TMS 602 Articles 1.4B.2, 1.5B.1 & 1.5B.2. For Prism (required when $f_m > 2000$ psi): 2105A.2 ; TMS 602 Articles 1.4B.3, 1.4B.4, 1.5B.1 & 1.5B.2.
M1d: Mortar Proportions Verify proportions or properties of site-prepared, premixed or preblended mortar.	TMS 602, Table 3 (row 5), Table 4 Item 1a. DSA PR 20-01. (See Appendix (end of this form) for exemptions.)
M1e: Grout Proportions Verify proportions or properties of site-prepared, premixed or preblended grout.	TMS 602, Table 3 (row 5), Table 4 Item 2d. (See Appendix (end of this form) for exemptions.)
M1f: Batch Plant Inspection Batch plant inspection: Periodic	Default of ' Continuous ' per 1705A.3.3 . If approved by DSA, batch plant inspection may be reduced to ' Periodic ' subject to requirements in Section 1705A.3.3.1 , or not required per 1705A.3.3.2 . See IR 17-13. Refer to TMS 602 Table 3 and Table 4, Item #3a. (See Appendix (end of this form) for exemptions.)
M1g: Core Tests Test core-drilled samples.	2105A.4 . (See Appendix (end of this form) for exemptions.)
M1h: Prisms Inspect preparation of prisms.	TMS 602 Articles 1.4.B.3 & 1.4.B.4 & Table 4 Item 4.
M1i: Dowels and Supports Verify size, location and condition of all dowels, construction supporting masonry, etc.	
M1j: Reinforcement and Members Verify size, grade and type of reinforcement, connectors, and anchor bolts. Verify size and location of structural members.	TMS 602 Table 4, Items 1c & 3c.
M1k: Reinforcement Placement Inspect placement of reinforcement, anchor bolts, and connectors.	TMS 602 Table 4 Item 2c.
M1l: Grout Placement Placement, consolidation, and reconsolidation of grout.	TMS 602 Table 4 Item 3h.
M1m: Unit Layout and Joints Inspect placement of masonry units and construction of mortar joints.	TMS 602 Table 4 Item 3b.
M1n: Cold/Hot Weather Work Verify preparation, construction and protection of masonry during cold weather (temperature below 40° F) or hot weather (temperature above 90° F).	TMS 602 Table 4 Item 3f. * May be performed by the project inspector when specifically approved by DSA.
M1o: Anchors and Embeds Inspect type, size and location of anchors and all other items to be embedded in masonry including other details of anchorage of masonry	TMS 602 Table 4 Item 3d.

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to structural members, frames and other construction.	
M1p: Grout Cavity Inspect grout space, including mortar protrusions, prior to placement of grout.	TMS 602 Table 4 Item 2a.

M2. VENEER OR GLASS BLOCK PARTITIONS:	
Test or Special Inspection	Code References and Notes
M2a: Mortar and Grout Verify proportions of site prepared mortar and grout and/or verify certification of premixed mortar.	TMS 602 Table 3 (row 5) and Table 4 Items 1a & 2d.
M2b: Unit Layup and Joints Inspect placement of units and construction of mortar joints.	TMS 602 Table 4 Item 3b.
M2c: Wires and Connector Inspect placement of wire, connectors and anchors	TMS 602 Table 4 Item 2c.
M2d: Anchors and Embeds Inspect type, size and location of anchors and all other items to be embedded in masonry veneer including details of anchorage of masonry to veneer backing, frames and other construction.	TMS 602 Table 4 Item 3d.
M2e: Cold/Hot Weather Work Verify preparation, construction and protection of masonry during cold weather (temperature below 40° F) or hot weather (above 90° F).	TMS 602 Table 4 Item 3f. * May be performed by the project inspector when specifically approved by DSA.
M2f: Adhered Veneer Bond Test adhered veneer bond strength.	1410.2.1 (Field-constructed mock-up using specified unit, mortar, and substrate, laboratory tested in accordance with ASTM C1823).

M3. POST-INSTALLED ANCHORS IN MASONRY:	
Test or Special Inspection	Code References and Notes
M3a: Inspection Inspect installation of post-installed anchors	1617A.1.19, 1705A.4, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic); ACI 318 Section 26.13. * May be performed by the project inspector when specifically approved by DSA. (See Appendix (end of this form) for exemptions.)
M3b: Test Test post-installed anchors.	1705A.4, 1910A.5. (See Appendix (end of this form) for exemptions.)

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M4. OTHER MASONRY:	
Test or Special Inspection	Code References and Notes
M4a. Not used.	N/A
M4b. Not used.	N/A
M4c. Not used.	N/A
M4d. Not used.	N/A
M4e. Not used.	N/A
M4f. Not used.	N/A
M4g. Not used.	N/A
M4h. Not used.	N/A
M4i. Not used.	N/A
M4j. Not used.	N/A
M4k. Not used.	Not used.
M4l. Not used.	Not used.

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S/A1. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES	
Test or Special Inspection	Code References and Notes
S/A1a: Material Identification Verify identification of all materials and: • Mill certificates indicate material properties that comply with requirements. • Material sizes, types and grades comply with requirements.	Table 1705A.2.1 Item 3a–3c. 2202A.1; AISI S100 Section A3.1 & A3.2, AISI S240 Section A3 & A5, AISI S220 Section A4 & A6. *By special inspector or qualified technician when performed off-site.
S/A1b: Unidentified Material Test unidentified materials	2202A.1.
S/A1c: Steel Fabrication Verify and document steel fabrication per DSA- approved construction documents.	Not applicable to cold-formed steel light-frame construction, except for trusses (1705A.2.4).
S/A1d: Buckling Restrained Brace Verify and document steel fabrication per DSA-approved construction documents.	Testing and special inspections in accordance with IR 22-4. For DSA accepted fabrication shops, BRB manufacturer's Certificate of Compliance in lieu of testing and special inspections. See IR 22-4.

S/A2. HIGH-STRENGTH BOLTS:	
Test or Special Inspection	Code References and Notes
S/A2a: Product Verification Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.	Table 1705A.2.1 Items 1a & 1b, 2202A.1; AISC 360 Section A3.3, J3.1, and N3.2; RCSC Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.
S/A2b: Bolts, Nuts, and Washers Test high-strength bolts, nuts and washers.	Table 1705A.2.1 Item 1c, 2213A.1; RCSC Section 7.2; DSA IR 17-8.
S/A2c: Snug Tight Bearing-type ("snug tight") connections.	Table 1705A.2.1 Item 2a, 1705A.2.6, 2204A.2; AISC 360 J3.1, J3.2, M2.5 & N5.6; RCSC Section 9.1; DSA IR 17-9.
S/A2d: Pretensioned / Slip-Critical Pretensioned and slip-critical connections.	Table 1705A.2.1 Items 2b & 2c, 1705A.2.6, 2204A.2; AISC 360 J3.1, J3.2, M2.5 & N5.6; RCSC Sections 9.2 & 9.3; DSA IR 17-9 **"Continuous" or "Periodic" depends on the tightening method used.

S/A3. WELDING:	
Test or Special Inspection	Code References and Notes
S/A3a: Weld Material Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	1705A.2.5, Table 1705A.2.1 Items 4 & 5; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3.
S/A3b: Certificate of Compliance Verify weld filler material manufacturer's certificate of compliance.	DSA IR 17-3.
S/A3c: WPS and Qualifications Verify WPS, welder qualifications and equipment.	DSA IR 17-3.

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S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3):	
Test or Special Inspection	Code References and Notes
S/A4a: Weld Category A Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	Table 1705A.2.1 Items 5a.1–4 ; AISC 360 (and AISC 341 as applicable); DSA IR 17-3.
S/A4b: Weld Category B Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	1705A.2.2, Table 1705A.2.1 Items 5a.5 & 5a.6 ; AISC 360 (and AISC 341 as applicable); DSA IR 17-3.
S/A4c: Stairs and Railing Inspect welding of stairs and railing systems.	1705A.2.1 ; AISC 360 (and AISC 341 as applicable); AWS D1.1 & D1.3; DSA IR 17-3.
S/A4d: Reinf. Steel Weldability Verification of reinforcing steel weldability other than ASTM A706.	1705A.3.1 ; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
S/A4e: Reinforcing Steel Inspect welding of reinforcing steel.	Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8 ; AWS D1.4; DSA IR 17-3.
S/A5. FIELD WELDING (IN ADDITION TO SECTION S/A3):	
Test or Special Inspection	Code References and Notes
S/A5a: Weld Category A Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	Table 1705A.2.1 Items 5a.1–4 ; AISC 360 (AISC 341 as applicable); DSA IR 17-3.
S/A5b: Weld Category B Inspect single-pass fillet welds ≤ 5/16".	Table 1705A.2.1 Item 5a.5 ; AISC 360 (AISC 341 as applicable); DSA IR 17-3.
S/A5c: End Welded Studs Inspect end-welded studs (ASTM A-108) installation (including bend test).	2213A.2 ; AISC 360 (AISC 341 as applicable); AWS D1.1; DSA IR 17-3.
S/A5d: Deck Welds Inspect floor and roof deck welds.	1705A.2.2, Table 1705A.2.1 Item 5a.6 ; AISC 360 (AISC 341 as applicable); AWS D1.3; DSA IR 17-3.
S/A5e: Cold-Formed Steel Inspect welding of structural cold-formed steel.	1705A.2.5 ; AWS D1.3; DSA IR 17-3. The quality control provisions of AISI S240 Chapter D shall also apply. * May be performed by the project inspector when specifically approved by DSA.
S/A5f: Stairs and Railing Inspect welding of stairs and railing systems.	1705A.2.1 ; AISC 360 (AISC 341 as applicable); AWS D1.1 & D1.3; DSA IR 17-3. * May be performed by the project inspector when specifically approved by DSA.
S/A5g: Reinf. Steel Weldability Verification of reinforcing steel weldability.	1705A.3.1 ; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
S/A5h: Reinforcing Steel Inspect welding of reinforcing steel.	Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8 ; AWS D1.4; DSA IR 17-3.

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S/A6. NONDESTRUCTIVE TESTING:	
Test or Special Inspection	Code References and Notes
S/A6a: Ultrasonic Ultrasonic	1705A.2.1, Table 1705A.2.1 Item 4c, 1705A.2.5; AISC 341 J6.2, AISC 360 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
S/A6b: Magnetic Particle Magnetic Particle	1705A.2.1, Table 1705A.2.1 Item 4c, 1705A.2.5; AISC 341 J6.2, AISC 360 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
S/A6c: Not used.	N/A
S/A6d: Not used.	N/A
S/A6e: Not used.	N/A

S/A7. STEEL JOISTS AND TRUSSES:	
Test or Special Inspection	Code References and Notes
S/A7a: Fabrication Verify size, type and grade for all chord and web members as well as connectors and weld filler material; verify joist profile, dimensions and camber (if applicable); verify all weld locations, lengths and profiles; mark or tag each joist.	1705A.2.3, Table 1705A.2.3; AWS D1.1; DSA IR 22-3 for steel joists only. 1705A.2.4; AWS D1.3 for cold-formed steel trusses.

S/A8. SPRAYED FIRE-RESISTANT MATERIALS:	
Test or Special Inspection	Code References and Notes
S/A8a: Surface and Installation Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify compliance of all aspects of application with DSA-approved documents.	1705A.15, 1705A.15.1, 1705A.15.2, 1705A.15.3, 1705A.15.4, 1705A.15.5, 1705A.15.6.
S/A8b: Density Test density.	1705A.15.1, 1705A.15.5, ASTM E605
S/A8c: Bond: Adhesion/Cohesion Bond strength adhesion/cohesion.	1705A.15.1, 1705A.15.6, ASTM E736

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S/A9. ANCHOR BOLTS AND ANCHOR RODS:	
Test or Special Inspection	Code References and Notes
S/A9a: Anchor Rods and Bolts Anchor Bolts and Anchor Rods	Identify, sample and test anchor bolts and anchor rods not meeting exemptions identified in Section 1 of IR 17-11.
S/A9b: Other Threaded Rods Threaded rod not used for foundation anchorage.	Identify, sample and test threaded rods not meeting exemptions identified in Section 1 of IR 17-11.
S/A10. STORAGE RACK SYSTEMS:	
Test or Special Inspection	Code References and Notes
S/A10a: Material Verification Materials used, to verify compliance with one or more of the material test reports in accordance with the approved construction documents.	Table 1705A.13.7
S/A10b: Fabrication Fabricated storage rack elements.	1704A.2.5; Table 1705A.13.7
S/A10c: Anchorage Storage rack anchorage installation.	ANSI/MH16.1 Section 7.3.2; Table 1705A.13.7
S/A10d: Completed System Completed storage rack system to indicate compliance with the approved construction documents.	Table 1705A.13.7; * May be preformed by the project inspector when specifically approved by DSA.

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S/A11. Other Steel	
Test or Special Inspection	Code References and Notes
S/A11a. Not used.	N/A
S/A11b. Not used.	N/A
S/A11c. Not used.	N/A
S/A11d. Not used.	N/A
S/A11e. Not used.	N/A
S/A11f. Not used.	N/A
S/A11g. Not used.	N/A
S/A11h. Not used.	N/A
S/A11i. Not used.	N/A
S/A11j. Not used.	N/A
S/A11k. Not used.	Not used.
S/A11l. Not used.	Not used.

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W1. PREFABRICATED WOOD TRUSSES:	
Test or Special Inspection	Code References and Notes
W1a: Open Web Truss Fabrication Inspect fabrication of manufactured open-web trusses.	1705A.5.6; DSA IR 23-8.
W1b: Metal Plate Truss Fabrication Inspect fabrication of manufactured metal-plate- connected trusses.	1705A.5.6, 1705A.5.7; DSA IR 23-4.
W2. MANUFACTURED WOOD STRUCTURAL ELEMENTS:	
Test or Special Inspection	Code References and Notes
W2a: GLS Timber Fabrication Inspect fabrication of structural glued-laminated timber.*	* see 1705A.5.5 for exceptions
W2b: CLT Fabrication Inspect fabrication of cross-laminated timber.	1705A.5.5
W2c: Mass Timber Erection Inspect erection of mass timber.	Table 1705A.5.3, Item 2
W2d: Connections Type A Inspect mass timber connections with threaded fasteners, bolts, and/or adhesive anchors other than described in item e below. Inspect concealed mass timber connections.	Table 1705A.5.3, Items 3.1, 3.3, 3.4, 3.5. For threaded fasteners: Verify use of proper installation equipment. Verify use of pre-drilled holes where required. Inspect screws, including diameter, length, head type, spacing, installation angle, and depth.
W2e: Connections Type B Inspect mass timber connections with adhesive anchors installed in a horizontal or upward orientation.	Table 1705A.5.3, Item 3.2
W2f: Sealants Inspect application of sealants or adhesives applied to mass timber elements.	1705A.20

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W3. OTHER Wood:	
Test or Special Inspection	Code References and Notes
W3a. Not used.	N/A
W3b. Not used.	N/A
W3c. Not used.	N/A
W3d. Not used.	N/A
W3e. Not used.	N/A
W3f. Not used.	N/A
W3g. Not used.	N/A
W3h. Not used.	N/A
W3i. Not used.	N/A
W3j. Not used.	N/A
W3k. Not used.	Not used.
W3l. Not used.	Not used.

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X1. OTHER:	
Test or Special Inspection	Code References and Notes
X01. Load test for identified product(s):	1709A.2, 1709A.3. Testing is not required for: 1) a product with a valid evaluation service report per DSA IR A-5, or 2) a product that can be justified by structural calculation.
X02. Installation torque for non-HS bolts on communication tower identified as essential service facility projects (ESFP).	Calibrated wrench use required, verified by SI during installation. DSA Policy PL 18-01: Communication Towers, Poles and Buildings Utilized by State Agencies for Essential Services Communications. *EXCEPTION: Non-ESFP may use PI without need for notification to DSA.
X03. Not used.	N/A
X04. Not used.	N/A
X05. Not used.	N/A
X06. Not used.	N/A
X07. Not used.	N/A
X08. Not used.	N/A
X09. Not used.	N/A
X10. Not used.	N/A

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EXEMPTIONS

SOILS - EXEMPTIONS:

Soils: Eligible shallow foundation elements | Shallow foundations, are exempt from special inspections and testing by a Geotechnical Engineer for the following cases: A) buildings without a geotechnical report and meeting the exception Item #1 criteria in CBC Section 1803A.2 supported by native soil (any excavation depth) or fill soil (not exceeding 12" depth per CBC, Section 1804A (4)), B) soil scarification/recompaction not exceeding 12" depth, C) native or fill soil supporting exterior non-structural flatwork (e.g., sidewalks, site concrete ramps, site stairs, parking lots, driveways, etc.), D) unpaved landscaping and playground areas, or E) utility trench backfill with depth not exceeding 12". These exempt structures shall be identified on the approved construction documents.

Soils: Eligible deep foundation elements, Type 1 | Deep foundation acting as cantilever footing with a design based on minimum allowable pressures per CBC Table 1806A.2 and without a geotechnical report are exempt from special inspection and testing by a Geotechnical Engineer for the following cases: A) free standing sign or scoreboard, B) cell or antenna towers and poles less than 35'-0" tall (e.g., lighting poles, flag poles, poles supporting open mesh fences, etc.). These exempt structures shall be identified on the approved construction documents.

Soils: Eligible deep foundation elements Type 2 | Deep foundation acting as cantilever footing with a design based on minimum allowable pressures per CBC Table 1806A.2 and without a geotechnical report are exempt from special inspection and testing by a Geotechnical Engineer for the following cases: A) single-story open fabric shade structure, or B) covered walkway structure with an apex height less than 10'-0" above adjacent grade. These exempt structures shall be identified on the approved construction documents.

CONCRETE/MASONRY - EXEMPTIONS:

Concrete/Masonry: Eligible post-installed anchors | Post-installed anchors for the following: A) exempt non-structural components (e.g., mechanical, electrical, plumbing equipment – see item 7 for "Welding" in the Appendix below) given in CBC Section 1617A.1.18 or B) interior nonstructural wall partitions meeting criteria listed in exempt item 3 for "Welding" in the Appendix below.

Concrete: Batch plant inspection for items listed in and complying with CBC Section 1705A.3.3.2. | Concrete batch plant inspection is not required for items given in CBC Section 1705A.3.3.2 subject to the requirements and limitations in that section.

Concrete: Epoxy shear dowels in nonstructural slab-on-grade per CBC Section 1910A.5.4, Exception #4. | Epoxy shear dowels in site flatwork and/or other nonstructural concrete.

Concrete/Masonry: Reinforcing bar testing for items listed in and complying with CBC Section 1910A.2. | Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section. These exempt structures shall be identified on the approved construction documents.

Masonry: Freestanding site walls and retaining walls per DSA IR 21-1. | Freestanding and site retaining masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1.

Eligible precast elements | Structural tests and special inspections are not required for the following concrete precast elements. Provide a certificate of compliance at delivery. Exemptions shall be identified on the approved construction documents.

1. Underground vaults no greater than 5 feet x 5 feet x unlimited height and pipe manufactured to an ASTM standard, 5 foot or less in diameter.
2. Elements manufactured in a PCI or NPCA certified manufacturing plant:

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|----|---|
| A. | Underground vaults no greater than 16 feet in both length and width, of unlimited height, not subject to loading greater than HS 20-44. |
| B. | Pipe. |
| C. | Stair treads, landing planks. |

WELDING - EXEMPTIONS:

Welding: Eligible fences and gates | Fences, gates with maximum leaf span of 10', and gates with a maximum rolling section of 10' all having an apex height less than 8'-0" above lowest adjacent grade.

Welding: Eligible railing and ramps | Handrails, guardrails, and modular or relocatable ramps associated with walking surfaces less than 30" above adjacent grade; fillet welds shall not be ground flush.

Welding: Eligible interior cold-formed steel framing | Non-bearing non-shearwall interior cold-formed steel framing spanning less than 15'-0" in height and header less than 10'-0" in opening width, such as in interior partitions, interior soffits, etc.

Welding: Eligible equipment curbs | Manufactured support frames and curbs using hot rolled or cold-formed steel (i.e., light gauge) for mechanical, electrical, or plumbing equipment weighing less than 2000# (equipment only) (connections of such frames to superstructure elements using welding will require special inspection.)

Welding: Eligible components supporting MEP distribution systems | Manufactured components (e.g., Tolco, B-Line, Alcon, etc.) for mechanical, electrical, or plumbing hanger support and bracing (connections of such components to superstructure elements using welding will require special inspection.)

Welding: Eligible mounts and recreational equipment | TV Brackets, projector mounts with a valid listing (see DSA IR A-5) and recreational equipment (e.g., playground structures, basketball backstops, etc.) (connections of such elements to superstructure elements using welding will require special inspection.)

Welding: Eligible nonstructural components | Any support for exempt non-structural components given in CBC Section 1617A.1.18 meeting the following: A) when supported on a floor/roof, <400# or resulting composite center of mass (including component's center of mass) ≤4' above supporting floor/roof, B) when hung from a wall or roof/floor, and <20# for discrete units or <5 plf for distributed systems.

Project Name: **Gateway Program**
 School District: **Liberty Union High School District**

Application No.: **01-122796** Increment:
 File No.: **7-H4**

PROJECT FORMS FOR SECTION 01 6000 – PRODUCT REQUIREMENTS

Request for Substitution

Example Project

Project Number: XXXX.XX

DSA Application: 01-000000

DSA File: 00-00

Specification Title: _____

Product Description: _____

Specification Section: _____

Article/Paragraph: _____

Architect will consider substitution requests received after the date established as deadline for substitution request only when one or more of the following conditions are met and documented. Indicate one or more conditions which apply:

- ☐ Specified item fails to comply with regulatory requirement.
- ☐ Specified item is no longer manufactured.
- ☐ Specified item, through no fault of the Contractor, unavailable in the time frame required to meet project schedule.
- ☐ Specified item, through subsequent information disclosure, will not perform properly or fit in designated space.
- ☐ Manufacturer declares specified product to be unsuitable for use intended or refuses to warrant installation of product.
- ☐ Substitution would be a substantial benefit to the Owner in terms of cost, time, energy conservation, or other consideration of merit.

Explain benefit to Owner (required):

Proposed Product Name (include specific model number): _____

Manufacturer: _____ Phone: _____

Address: _____

Installer: _____

Address: _____ Phone: _____

History: ☐ New product ☐ 2-5 years old ☐ 5-10 years old ☐ More than 10 years old

Difference between proposed substitution and specified product: _____

☐ Attached comparative table. Include point-by-point comparison of each article number. **REQUIRED**

Similar Installation:

Project: _____ Architect: _____

Address: _____ Owner: _____

Date Installed: _____

Proposed substitution affects other parts of Work? ☐ No ☐ Yes; Explain: _____

Savings to Owner for accepting substitution: _____ (\$ _____).

Proposed substitution changes Contract Time? ☐ No ☐ Yes; [Add] or [Deduct] _____ days.

Request for Substitution

(Continued)

As outlined in Specification Section 01 6000, a Request for Substitution constitutes a representation that the proposer:

- Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
- Will provide the same warranty or bonds for the substitution as for the specified product.
- Will coordinate installation of an accepted substitution and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
- Waives all claims for additional costs or time extension which may subsequently become apparent.
- Will reimburse Owner for services provided by Owner and Architect associated with re-approval by authorities.

General Contractor Representative Printed Name: _____

General Contractor Representative Signature, attesting to agreement to all above terms: _____

Date Submitted from General Contractor to Architect: _____

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports

Additional comments: _____

Architect's review and action:

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
- ☐ Substitution approved as noted. Make submittals in accordance with Specification Section 01 3300.
- ☐ Substitution rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Reviewed by: _____ Date: _____

PROJECT FORMS FOR SECTION 01 8113 – SUSTAINABLE DESIGN REQUIREMENTS

QKA Sustainable Materials Submittal Cover Sheet

Specification Section:	Original Product Data Submittal #(s):
Manufacturer:	Was this product a substitution?:
Product Name & Number:	
Purchase Date:	
Materials Costs (include tax & shipping):	

Sustainability Data and Supporting Documentation Index. Check any documentation that is included and enter summary data in the appropriate field.

1. Lifecycle Assessment (LCA) or Environmental Product Declaration (EPD)
 - ☐ Industry LCA or EPD
 - ☐ Product-specific LCA or EPD
2. Materials Sourcing
 - ☐ Extended Producer Responsibility Program
 - ☐ Bio-based materials (% _____)
 - ☐ Certified Wood
 - ☐ FSC Certification of sawmill/manufacturing facility in good standing
 - ☐ Proof of FSC content of material order (chain of custody on receipt)
 - ☐ Recycled Content
 - ☐ Post-consumer content (% _____)
 - ☐ Pre-consumer/post-industrial content (% _____)
 - ☐ Plant location (for aluminum, steel, concrete) _____
 - ☐ Heat number(s) (for aluminum, steel) _____
 - ☐ Local Sourcing - if this is the only sustainability claim, do not submit product.
 - ☐ Names and addresses of all suppliers and extraction locations
 - ☐ Map of all addresses showing within 100-mile radius of construction site
3. Material Ingredients
 - ☐ Health Product Declaration
 - ☐ Cradle to Cradle Certificate and/or C2C Material Health Certificate
 - ☐ Declare Label
 - ☐ Product Lens Certificate
 - ☐ Greencircle Certificate
4. VOC Emissions and Content
 - ☐ Wet-applied products
 - ☐ VOC content in g/L or mg/L (_____)
 - ☐ CARB/SCAQMD Category _____
 - ☐ Volume used per building
 - ☐ Proof of VOC emissions testing
 - ☐ Dry-installed products (excluding inherently non-emitting materials)
 - ☐ Proof of VOC emissions testing
5. Ethical Design Requirements
 - ☐ Cradle to Cradle Social Fairness level _____
6. Product substitution credit performance comparison to Basis of Design
7. Materials Costs
 - ☐ Receipt for project-specific purchase
 - ☐ From inventory/bulk purchase

**SECTION 01 2600
MODIFICATION PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. Documentation of change in Contract Sum and Contract Time.
- C. Change procedures.
- D. Execution of change orders.
- E. Correlation of Contractor submittals.

1.02 RELATED SECTIONS

- A. Document - Agreement: Monetary values of established Unit Prices.
- B. Document - General Conditions and Supplementary General Conditions: Governing requirements for changes in the Work, in Contract Sum and Contract Time and percentage allowances for Contractor's overhead and profit.
- C. Section 01 1600 - Project Forms: Modification Procedure Forms.
- D. Section 01 2900 - Applications for Payment: Payment applications and Schedule of Values.
- E. Section 01 3200 - Construction Progress Schedules: Work schedule.
- F. Section 01 6000 - Product Requirements: Product options and substitutions.
- G. Section 01 7000 - Contract Closeout: Project record documents.

1.03 SUBMITTALS

- A. Submit name of the individual in Contractor's firm authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. The following submittals shall be made on forms prepared by the Architect:
 - 1. Request For Information Forms.
 - 2. Architect's Supplemental Instructions Forms.
 - 3. Request For Proposal Forms.
 - 4. Change Order Forms.
 - 5. Work Directive Form.

1.04 DOCUMENTATION OF CHANGE IN CONTRACT SUM AND CONTRACT TIME

- A. Maintain detailed records of work done. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.
- B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
- C. Provide additional data to support computations:
 - 1. Quantities of products, labor, and equipment.
 - 2. Taxes, insurance, and bonds.
 - 3. Overhead and profit.
 - 4. Justification for any change in Contract Time.
 - 5. Credit for deletions from Contract, similarly documented.

1.05 REQUEST FOR INFORMATION ("RFI")

- A. An RFI is a written request prepared by the Contractor asking the Architect to provide additional information necessary to clarify an item which the Contractor feels is not clearly shown or called for in the drawings or specifications, or to address questions which have arisen under field conditions.
 - 1. RFI's shall be submitted by the Contractor to the Architect on the form which is included in the project. Submittals not conforming to this requirement will be returned.
- B. The RFI shall reference all the applicable Contract Documents including specification section, detail, page numbers, drawing numbers, and sheet numbers, etc. The Contractor shall make suggestions and/or interpretations of the issue raised by the RFI. An RFI cannot modify the Contract Cost, Contract Time, or the Contract Documents.
- C. The Architect must respond to a RFI within fourteen (14) calendar days after receiving such request. If the Architect cannot respond to the RFI within fourteen (14) calendar days, the Architect shall notify the Contractor, with a copy to the Inspector and the Owner, of the amount of time that will be required to respond.
- D. The Contractor shall be invoiced by the Owner for any costs incurred for professional services, which shall be deducted from the next progress payment, if an RFI requests an interpretation or decision of a matter where the information sought is equally available to the party making such request.

1.06 ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS ("ASI")

- A. An ASI is a written supplemental instruction issued and signed by the Architect for minor changes to the Work, without change in Contract Sum or Contract Time.
- B. Architect Authority;
 - 1. The Architect will have authority to order minor changes in the Work not involving any adjustment in the Contract Sum, an extension of the Contract Time, or a change which is inconsistent with the intent of the Contract Documents.

2. Such changes shall be effected by written Change Order and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

1.07 REQUEST FOR PROPOSAL ("RFP")

- A. An RFP is a written request prepared by the Architect asking the Contractor to submit to the Owner and the Architect an estimate of the effect of a proposed change on the Contract Price and the Contract Time.
- B. An RFP shall contain adequate information, including any necessary drawings and specifications, to enable Contractor to provide the cost breakdowns.
- C. Owner or Architect may initiate changes by submitting a proposal request to Contractor. Request will include:
 1. Detailed description of the change, products and location of the change in the project.
 2. Supplementary or revised drawings and specifications.
 3. The projected time span for making the change and a specific statement as to whether overtime work is, or is not, authorized.
 4. A specific period of time during which the requested price will be considered valid.
 5. Such request is for information only and is not an instruction to execute the changes nor to stop work in progress.
- D. The Contractor shall not be entitled to any Additional Compensation for preparing a response to an RFP, whether ultimately accepted or not.

1.08 CHANGE ORDER REQUEST (CHANGE EVENT "CE" REQUEST)

- A. Definition: A CE is a written request prepared by the Contractor asking the Owner and the Architect to incorporate a proposed change called for in an RFP or a claim into a Change Order (Prime Contract Change Order "PCCO").
- B. Changes in Price: Include breakdowns as required in the Article for Format for Change Event request to validate any change in Contract Price due to proposed change or claim.
- C. Changes in Time: A CE shall also include any additional time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in the General Conditions and Division 01 of the Specifications.
- D. Scope of Costs: Within ten (10) days or such lesser period of time as may be required by Owner after a request is made for a change that impacts the Contract Sum or the Contract Time, provide to the Owner and the Architect in writing an estimate of the effect of the proposed Change upon the Contract Price and the actual cost of construction, which shall include a complete itemized cost breakdown of all labor and material showing the following required for the change: actual quantities and unit prices of materials, labor hours, wage rates, the effect upon the Contract Time of such Change.

- E. Determination of Cost: The amount of the increase or decrease in the Contract Price resulting from a PCCO, if any, shall be determined in one or more of the following ways as applicable to a specific situation:
1. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
 2. Unit prices stated in the Contractor's original bid, the Contract Documents, or subsequently agreed upon between the Owner and the Contractor;
 3. Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
 4. By cost of material and labor and percentage of overhead and profit.
- F. Determination of Costs by Material and labor and Percentage of overhead and profit: If the value is determined by this method the following requirements shall apply:
1. Daily Reports by Contractor.
 - a. General: At the close of each working day, the Contractor shall submit a daily report to the Inspector, on forms approved by the Owner, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, the location of the Work, and for other services and expenditures when authorized concerning extra work items. An attempt shall be made to reconcile the report daily, and it shall be signed by the Inspector and the Contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through the Contractor.
 - b. Labor: Show names of workers, classifications, and hours worked.
 - c. Materials: Describe and list quantities of materials used.
 - d. Equipment: Show type of equipment, size, identification number, and hours of operation, including, if applicable, loading and transportation.
 - e. Other Services and Expenditures: Describe in such detail as the Owner may require.
- G. Basis for Establishing Costs for Change Orders:
1. Labor will be the actual cost for wages prevailing locally for each craft or type of workers at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State, or local laws, as well as assessments or benefits required by lawful collective bargaining agreements.
 2. Labor Unit Productivity for a given task or trade shall not be calculated at a lesser productivity than that published by industry references as follows:
 - a. Mechanical Trades: SMACNA productivity rates increased by 30 percent (30 percent greater productivity for a given task than specified by the reference).

- b. Electrical and Division 26 Trades: NECA productivity rates increased by 30 percent (30 percent greater productivity for a given task than specified by the reference).
 - c. All Other Trades: Lee Saylor Estimating Guide productivity using the "Open Shop Rate" for both labor and materials.
3. Only costs for direct labor related to the Changed or Added Work shall be included. Supervision, Project Manager, Project Engineer, Assistant Superintendent, research and preparation of Change Order Requests and other similar classifications shall be included in the calculation for overhead and not listed separately as line items.
 4. The use of a labor classification, which would increase the extra work cost, will not be permitted unless the Contractor establishes the necessity for such additional costs.
 5. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.
 6. Materials shall be at invoice or lowest current price at which such materials are locally available and delivered to the Site in the quantities involved, plus sales tax, freight, and delivery.
 7. The Owner reserves the right to approve materials and sources of supply or to supply materials to the Contractor if necessary for the progress of the Work. No markup shall be applied to any material provided by the Owner.
 8. Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of \$100 or less.
 9. Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies or distributors at the time the work is performed.
 10. The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.
 11. Necessary loading and transportation costs for equipment used on the extra work shall be included. If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the Owner than holding it at the work Site, it shall be returned unless the Contractor elects to keep it at the work Site at no expense to the Owner.
 12. Other Items. The Owner may authorize other items which may be required on the extra work. Such items include labor, services, material, and equipment which are different in their nature from those required by the Work, and which are of a type not ordinarily available from the Contractor or any of the Subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.
 13. Invoices. Vendors' invoices for material, equipment rental and other expenditures shall be submitted with the CE. If the request for payment is not substantiated by invoices or other documentation, the Owner may establish the cost of the item involved at the lowest price which was current at the time of the Daily Report.

14. Overhead. Overhead, including direct and indirect costs shall be included in the line item amount shown in the Article FORMAT FOR PROPOSED COST CHANGE, shall be submitted with the CE and shall include all of the following:
 - a. Home office overhead,
 - b. Off-Site supervision,
 - c. Change Order and CE Request preparation/negotiation/research,
 - d. Schedule delays,
 - e. Project interference and disruption,
 - f. Additional guaranty and warranty durations,
 - g. On-Site supervision, additional temporary protection,
 - h. Additional temporary utilities,
 - i. Additional material handling costs,
 - j. Additional safety equipment costs.

H. Contractor's Certification:

1. All proposed CE requests, including those originated by the Contractor or those filed as claims, must include the following certification by the Contractor:

"The undersigned Contractor approves the foregoing as to the changes in work, if any, and as to the contract price specified for each item and as to the extension of time allowed, if any, for completion of the project as stated herein, and agrees to furnish all labor, materials, and service and to perform all work necessary to complete any additional work specified for the consideration stated herein. Submission of claims which have no basis in fact or which Contractor knows are false are made at the sole risk of the Contractor and may be a violation of the False Claims Act, as set forth in Government Code Sections 12650 et seq. It is understood that the changes to the Contract Documents set forth herein shall only be effective upon approval by the governing board of the District.

"It is expressly understood that the value of the extra work or changes expressly includes any and all of the Contractor's costs and expenses, both direct and indirect, resulting from additional time required on the project or resulting from delay to the project. Any costs, expenses, damages, or time extensions not included herein are deemed waived."

2. All proposed Change Event requests shall be submitted on forms included in this project manual. Change Event Requests submitted on the Contractor's forms, altered, modified, or incomplete forms will be deemed waived.

- I. Format for Change Event Request: The Change Event Request format provided in Section 01 1600 - Project Forms shall be prepared by the Contractor to communicate proposed additions and deductions to the Contract.

- J. The value of such extra work or changes, as determined by any of the aforementioned methods, expressly includes any and all of the Contractor's costs and expenses, both direct and indirect, resulting from additional time required on the project or resulting from delay to the project. Any costs or expenses not included in the COR are deemed waived.
- K. Changes may be made by Owner by an appropriate written Prime Contract Change Order (PCCO), or, at the Owner's option, such changes shall be implemented immediately upon the Contractor's receipt of an appropriate written directive (Work Directive "WD").
- L. Notice required for Contractor-Initiated Change Event Requests: To request an increase in the Contract Price, or any extension in the Contract Time for completion, Contractor shall give the Owner and the Architect written notice thereof within ten (10) days after the occurrence of the event giving rise to the request, together with detailed estimates of the impact on the Contract Price and/or the Contract Time.
 - 1. This notice shall be given by the Contractor before proceeding to execute the Work.
 - 2. No request shall be considered unless made in accordance with this Article; however, the mere presentation of such claim shall not establish the validity of the cause giving rise to such request, or of the extension of the Contract Time, and/or the increase in the Contract Price.
 - 3. Contractor shall proceed to execute the Work even though the adjustment has been rejected or not agreed upon.
 - 4. Failure to provide the required notice within the stated time constitutes an express waiver of request.
 - 5. Agreed upon Change Event adjustments to Construction Price and/or Construction Time to be recommended for authorization by Owner will be incorporated by Architect into a Potential Change Order (PCO). Receipt of a PCO does not authorize Contractor to execute work.
 - 6. Any change in the Contract Price or extension of the Contract Time resulting from such request shall be authorized by a Prime Contract Change Order (PCCO) or Work Directive (WD).

1.09 CHANGE ORDERS (PRIME CONTRACT CHANGE ORDER "PCCO")

- A. No Changes Without Authorization;
 - 1. There shall be no change whatsoever in the drawings, specifications, or in the Work without an executed Prime Contract Change Order or an order by the Architect for a minor change in the Work as herein provided.
 - 2. Owner shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the same shall have been authorized by and the cost thereof approved in writing by Prime Contract Change Order.
 - 3. No extension of time for performance of the Work shall be allowed hereunder unless claim for such extension is made at the time changes in the Work are ordered, and such time duly adjusted in writing in the Prime Contract Change Order.
 - 4. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications.

5. Notwithstanding anything to the contrary in this Article, all Prime Contract Change Orders shall be prepared and issued by the Architect and shall become effective when executed by the Owner, the Architect, the Contractor, and associated Construction Change Document (CCD) approved by DSA.
- B. Owner will designate in writing the person who is authorized to execute change orders.
- C. Contractor may initiate changes by submitting a written notice to Architect containing:
 1. Description of the proposed changes.
 2. Statement of the reason for making the changes.
 3. Statement of the effect on the contract sum and the contract time.
 4. Statement of the effect on the work of separate contractors.
 5. Documentation supporting any change in contract sum or contract time as appropriate.
- D. A Prime Contract Change Order is a written instrument prepared by the Architect and signed by the Owner, the Contractor, and the Architect stating their agreement upon all of the following:
 1. A change in the Work;
 2. The amount of the adjustment in the Contract Sum, if any; and
 3. The extent of the adjustment in the Contract Time, if any.
- E. The following paragraph shall be a part of each Prime Contract Change Order:
 1. The compensation (time and cost) set forth in this Prime Contract Change Order comprises the total compensation due the Contractor, all Subcontractors and all Suppliers, at all tiers, for the work or change defined in the Prime Contract Change Order, including all impact on unchanged work. By signing this Prime Contract Change Order the Contractor acknowledges and agrees, on behalf of themselves, all Subcontractors and all Suppliers, at all tiers, that the stipulated compensation includes payment for all work contained in the Prime Contract Change Order, plus all payment for the interruption of schedules, extended and unabsorbed overhead costs, delay, disruption, and all impact, ripple impact or cumulative impact on all other work under this Contract. The signing of the Prime Contract Change Order indicates that the Prime Contract Change Order constitutes full mutual accord and satisfaction for the changed work, and that the time and cost under the Prime Contract Change Order constitutes the total equitable adjustment owed the Contractor, all Subcontractors and all Suppliers, at all tiers, as a result of the change. The Contractor, on behalf of themselves, all Subcontractors and all Suppliers, at all tiers, agrees to waive all rights, without exception or reservation of any kind whatsoever to file any further claim related to this Prime Contract Change Order. No further claim or request for equitable adjustment of any kind whatsoever shall arise out of or as a result of this change or the impact of this change on the remainder of the work under this Contract.
- F. For a "close out" Prime Contract Change Order (i.e., the final Change Order on the project), add the following paragraph.

1. By execution of this Prime Contract Change Order the Contractor specifically waives, relinquishes, and releases any and all rights under Section 1542 of the California Civil Code which reads as follows:

"A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR."

1.10 EXECUTION OF PRIME CONTRACT CHANGE ORDERS

- A. Execution of Prime Contract Change Orders: Architect/Engineer will issue Prime Contract Change Orders for signatures of parties as provided in the Conditions of the Contract.
- B. Transmittal and Distribution:
 1. Architect will prepare and execute the Prime Contract Change Order and forward to Contractor.
 2. Contractor shall execute the Prime Contract Change Order and forward to Architect. Architect will forward Prime Contract Change Order to Owner.
 3. Owner will execute the Prime Contract Change Order and forward to the Architect.

1.11 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Prime Contract Change Order as a separate line item and adjust the Contract Sum/Price.
- B. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- C. Promptly enter changes in Project Record Documents.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 ELECTRONIC PROCESSING PROCEDURES

- A. Modification requests shall be transmitted to the Architect using the project's cloud-based file sharing and storage service ("project's website") with electronic, editable (PDF) format attachments, as required. The cloud-based file sharing and storage service will be selected by the Architect. Contractor's failure to utilize, provide entries and processing through the Architect's cloud-based system will subject Contractor to hourly back charges associated with efforts required by others to perform work which is the contractual responsibility of the Contractor.
- B. Contractor's cost related to use of the project's website services shall be included in the Contractor's bid.
- C. Provide hardcopy submittals if requested by Architect.

- D. The Architect's review comments and/or direction will be made available on the project's website for downloading.
- E. Contractor will distribute a hardcopy of all reviewed request and direction to the Inspector of Record, Owner, and Construction Manager.

3.02 PROJECT FORMS

- A. Refer to Specification Section 00 6357 Proposed Change Orders Format, for modification cost itemization format requirements and definitions.
- B. The following forms are included in Section 01 1600 - Project Forms.
 - 1. REQUEST FOR INFORMATION
 - 2. ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS
 - 3. REQUEST FOR PROPOSAL
 - 4. CHANGE EVENT
 - 5. POTENTIAL CHANGE ORDER
 - 6. WORK DIRECTIVE
 - 7. PRIME CONTRACT CHANGE ORDER

END OF SECTION

**SECTION 01 2900
APPLICATIONS FOR PAYMENT**

PART 1 GENERAL

1.01 DESCRIPTION

A. Payment Procedures:

1. Schedule of Values.
2. Applications for Payment.
3. Conditions of Payment.
4. Final Payment.
5. Contractor Submittals.

B. Related Documents

1. Document - Contract (Agreement Between Owner and Contractor): Lump Sum.
2. Document - General Conditions: Progress Payments, Retainages and Final Payment, Applicability of Labor Compliance Program.
3. District Labor Compliance Program, as applicable to the project.
4. Section 01 1600 - Project Forms: Payment Procedure Forms.
5. Section 01 2600 - Modification Procedures: Change Orders.
6. Section 01 3900 - Coordination and Meetings.
7. Section 01 3300 - Submittals: Submittal procedures.
8. Section 01 3200 - Construction Progress Schedules.
9. Section 01 7000 - Contract Closeout: Final payment.
10. Section 01 7419 - Construction Waste Management

1.02 SUBMITTALS

A. On forms approved by the Owner, the Contractor shall furnish the following:

1. Within ten (10) days of the award of the Contract, a detailed breakdown of the Contract Price (Schedule of Values) for each Project or Site;
2. Within ten (10) days of the award of the Contract, a schedule of estimated monthly payment requests (cash flow) due the Contractor showing the values and construction time of the various portions of the Work to be performed by it and by its Subcontractors or material and equipment suppliers containing such supporting evidence as to its correctness as the Owner may require;

3. Within ten (10) days, the name, address, telephone number, fax number, license number, and classification of all of its Subcontractors and of all other parties furnishing labor, material, or equipment for its Contract, along with the amount of each such subcontract or the price of such labor, material, and equipment needed for its entire portion of the Work.
4. Five (5) days prior to the submission of a pay request, an itemized breakdown of work done for the purpose of requesting partial payments;
5. Five (5) days prior to the submission of a pay request, the minutes of Coordination Meetings per Section 01 3900.
6. Five (5) days prior to the submission of a pay request, updated Construction Progress Schedule per Section 01 3100.
7. Five (5) days prior to the submission of a pay request, updated Construction Waste Management Plan with waste delivery receipts/tags.
8. Five (5) days prior to the submission of a pay request, updated deconstruction plan with waste delivery receipts/tags.
9. For all public works projects subject to prevailing wage requirements of the Labor Code: submittal of electronic certified payroll records to the State Labor Commissioner maintained on a weekly basis, as required (Labor Code Section 1776), and penalties for failure to do so (Labor Code Section 1776(g)); The requirement includes and applies to all subcontractors performing work on projects even if their portion of the work is less than one half of one percent of the total amount of the contract.

B. Owner Approval Required

1. The Owner shall review all submissions received pursuant to paragraph 1.03 A. in a timely manner. All submissions must be approved by the Owner before becoming the basis of any payment.

C. Submit itemized applications typed on Application and Certificate for Payment and Continuation Sheet.

D. Provide itemized data on continuation sheet:

1. Format, schedules, line items and values: Those of the Schedule of Values accepted by Architect.

E. Obtain signature of Owner's Inspector on Application for Payment Continuation Sheet with each application prior to submittal to Architect.

1.03 SCHEDULE OF VALUES

- A. The Schedule of Values shall be used only as the basis for the Contractor's Progress Payments.
- B. Upon request of the Architect, support the values with data which will substantiate their correctness.
- C. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 1. Contractor's construction schedule.

2. Application for Payment form.
 3. List of subcontractors
 4. List of products.
 5. List of principal suppliers and fabricators.
 6. Schedule of submittals.
- D. Form of Schedule: Submit schedule on Application for Payment Continuation Sheet. Identify schedule with;
1. Title of Project and location, and name of Owner.
 2. Architect and Architect's Project Number.
 3. Name and address of Contractor.
 4. Contract designation.
 5. Date of submission.
- E. Schedule shall list the installed value of the component parts of the Work in sufficient detail to serve as a basis for computing values for progress payments during construction. Modify detail as requested by Architect.
- F. Follow the table of contents of this Project Manual as the form for listing component items.
1. Identify each line item with the number and title of the respective section of the specifications.
 2. Include separate line items for each section of Division 01.
- G. For each major line item which has installed value of more than \$10,000.00, list sub-values of major products or operations under the item.
- H. For the various portions of the Work:
1. Itemize separate line item cost for each of following general cost items (if provided):
 - a. Performance and payment bonds.
 - b. Field supervision and layout.
 - c. Temporary facilities and controls.
 - d. Mobilization.
 2. Each item shall include a directly proportional amount of the Contractor's overhead and profit.
 3. For items on which progress payments will be requested for stored materials, break down the value into:
 - a. The cost of the materials, delivered and unloaded, with taxes paid.

b. The total installed value.

I. The sum of all values listed in the schedule shall equal the total Contract Sum.

1.04 APPLICATIONS FOR PAYMENT

A. Procedure: On or before the twenty-fifth (25th) day of each calendar month during the progress of the portion of the Work for which payment is being requested, the Contractor shall submit to the Architect an itemized Application for Payment for operations completed in accordance with the Schedule of Values. Such application shall be notarized if the project is subject to a Labor Compliance Program, or if directed by the Owner for projects not subject to as Labor Compliance Program, and supported by all of the following, or such portion thereof as Architect requires:

1. The amount paid to the date of the Application to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;
2. The amount being requested with the Application for Payment by the Contractor on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract;
3. The balance that will be due to each of such entities after said payment is made;
4. A certification that the Record Drawings and Annotated Specifications are current;
5. The additions to and subtractions from the Contract Price and Time;
6. A summary of the retentions (each Application shall provide for retention, as set forth above, of the amount due until completion of the Work of the Contractor and Final Acceptance thereof by Owner);
7. Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the Owner may require from time to time;
8. The percentage of completion of the Contractor's Work by line item; and
9. A statement showing all payments made by the Contractor for labor and materials on account of the Work covered in the preceding Application for Payment.

B. Application Form:

1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.
2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
3. Execute certification with signature of a responsible officer of Contract firm.

C. Continuation Sheets:

1. Fill in total list of all scheduled component items of Work, with item number and scheduled dollar value for each item.

2. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored.
 3. List each Change Order executed prior to date of submission, at the end of the continuation sheets.
 - a. List by Change Order Number, and description, as for an original component item of work.
- D. Purchase of Materials and Equipment: The Contractor is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from Owner. Therefore, payment by the Owner for stored material shall be made only in unusual circumstances where the Architect specifically recommends, and Owner specifically approves, the payment in writing.
1. Payments made on account of materials and equipment not incorporated in the Work shall be conditioned upon submission by the Contractor, Subcontractor, or vendor of:
 - a. bills of sale and such other documents satisfactory to the Architect and the Owner to establish the Owner's title to such materials or equipment free of all liens and encumbrances, and otherwise protect the Owner's interest, and:
 - b. including, without limitation, provision of applicable insurance and transportation to the Site.
 2. All stored items shall be inventoried, specified by identification numbers (if applicable), released to the Owner by sureties of the Contractor and the Subcontractor and delivered and suitably stored at the Site or at some other location agreed upon in writing by the Owner, if stored off-Site, stored only in a bonded warehouse.
- E. Warranty of Title: The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances in favor of the Contractor, Subcontractors, material and equipment suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work.
- F. Progress Payments:
1. Payments to Contractor
 - a. Within thirty (30) days after approval of the Request for Payment, Contractor shall be paid a sum equal to ninety five (95) percent of the value of the Work performed up to the last day of the previous month unless a different retention percentage is stated in the Notice Inviting Bids, in which case that percentage applies, less the aggregate of previous payments. The value of the Work completed shall be an estimate only, no inaccuracy or error in said estimate shall operate to release the Contractor, or any bondsman, from damages arising from such Work or from enforcing each and every provision of this Contract, and the Owner shall have the right subsequently to correct any error made in any estimate for payment.
 - b. The Contractor shall not be entitled to have any payment requests processed, or be entitled to have any payment made for work performed, so long as any lawful or proper direction given

by the Owner concerning the Work, or any portion thereof, remains uncomplied with. At any time after fifty percent (50%) of the Work has been completed, if the Owner, by action of its governing body, finds that satisfactory progress is being made, the Owner may make any of the remaining payments in full for actual work completed or may withhold any amount up to ten percent (10%) thereof as the Owner may find appropriate based on the Contractor's progress.

2. Payments to Subcontractors: No later than ten (10) days after receipt, the Contractor shall pay to each Subcontractor, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.
 3. Percentage of Completion or Payment Information: The Owner will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor, and action taken thereon by the Owner, on account of portions of the Work done by such Subcontractor.
 4. No Obligation of Owner for Subcontractor Payment: The Owner shall have no obligation to pay, or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.
 5. Payment to Suppliers: Payment to material or equipment suppliers shall be treated in a manner similar to that provided in paragraphs 1.05 F. 2., 3. and 4.
 6. Payment Not Constituting Approval or Acceptance: An approved Request for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of work not in accordance with the Contract Documents.
 7. Joint Checks: Owner shall have the right, if necessary for the protection of the Owner, to issue joint checks made payable to the Contractor and Subcontractors and/or material or equipment suppliers. The joint check payees shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. In no event shall any joint check payment be construed to create any contract between the Owner and a Subcontractor of any tier, any obligation from the Owner to such Subcontractor, or rights in such Subcontractor against the Owner.
- G. Labor Compliance: A determination regarding whether this project is subject to prevailing wage requirements of the Labor Code is included in the Instructions to Bidders. Further information is contained in the General Conditions. The Contractor is responsible for enforcement of the terms and conditions of the Labor Code, including electronic certified payroll reporting and posting job site notices prescribed by regulation.

1.05 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. Each and every Application for Payment shall be accompanied with the complete substantiating data specified in this Section in the article titled CONDITIONS OF PAYMENT.
- B. When the Owner or the Architect requires substantiating data, Contractor shall submit suitable information, with a cover letter identifying:
 1. Project.

2. Application number and date.
3. Detailed list of enclosures.
4. For stored products:
 - a. Item number and identification as shown on application.
 - b. Description of specific material.

1.06 COMPLETION AND FINAL PAYMENT

A. Final Inspection

1. Contractor shall immediately upon receipt of the Punch List, initiate work on all items therein related to Contractor's Work and diligently complete the same. Upon receipt of Contractor's written notice that all of the Punch List items have been fully completed and the Work is ready for final inspection and acceptance, Architect shall inspect the Work and shall submit to Contractor and Owner a final inspection report noting the work, if any, required in order to complete the Work in accordance with the Contract Documents. Absent unusual circumstances, this report shall consist of the Punch List items not yet satisfactorily completed.
2. Upon completion of the Work contained in the final inspection report, the Contractor shall so notify the Owner, who shall again inspect such Work. If the Owner finds the Work contained in such final inspection report acceptable under the Contract Documents and, therefore, the Work fully completed, it shall so notify Contractor, who shall then submit to the Architect its final Application for Payment.
3. Upon receipt and approval of such final Application for Payment, the Architect shall issue a final Certificate of Payment stating that to the best of its knowledge, information, and belief, and on the basis of its observations, inspections, and all other data accumulated or received by the Architect in connection with the Work, such Work has been completed in accordance with the Contract Documents. The Owner shall thereupon inspect such Work and either accept the Work as complete or notify the Architect and the Contractor in writing of reasons why the Work is not complete. Upon acceptance of the Work of the Contractor as fully complete (which, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the Owner shall record a Notice of Completion with the County Recorder, and the Contractor shall, upon receipt of payment from Owner, pay the amounts due Subcontractors.

B. Retainage: The retainage, less any amounts disputed by the Owner or which the Owner has the right to withhold, shall be paid after approval of the Owner of the Architect's Certificate of Payment referred to in paragraph 1.07 A., after the satisfaction of the conditions set forth in paragraph 1.07 C., and after thirty-five (35) days after the acceptance of the Work and recording of the Notice of Completion by Owner. No interest shall be paid on any retainage, or on any amounts withheld due to a failure of the Contractor to perform, in accordance with the terms and conditions of the Contract Documents.

C. Procedures for Application for Final Payment: The Application for Final Payment shall be accompanied by the same details as set forth in paragraph 1.05, and in addition, the following conditions must be fulfilled:

1. A full and final waiver of all liens in connection with the Work shall be submitted by Contractor, including a release of lien in recordable form, together with (to the extent permitted by law) a copy of the full and final waiver of all liens, including a release of lien in recordable form, in connection with the Work obtained by Contractor from each person to receive a payment thereunder, which waivers of lien shall be in a form as approved by Owner.
 2. The Contractor shall have made, or caused to have been made, all corrections to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of Owner required under the Contract.
 3. Each Subcontractor shall have delivered to the Contractor all written guarantees, warranties, applications, and bonds required by the Contract Documents for its portion of the Work.
 4. The Contractor shall deliver to the Owner reproducible final Record Drawings and Annotated Specifications showing the Contractor's Work "as built," with the Contractor's certification of the accuracy of the Record Drawings and Annotated Specifications, all guarantees, and operation and maintenance instructions for equipment and apparatus.
 5. Architect shall have issued a Final Certificate of Payment.
 6. The Contractor shall have delivered to the Owner all manuals and materials required by the Contract Documents.
 7. The Contractor shall have removed, or caused to be removed, all waste materials and rubbish from and about the Site, as well as all tools, construction equipment, machinery, surplus material, scaffolding equipment, and any other similar materials of the Contractor or any subcontractor, shall have cleaned, or caused to be cleaned, all glass surfaces, and shall have left the Work broom-clean, except as otherwise provided in the Contract Documents.
- D. Fill in Application form as specified for progress payments and present the final statement of accounting.
- E. Use continuation sheet for presenting the final statement of accounting as specified in Section 01 7000 - Contract Closeout.
- F. Fill out and submit with application for final payment:
1. Contractor's Affidavit of Payment of Debts and Claims.
 2. Contractor's Affidavit of Release of Liens.
 3. Consent of Surety Company to Final Payment.
 4. Release Form 3 Conditional Waiver and Release Upon Final Payment.
- G. Fill out and submit to Owner prior to receipt of final payment: Release Form 4 Unconditional Waiver and Release Upon Final Payment

1.07 SUBMITTAL PROCEDURE

- A. Submit Applications for Payment to Architect at the times stipulated in the Agreement.

- B. Number: Five copies of each Application, or four copies in addition to number required by Contractor.
- C. Each Application shall include all of the items listed in the Article titled CONDITIONS OF PAYMENT.

1.08 CONDITIONS OF PAYMENT

- A. Contractor submittal of the following items attached to the Application for Payment Transmittal following this Section with original signature of the Contractor's Project Superintendent, with each and every Application for Payment is a condition precedent to receipt of payment.
 - 1. Certification of Review of Payment Application by original signature on the Application for Payment Transmittal of Contractor's Superintendent. This document shall be counter-signed signifying review and approval by Owner's Inspector of Record.
 - 2. Application for Payment with schedule of values for the period during which Work was performed.
 - 3. Completed Daily Reports for the applicable billing period. Contractors shall maintain daily records of their activities, subcontractors present, number of workers representing each subcontractor, number of workers employed by the Contractor, and any other information deemed pertinent by the Contractor. Architect is not required to review or comment on this information.
 - 4. Completed Schedule Update for the applicable billing period, with all attachments as may be required by Section 01 3100 for that submittal.
 - 5. Provide Certification by original notarized signature of Contractor's Project Superintendent on the Application for Payment Transmittal that the project is on schedule and that the Contractor has experienced no delays or schedule disruptions.
 - a. In the event that a Contractor has experienced delay or disruption in the period for which payment is applied, Contractor must so indicate in writing with original signature on Contractor's company letterhead attached to this certification stating the nature of the delay or disruption, the event that precipitated said delay, and the method of recovering the lost time and maintaining the schedule recommended by the Contractor. Failure to so timely indicate delay or disruption shall be construed as a waiver of claim for damages for same.
 - 6. Certification by original notarized signature of Contractor's Project Superintendent on the Application for Payment Transmittal that Contractor has updated all As-Built Drawings in the Project Superintendent's office.
 - 7. Completed Conditional Waiver and Release Upon Progress Payment Forms for the Contractor and any and all Subcontractors, second and third tier subcontractors and material suppliers or service providers.
 - 8. Completed Unconditional Waiver and Release Upon Progress Payment Forms for previous billing period, if any. Contractor to provide one Unconditional Waiver and Release Upon Progress Payment for every corresponding Conditional Waiver and Release submitted with previous Application for Payment.
 - 9. Copy of Verified Report Form SSS 6, as required during the applicable billing period.

- B. When Architect finds Application and all required submittal attachments properly completed and correct, he or she will transmit Certificate for Payment to Owner, with copy to Contractor. Incomplete or improper submittals will be returned to the Contractor without action.

1.09 REVIEW OF PROGRESS PAYMENT

- A. Owner Approval: The Architect will, within seven (7) days after receipt of the Contractor's Application for Payment, either certify such payment or notify the Contractor in writing of the Architect's reasons for withholding certification in whole or in part as provided above.
- B. Architect's Review: The review of the Contractor's Application for Payment by the Architect is based on the Architect's observations at the Site and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion, and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the review by the Architect will not be a representation that the Architect has:
 - 1. Made exhaustive or continuous on-Site inspections to check the quality or quantity of the Work;
 - 2. Reviewed construction means, methods, techniques, sequences, or procedures;
 - 3. Reviewed copies of requisitions received from Subcontractors, material and equipment suppliers, and other data requested by the Owner to substantiate the Contractor's right to payment; or
 - 4. Made on examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.
 - 5. Reviewed or examined for accuracy or completeness any documentation submitted to comply with the Owner's Labor Compliance Program.

1.10 DECISIONS TO WITHHOLD PAYMENT

- A. Reasons to Withhold Payment: The Owner may decide to withhold payment in whole, or in part, to the extent reasonably necessary to protect the Owner if, in the Owner's opinion, the representations to the Owner required by the Article titled REVIEW OF PROGRESS PAYMENT cannot be made. The Owner may withhold payment, in whole, or in part, to such extent as may be necessary to protect the Owner from loss because of:
 - 1. Defective Work not remedied;
 - 2. Stop Notices filed, unless the Contractor at its sole expense provides a bond or other security satisfactory to the Owner in the amount of at least one hundred twenty-five percent (125%) of the claim, in a form satisfactory to the Owner, which protects the Owner against such claims;
 - 3. Liquidated damages assessed against the Contractor;
 - 4. Reasonable doubt that the Work can be completed for the unpaid balance of any Contract Price or by the completion date;

5. Damage to the Owner, another contractor, or subcontractor;
 6. Unsatisfactory prosecution of the Work by the Contractor;
 7. Failure to store and properly secure materials;
 8. Failure of the Contractor to submit on a timely basis, proper and sufficient documentation required by the Contract Documents, including, without limitation, monthly progress schedules, shop drawings, submittal schedules, schedule of values, product data and samples, proposed product lists, executed change orders, and verified reports, certifications, certified payrolls, any submittals required by the Labor Compliance Program but not enumerated in this or other sections of these specifications, as applicable, and other submittals specified as conditions precedent to receipt of payment in the Article titled CONDITIONS OF PAYMENT;
 9. Failure of the Contractor to maintain record drawings;
 10. Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Application for Payment;
 11. Unauthorized deviations from the Contract Documents; or
 12. Failure of the Contractor to prosecute the Work in a timely manner in compliance with established progress schedules and completion dates.
 13. Failure of the Contractor to conform to the requirements of the Labor Compliance Plan as applicable.
- B. Written Reasons for Withholding Provided: Upon request of the Contractor whose payment is deferred, the Contractor shall be given a written copy of Owner's reasons for withholding payment.
- C. Payment After Cure: When the grounds for declining approval are removed, payment shall be made for amounts withheld because of them. No interest shall be paid on any retainage or amounts withheld due to the failure of the Contractor to perform in accordance with the terms and conditions of the Contract Documents.
- D. Labor Compliance Penalties: In addition to the remedy of withholding payment, the Owner may assess penalties as described in the Labor Compliance Program or as otherwise required by law for failure of the Contractor to conform to the requirements of the Labor Compliance Plan.

1.11 SUBSTITUTION OF SECURITIES

- A. In accordance with § 22300 of the Public Contract Code, the Owner will permit the substitution of securities for any monies withheld by the Owner to ensure performance under the Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the Owner, or with a state or federally chartered bank as the escrow agent, who shall then pay such monies to the Contractor. Upon satisfactory completion of the Contract, the securities shall be returned to the Contractor.
- B. Securities eligible for investment under this section shall include those listed in Government Code § 16430, bank or savings and loan certificates of deposit, interest-bearing, demand-deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contractor and the Owner.

- C. The Contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.
- D. The escrow agreement used for the purposes of this Section shall be substantially similar to the form set forth in Public Contract Code § 22300.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 PROJECT FORMS

- A. The following Payment Procedure forms are included in Section 01 1600 - Project Forms.
 - 1. APPLICATION FOR PAYMENT TRANSMITTAL
 - 2. APPLICATION AND CERTIFICATE FOR PAYMENT
 - 3. APPLICATION FOR PAYMENT CONTINUATION SHEET
 - 4. CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS
 - 5. CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS
 - 6. CONSENT OF SURETY TO FINAL PAYMENT
 - 7. CONDITIONAL AND UNCONDITIONAL RELEASE ON PROGRESS AND FINAL PAYMENT - FORMS 1 THROUGH 4
 - 8. WHEN NOTED IN THE GENERAL CONDITIONS AS PART OF THE PROJECT, DISTRICT LABOR COMPLIANCE PROGRAM WILL BE BOUND IN SECTION 01 1600.

END OF SECTION

SECTION 01 3200
CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Prepare cost loaded Construction schedule using the critical path method (CPM) demonstrating fulfillment of all contract requirements.
- B. Submittals and Distribution.
- C. Review.
- D. Rain days.

1.02 RELATED SECTIONS

- A. Document 00 5200 – Contract: Contract Duration and provisions for liquidated damages.
- B. Section 01 2900 - Applications For Payment: Schedule of values.
- C. Section 01 4000- Quality Control: Inspection and testing reports.

1.03 DEFINITIONS

- A. Critical Path Method (CPM): A method of planning and scheduling a construction project where activities are arranged based on activity relationships and network calculations to determine when activities can be performed and the critical path of the Project.
- B. Critical Path: The longest continuous chain of activities through the network schedule that establishes the minimum overall project duration.
- C. Network Diagram: A graphic diagram of a network schedule, showing the activities and activity relationships.
- D. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path.
 - 2. Predecessor activity is an activity that must be completed before a given activity can be started.
- E. Event: An event is the starting or ending point of an activity.
- F. Milestone: A key or critical point in time for reference or measurement.
- G. Float is the measure of leeway in activity performance.
 - 1. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.

2. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned project completion date.
3. Float time shall accrue to the Owner and to the Owner's benefit.

1.04 QUALITY ASSURANCE

- A. Scheduler Qualifications: Contractor's personnel or Specialist Consultant to the Contractor specializing in CPM scheduling with three years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within forty-eight (48) hours of request.
- B. Designate, in writing, an authorized representative who will be responsible for the preparation of the CPM schedule and progress of the project. The Contractor's representative shall have direct project control and complete authority to act on behalf of the Contractor in fulfilling the Construction Schedule requirements.
- C. Within 5 calendar days from Notice of Award, submit demonstration of competence in use of CPM scheduling, including evidence of the use of CPM scheduling as specified above. In the event of failure to satisfy Architect of competence, the Contractor shall be required to employ a qualified CPM consultant to be approved by the Architect.
 1. The cost of revision to the CPM schedule, not resulting from authorized contract changes, shall be the responsibility of the Contractor.

1.05 SCHEDULE OF INSPECTIONS AND TESTS

- A. Provide information regarding tasks requiring special inspection and tests to District's inspection and testing laboratory, as requested.

1.06 CONSTRUCTION SCHEDULE

- A. Prepare the Construction Schedule using the network analysis diagram system known as the critical path method (CPM). Follow procedures outlined in AGC's "Construction Planning & Scheduling".
 1. Proceed with preparation of the network diagram immediately following Notice of Award.
 2. Follow the steps necessary to complete development of the network diagram in sufficient time to submit the CPM Schedule so it can be accepted for use no later than 30 days after commencement of the Work.
 3. Conduct educational workshops to train and inform key project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule.
 4. Establish procedures for monitoring and updating the CPM Schedule and for reporting progress. Use "one working day" as the unit of time.
- B. CPM Schedule Preparation: Prepare a list of all activities involved in the Project. Include a list of activities required to complete the Work. Provide the best data available for generation of the network diagram and the CPM Schedule.

1. Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities.
 2. Indicate estimated times for the following activities to be performed:
 - a. Preparation and processing of submittals.
 - 1) Milestone 6 weeks prior to submission of DSA Deferred Approval product, for DSA required scheduling for receipt of submittal for review.
 - b. Purchase of materials.
 - c. Delivery.
 - d. Fabrication.
 - e. Installation.
 3. Include, in the network diagram, separate activities showing:
 - a. Preparation and submittal of shop drawings.
 - b. Architect review of shop drawings, including review and selection of colors.
 - c. Procurement and delivery of materials and equipment.
 - d. Installation and testing of major equipment.
 - e. Required delivery for all Owner supplied, Contractor installed items.
 4. Include a legend showing:
 - a. Each location or area code number and the place or location it refers to.
 - b. Each responsibility or trade code number and the trade or entity it refers to.
 5. Indicate each building or separate area as a separately scheduled element of the Work.
 6. Using the preliminary network diagram, prepare a skeleton network to identify probable critical paths.
 7. Where the work of several trades is combined into one activity, the Contractor shall furnish, for each such combined activity, the cost breakdown of each trade on sheets separate from the network diagram. The sum of the costs for each trade shall equal the total dollar value of each such combined activity.
- C. Submit the following supporting data with the submittal of the original CPM construction schedule. Any changes to this information shall be submitted with successive updates and revisions.
1. The proposed number of working days per week.
 2. The holidays to be observed during the duration of the contract (by day, month, and year).
 3. The planned number of shifts per day.

4. The number of hours per shift.
 5. The planned usage of major construction equipment on the site, on a monthly basis.
 6. The average weekly manpower usage for each trade to be employed on the project.
- D. Processing: Enter prepared data on the processing system. Process data to produce output data or a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM Schedule within the limitations of Contract Time.
- E. Format: Display the full network on a single sheet of stable transparency, or other reproducible media, of sufficient width to show data clearly for the entire construction period.
1. Mark the critical path. Locate the critical path near the center of the network; locate paths with the most float near the edges.
 2. Sub networks on separate sheets are permissible for activities clearly off the critical path.
- F. Initial Issue: Prepare the initial issue of the CPM Schedule network diagram from a listing of straight "early start-total float" sort. Identify critical activities. Prepare tabulated reports to show the following:
1. The Contractor or subcontractor and Work or activity.
 2. Description of the activity.
 3. Principal events of that activity.
 4. Immediate preceding and succeeding activities.
 5. Early, late and actual start dates.
 6. Early, late and actual finish dates.
 7. Activity duration in working days.
 8. Total float and free float time. Float time shall accrue to the Owner and to the Owner's benefit.
 9. Average size of work force.
 10. Monetary value of activity (coordinated with the Schedule of Values).
- G. Value Summaries: Prepare 2 cumulative value listings, sorted by finish dates.
1. In first listing, tabulate the following:
 - a. Activity number.
 - b. Early finish date.
 - c. Dollar value.
 - d. Cumulative dollar value.
 2. In second listing, tabulate the following:

- a. Activity number.
 - b. Late finish date.
 - c. Dollar value.
 - d. Cumulative value.
3. In subsequent issues of both listings, substitute actual finish dates for activities completed as of listing date.
- H. Prepare listing for ease of comparison with payment requests: coordinate timing with progress meetings.
1. In both value summary listings, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.
 2. Submit value summary printouts following each regularly scheduled progress meeting.
 3. Provide monthly project cash flow analysis upon District's request at no additional cost.

1.07 REVISIONS TO SCHEDULES

- A. Graphically indicate progress of each activity to date of submittal, and projected completion date of each activity as referenced to the baseline date for that activity as shown in the initial schedule.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- C. Insert Delay Contingency activities into the critical path at the point where they occur, incorporating the mutually agreed duration per the Article on DELAY CONTINGENCY. Shorten the initial Delay Contingency activity by this mutually agreed duration.
- D. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including the effect of changes on schedules of separate contractors.
- E. Revision to the CPM schedule may require reallocation of costs. Revised activity cost data shall be submitted with revised CPM schedules as necessary.
- F. After each monthly update or revision, the Contractor shall submit, to the Architect, one complete set of reproducible transparencies of the last accepted CPM schedule, each marked up in red, showing all revisions and changes in accordance with the monthly review meeting.
- G. Within five (5) working days after receipt of notice from the Architect, the Contractor shall submit a revised CPM schedule for any of the following reasons:
 1. When delay in completion of any activity, or group of activities, indicates an overrun of the contract time or milestone requirement by 20 working days or ten percent (10%) of the remaining duration, whichever is less.
 2. Delays in submittals or deliveries or work stoppage are encountered which make re-planning or rescheduling of the work necessary.

3. The schedule does not represent the actual prosecution and progress of the project as being performed in the field.

1.08 SUBMITTALS

- A. Submit initial schedules within fifteen (15) calendar days after date of Owner-Contractor Agreement. After review, resubmit required revised data within five days.
- B. Submit revised Progress Schedules with each Application for Payment. Submittal of revised Progress Schedule is a condition precedent to receipt of Payment.
- C. Submit the number of opaque reproductions which Contractor requires, plus three copies which will be retained by Architect. In addition, submit each schedule submittal, including initial submittal, in the Scheduling software's complete and original software file format on Compact Disc – Read Only (CD-ROM). Provide one such disk with each schedule submittal. Architect will retain CD-ROM electronic versions.
- D. Submit "two-week look ahead" report in bar-chart format indicating activities scheduled to occur in the up-coming two week period. Provide and discuss these submittals at the progress meetings specified in Section 01 3900 and additionally as requested by the Architect, Owner or Inspector.

1.09 PROGRESS REPORTING, UPDATING AND REVISIONS:

- A. On a date mutually agreed upon by the Architect and the Contractor, a job site progress meeting will be held each month at which time the CPM schedule will be reviewed and updated. Attendees of this meeting shall include the Architect, the General Contractor and subcontractors, if requested by the Architect. The Contractor shall have its copy of the Payment Request form and all other data required by the Contract Documents accurately filled in and completed prior to this meeting. Job Progress and the CPM schedule will be reviewed to verify:
 1. Payment due to the Contractor, based on percentage complete of items in the submitted Payment Request form.
 2. Logic, time and cost data for change order work that is to be incorporated into the CPM schedule or Payment Request form.
 3. Status of as-built record drawings and as-built record specifications.
- B. The Contractor shall submit a narrative report as a part of its monthly progress review and update.

1.10 REVIEW

- A. Architect's review is limited to verification of compliance with the Contract start and end dates and inclusion of Contract Time adjustments.
- B. To the extent that the CPM schedule or any revised CPM schedule shows anything not jointly agreed upon, it shall be deemed to have not been accepted by the Architect. Failure to include any element of work required for the performance of this contract shall not excuse the Contractor from completing all work required within any applicable completion date of each phase notwithstanding the Architect's acceptance of the CPM schedule.

- C. Acceptance of any revised CPM schedule and all supporting data is contingent upon compliance with all other paragraphs of this section and any other previous agreements or requirements with or by the Architect.

1.11 DELAY CONTINGENCY

- A. Each Contractor submitting a bid proposal shall make allowance in its proposal and Project Schedule for sixty (60) work days for delay to the critical path due to inclement weather or delay due to circumstances beyond the Contractor's control.
- B. Extension of time for delay due to inclement weather or circumstances beyond the Contractor's control will be allowed only in the event that the total number of critical path work days delayed exceeds the number of days allowed in paragraph A of this Article. No time extension will be allowed for delays that do not affect the critical path as set forth in the master schedule.
- C. No time extension will be allowed for inclement weather occurring on any Saturday, Sunday, National or other holiday, including holidays recognized by specific unions, crafts or trades. Exception: If any day defined above is scheduled as a work day under the provisions of the Article CONTRACTOR'S RESPONSIBILITY FOR COMPLETION and approved by the Architect and Owner, or as otherwise approved by the Owner.
- D. A rain day is defined as any day that receives .130" or greater rainfall as reported by a local weather service acceptable to the Architect and is cause for work to be stopped. For the purposes of this project, Rain Days must meet this definition and be mutually approved and agreed upon on the day that a rain day occurs by the Contractor and the Architect. Contractor will post and maintain, in a conspicuous location, a calendar of so-approved rain days at the Contractor's jobsite trailer.

1.12 CONTRACTOR'S RESPONSIBILITY FOR COMPLETION:

- A. The Contractor agrees that whenever it becomes apparent from the monthly progress review meeting or the schedule that contract completion dates will not be met, it shall take some or all of the following action at no additional cost to the Owner:
 - 1. Increase construction manpower in such quantities and crafts as will bring the progress of the work into conformance with all other requirements of this section.
 - 2. Increase the number of working hours per shift, shifts per working day, workdays per week, the amount of construction equipment or any combination of the foregoing, to bring the scheduling and progress of the work into conformance with all requirements of the Contract Documents.
 - 3. Reschedule the work under this contract in conformance with all other contract requirements to demonstrate completion of the contract work within the contract time.
- B. Compensate owner for costs incurred to the Owner for rescheduling or additional testing, inspection, or architectural services made necessary by the Contractor's actions.

1.13 ADJUSTMENT OF THE CONTRACT TIME:

- A. The contract time will be adjusted only for causes specified in the Contract Documents. In the event the Contractor requests an adjustment of the contract time, it shall furnish such justification, CPM data and supporting evidence as the Architect may deem necessary for a determination as to whether or not the Contractor is entitled to an adjustment of time under the provisions of the contract. Submission of

proof based on revised activity logic, duration and cost is obligatory with any request. Requests not conforming to these requirements are deemed to be waived.

- B. The Contract Time will be not be adjusted for any reason, including weather, until the latest accepted schedule clearly displays that the Contractor has used, in full, all the float time available for the Work. Delays in activities which, according to the latest accepted schedule, are not on the critical path in the CPM schedule will not be the basis for an adjustment to the contract time.
- C. The Contractor shall submit each request for an adjustment in the contract time to the Architect in accordance with all other requirements of the Contract Documents. The Contractor shall include, as part of each request:
 - 1. Justification for the delay in narrative form.
 - 2. A sub network showing all CPM logic revisions, duration changes and cost changes for the work in question and its relationship to other activities on the CPM schedule.
- D. The Architect's determination as to the adjustment of the contract time shall be based upon the latest schedule which has been accepted at the time of the alleged delay and all other relevant information. The Contractor shall submit with every request, an updated CPM schedule whenever the actual field progress of the work does not conform to the accepted schedule in force at the time of the alleged delay. The CPM data, if accepted by the Architect, shall be included in the next monthly updating of the schedule.
- E. The Architect shall, within a reasonable time after receipt of a request and supporting evidence for extension of the contract time, review the facts and shall advise the Contractor, in writing, of its decision.

1.14 DISTRIBUTION

- A. Distribute copies of reviewed schedules to Project site file, Subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.
- C. Architect will distribute copies to the Owner and the Inspector.

PART 2 PRODUCTS

2.01 SCHEDULING SYSTEMS

- A. Prepare schedules using professional quality scheduling software systems designed for this purpose, capable of producing results specified.
- B. Acceptable products:
 - 1. Primavera Systems
 - 2. Microsoft Project

PART 3 EXECUTION

Not Used

END OF SECTION

**SECTION 01 3300
SUBMITTALS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals required by the Contract Documents. Revise and re-submit as necessary to establish compliance with Contract Documents.
 - 1. It is reasonable that the Contractor will provide a satisfactory submittal by the second submittal. If repeated resubmittals are required, the Owner may "back charge" the Contractor for the cost of review and processing.

1.02 WORK NOT INCLUDED

- A. Submittals which are not required will not be reviewed by the Architect.
- B. The Contractor may require subcontractors to provide drawings, setting diagrams or similar information as part of the coordination of the Work. The Architect will not review this data.

1.03 RELATED WORK

- A. Section 01 3100 - Construction Schedules: Dates for submission and dates that reviewed submittals will be required shall be designated in the Construction Schedule.
- B. Section 01 7000 – Contract Closeout: Project record documents.

1.04 QUALITY ASSURANCE

- A. Submit to the Architect for review, product literature, samples and shop drawings as specified or required to fully describe every item proposed for incorporation in the work. Only approved items may be used.
- B. Prior to submittal, review and coordinate all aspects of each item. Verify that each item and it's submittals conform to Contract Document requirements. Contractor assumes full responsibility for coordinating and verifying information, quantities and dimensions shown in submittals.
- C. Submittals shall include:
 - 1. Date and revision dates.
 - 2. Project title and number.
 - 3. The names of:
 - a. Architect/Engineer.
 - b. Contractor.
 - c. Subcontractor.
 - d. Supplier.

- e. Manufacturer.
- f. Separate detailer when pertinent.
- 4. Identification of product or material.
- 5. Relation to adjacent structure or materials.
- 6. Field dimensions, clearly identified as such.
- 7. Specification section number.
- 8. Applicable standards, such as ASTM number or Federal Specification.
- 9. A blank space, 8 inches x 3 inches, for the Contractor and Architect stamps.
- 10. Identification of deviations from Contract Documents.
- 11. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements and compliance with Contract Documents.
- 12. Signature of and calculations by an engineer, licensed in California, where required by specifications.
- D. Indicate review and approval of each submittal prior to transmittal to Architect by affixing Contractor's stamp, initialed or signed, certifying:
 - 1. Review of submittal
 - 2. Verification of compliance with requirements of the Contract Documents.
 - 3. Verification of compatibility with other submittals, shop drawings, substitutions, and work of other trades.
 - 4. Coordination with existing job conditions and field construction criteria.
 - 5. Field verification of dimensions.
- E. Architect will review Contractor's stamp language. Revise language in accordance with Architect's comments and provide new stamp if required by Architect.
- F. Architect will return unreviewed any submittal not stamped by the Contractor in accordance with the above.
- G. Direct Architect's attention to any deviations from the Contract Documents . Deviations not so noted shall be considered unreviewed.
- H. Direct Architect's attention to any changes made in submittals other than those specifically requested by Architect. Changes not so noted shall be considered unreviewed.
- I. Work shall not be fabricated, nor material shipped to project site prior to the distribution of approved submittals from the Architect.

1.05 SUBMITTALS

- A. Make submittals of shop drawings, product data, samples, substitution requests, meeting minutes and other items required by the Contract Documents in accordance with the provisions of this Section.
- B. Submittals shall include all technical and performance data necessary for the Architect to properly evaluate the submittal. Provide physical samples if requested by Architect, whether expressly specified or not.
- C. Incomplete submittals will be return to the Contractor without review. Contractor shall be responsible for delays incurred by incomplete, multiple reviews or rejected submittals.
- D. Provide only one make or brand of any product proposed.

PART 2 PRODUCTS

2.01 SHOP DRAWINGS

- A. Shop drawings are to be drawn at large scale, fully detailed and with all materials and stock or purchased components fully identified. Shop drawings are to be submitted when specified and to illustrate every custom fabricated item or assembly.
- B. Types of prints required: See 3.01 ELECTRONIC SUBMITTAL PROCEDURES.
- C. Drawings are to be identified showing the project name, the Owner's name and account number, the Architect's name and job number, the Contractor's name and the specification section number and drawing detail reference number relating to the work shown.

2.02 PRODUCT DATA

- A. Submit detailed technical literature fully describing every product or item proposed for use including manufacturers and items specified. Include manufacturer's detailed specifications, drawings, photographs, performance criteria, installation instructions, test data, samples of colors and finishes and other information required to fully describe the item.
 - 1. Modify standard product data to delete information which is not pertinent.
 - 2. Provide additional information which is specifically applicable.
- B. Mark all submittals indicating items, options, and finishes proposed, and referencing project specification section and paragraph covering the work in question. Indicate as follows:
 - 1. Performance characteristics and capacities.
 - 2. Dimensions and/or clearances required.
 - 3. Wiring, piping and control diagrams.

2.03 SAMPLES

- A. Samples shall be identical to the precise article proposed, illustrating functional characteristics with all related parts and attachments. Indicate full range of color, textures and patterns.

- B. Samples shall be identified by attaching a label on unexposed side of Samples that include the following:
 - 1. Generic Description of Sample.
 - 2. Product name and name of manufacturer.
 - 3. Number and title of applicable Specification Section.
- C. Submit number of samples as indicated above. Where samples of large complete items such as light fixtures, hardware, etc. are required, one sample will suffice and that will be returned to the Contractor after review.

2.04 COLORS AND PATTERNS

- A. Submit color and pattern selections for all products offering a choice of these attributes unless a specific color or pattern is referenced in the Contract Documents.
- B. Submit within thirty five (35) days of Notice of Award a list of all required color selections organized by product, including manufacturer and model. Include samples of manufacturer's complete color range for all products.
- C. Architect will not select colors or patterns until samples of all items requiring selections have been submitted. Architect will not make partial color selections.
- D. Failure to submit all color selections as specified above, thus requiring additional unanticipated time for the Architect to make selections will not be basis for extension of Contract Time.
- E. Architect will make color selections within 30 working days following complete submittal of samples. This time will commence with the receipt of the latest incremental submittal, as applicable.
- F. Architect will issue Color Schedule.

PART 3 EXECUTION

3.01 ELECTRONIC SUBMITTAL PROCEDURES

- A. Submittals shall be transmitted to the Architect in electronic, editable (PDF) format using the project's cloud-based file sharing and storage service ("project's website"). The cloud-based file sharing and storage service will be selected by the Architect. Contractor's failure to utilize, provide entries and processing through the Architect's cloud-based system will subject Contractor to hourly back charges associated with efforts required by others to perform work which is the contractual responsibility of the Contractor.
- B. Contractor's cost related to the use of the project's website services shall be included in the Contractor's bid.
- C. The electronic submittal process is not intended for color samples, color charts, or physical material samples.
- D. Provide hardcopy submittals if requested by Architect.
- E. The Architect's review comments will be made available on the project's website for downloading.

- F. Contractor will distribute a hardcopy of all reviewed submittals to the Inspector of Record, Owner, and Construction Manager.

3.02 ADMINISTRATION REQUIREMENTS

- A. Name electronic file using the following identifiers, separated by dashes: consecutive submittal number, specification section number, revision number (if needed), and a brief description of the submittal contents; example: 015-05 5000-0 Metal Fabrications.
- B. Write sequential page numbers at bottom of each page of submittal. On submittal cover sheet, provide brief description for product and coinciding page numbers; example: Pages 5-23 Metal Fabricated Gate Shop Drawings.
- C. Provide the following on the submittal cover sheet:
 - 1. Project title and project number.
 - 2. Date.
 - 3. Submittal number.
 - 4. The name of:
 - a. Architect/Engineer.
 - b. Contractor.
 - c. Subcontractor.
 - d. Supplier.
 - e. Manufacturer.
 - f. Separate detailer when pertinent.
 - 5. Identification of product or material and page numbers.
 - 6. Submittal number, as described in 3.03.
 - 7. A blank space, 8 inches x 3 inches, for the contractor and Architects stamps.
 - 8. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements, and compliance with Contract Documents.
- D. Unless otherwise indicated in technical specifications, not less than 15 days following Notice of Award, submit a complete submittal register.

3.03 IDENTIFICATION OF SUBMITTALS

- A. Number submittals consecutively. Each specification section requiring submittal must at a minimum have one unique submittal number. DO NOT GROUP MULTIPLE SPECIFICATION SECTION ITEMS UNDER ONE SUBMITTAL NUMBER. Refer to submittal by this number in subsequent correspondence and submittals.

- a. Transmit re-submittals under new cover. Use submittal number of original submittal with revision number suffix. Cite original submittal number for reference.
 - b. Do not transmit new submittals with alphabetic suffix.
- B. Transmittal letter for each submittal shall show all information required for identification and checking.
- C. Include submittal number on first page and elsewhere as required for identification.
- D. Maintain log of submittals and status. Furnish copies to the Architect and Inspector upon request.

3.04 GROUPING OF SUBMITTALS

- A. Transmit submittals in groups containing all associated items to ensure availability of information during review. However, each specification section must bear unique submittal number.
- B. Incomplete or partial submittals may be returned for enhancement. No extension of time will be allowed for delays related to incomplete submittals.

3.05 SCHEDULING OF SUBMITTALS

- A. Transmit submittals sufficiently in advance of installation for required review, revisions, re-submittals and delivery. Include time required for transmittal by regular mail between the parties involved. No extension of time will be allowed for delays related to late submittals.
- B. Deferred approval submittals are subject to long lead times. Schedule submittals accordingly. DSA requires scheduling of deferred approval 6 weeks prior to submittal. Notify architect accordingly to request DSA review. Contractor must meet DSA scheduled review for receipt of submittal. If submittal is late or viewed incomplete, DSA will reject and require new review date be arranged no sooner than another 6 week period in advance of re-submittal.

3.06 ARCHITECT'S REVIEW OF SUBMITTALS

- A. Submittals will be reviewed and stamped by the Architect "No exceptions taken," "Submit specified item" or "Make corrections noted" to indicate full or conditioned approval or "Revise and resubmit" or "Rejected" to indicate disapproval. Terms are defined as follows:
- 1. No Exceptions Taken: Accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. Does not constitute approval or deletion of specified or required items not shown in the partial submittal.
 - 2. Submit specified item: Submit to the Architect the items indicated for review.
 - 3. Correct as noted: Same as 1., except that minor corrections as noted shall be made by the Contractor. No resubmittal required.
 - 4. Revise and resubmit: Rejected because of major inconsistencies or errors which shall be resolved or corrected by the Contractor prior to subsequent review by the Architect.
 - 5. Rejected: Submitted material does not conform to plans and specifications in major respect. For example, wrong size, model, capacity or material. Resubmit.
 - 6. Receipt Acknowledged. Received, recorded and distributed without further action.

- B. Submittals reviewed by the Architect which have been stamped shall be deemed to have the following language affixed and made a part thereof, regardless of the initial or subsequent readability of the actual stamp.
 - 1. Corrections or comments made on submittals during this review do not relieve the contractor from compliance with the requirements of the drawings and specifications. This check is for review of general conformance with the design concept of the project and general compliance with information given in the Contract Documents. The contractor is responsible for confirming and correlating all quantities and dimensions, selection of fabrication processes and techniques of construction, coordinating the work of the trades; and performing the work in a safe and satisfactory manner.
- C. Architect's review of submittals shall be undertaken with reasonable promptness, while allowing sufficient time in the Architect's professional judgment to permit adequate review.
- D. Architect's review of submittals has, as a primary objective, to assist in the completion of the project on time and in conformance with the Contract requirements by permitting review of material and fabricated items prior to ordering. Architect's review of submittals is based only on the data presented and extends only to conformance with general design intent and information contained in the Contract Documents.
- E. Architect's approval of submittals does not constitute final acceptance or unqualified approval of items or work proposed or put in place, nor does it constitute acceptance of responsibility for the accuracy, coordination or completeness of submittals. Architect's approval of submittals does not relieve the Contractor from the responsibility for errors, omissions, or compliance with all the requirements of the Contract Documents.
- F. Reimbursement of the Architect's costs for review:
 - 1. Architect will record all time and expenses incurred to review submittals requiring more than two reviews.
 - 2. Contractor shall reimburse the District through deduction from amounts due the Contractor upon receipt of the Architect's billing and that of the Architect's consultants at standard billing rates for all time and expenses incurred in unanticipated reviews.
- G. Architect's review of submittals does not change the Contract in any manner.

3.07 RESUBMITTAL

- A. Make all corrections or revisions required by reviewer's comments at Contractor's expense and resubmit as initially specified above. No additional costs will be authorized for corrections or revisions.
- B. Product data and shop drawings:
 - 1. Revise initial drawings or data and resubmit as initially specified.
 - 2. Indicate changes which have been made other than those requested by reviewer.
- C. Submit new samples as initially specified.

3.08 DEFERRED APPROVAL

- A. Items so designated in the Contract Documents are subject to deferred approval review by the Division of the State Architect (DSA).
- B. Not less than 15 days following Notice of Award, submit all items specified for deferred approval complete with all structural calculations, test data and information as specified or as subsequently required by the reviewing agency, including original engineering stamps and original signatures as required. Architect shall submit to DSA only following Architect/Engineer review.
 - 1. Note that DSA review will be provided through Bluebeam Studio (PDF platform that allows active commenting and collaboration) sessions. Contractor will be required to participate in Bluebeam Studio sessions and therefore will be required to obtain appropriate software license.
 - 2. The Architect will not approve deferred approval submittals until they are approved by DSA.
- C. No work or fabrication shall begin until DSA approved submittals are distributed to the Contractor.
- D. Contractor is notified that significant lead time is required for deferred approval review by DSA and shall schedule work accordingly. No extension of Contract Time will be allowed for delays incurred by deferred approval review.
 - 1. The Architect is not responsible for DSA delays in deferred approval review.

3.09 DISTRIBUTION

- A. Distribute only submittals with Architect/Engineer (and DSA as applicable) stamps of review. Contractor is responsible for coordination of submittals and comments following review. Contractor to provide all additional reproduction costs for copies required by the Contractor at its expense. No additional costs will be authorized for Contractor costs pertaining to submittals.

3.10 PROJECT FORMS

- A. The following forms are included in Section 01 1600 - Project Forms.
 - 1. SUBMITTAL TRANSMITTAL

END OF SECTION

SECTION 01 3546
CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN

PART 1 - GENERAL

1.01 SUMMARY

- A. Development and maintenance of a construction Indoor Air Quality (IAQ) Management Plan.
- B. IAQ construction requirements.

1.02 RELATED SECTIONS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 specification sections, apply to this sections
- B. General Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:
 - 1. General Conditions
 - 2. Supplementary General Conditions
 - 3. Temporary Facilities and Controls
 - 4. Sustainability Certifications Requirements (CAL-GREEN, CHPS, LEED, etc.)
 - 5. Erosion and Sedimentation Control
 - 6. General Commissioning Requirements
 - 7. Record Documents
 - 8. Section 01 3300 - Submittals
 - 9. Section 01 5000 - Temporary Facilities and Controls
 - 10. Section 01 6116 - Volatile Organic Compound (VOC) Restrictions
 - 11. Section 01 7000 - Contract Closeout: Additional requirements for Final Cleaning and Building Flush-out
 - 12. Section 23 0000 - Heating, Ventilating, Air Conditioning: Additional requirements for air filters.
 - 13. Section 23 0593 - Testing, Adjusting, and Balancing for HVAC: Additional requirements for baseline testing for IAQ.
 - 14. Section 23 0593 - Testing, Adjusting, and Balancing for HVAC: Cleaning of HVAC system including ductwork, air intakes and returns, and changing of filters.

1.03 REFERENCES

- A. American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE):

1. ASHRAE Standard 52.2-2017, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size.
2. ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality.
- B. ASTM International (ASTM):
 1. ASTM D5116-97, Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products.
- C. Sheet Metal and Air Conditioning National Contractors Association (SMACNA):
 1. IAQ Guidelines for Occupied Buildings under Construction, 2007, current edition.
- D. California Code of Regulations, Title 24, Part 11 California Green Building Standards Code, "CAL-GREEN."
- E. Collaborative for High Performance Schools (CHPS), California Adaptation, CA-CHPS Criteria v2.0.
- F. United States Green Building Council (USGBC), Leadership in Energy & Environmental Design (LEED), Reference for Building Design and Construction (BD+C), V4 and V4.1.

1.04 DEFINITIONS

- A. Absorptive Materials: Gypsum board, acoustical ceiling tile and panels, carpet and carpet tile, fabrics, fibrous insulation, and other similar products.
- B. Contaminants: Gases, vapors, regulated pollutants, airborne mold and mildew, and the like, as specified.
- C. Particulates: Dust, dirt, and other airborne solid matter.
- D. Wet Work: Concrete, plaster, coatings, and other products that emit water vapor or volatile organic compounds during installation, drying and curing.

1.05 PROJECT GOALS

- A. Goals: The Owner has set the following indoor air quality goals for jobsite operations on the project, within the limits of the construction schedule, Contract Sum, and available materials,
 1. Protect workers on the site from undue health risks during construction.
 2. Prevent residual problems with indoor air quality in the completed building.
 3. Minimize generation of site dust through management of erosion and sedimentation.
 4. Basis of Design: HVAC system has been designed to achieve minimum requirements for ventilation specified in ASHRAE 62.1 with air change effectiveness of 0.9 or greater.

1.06 SUBMITTALS

- A. See Section 01 3300 "Submittals" for submittal procedures.
- B. Sustainability Submittals: Submit all submittals required in this section in accordance with procedures specified in related section.

- C. Construction Indoor Air Quality Plan: Describe in detail measures to be taken to promote adequate indoor air quality upon completion; use SMACNA IAQ Guidelines for Occupied Buildings Under Construction as a guide.
 - 1. Submit no less than 60 days before enclosure of building.
 - 2. Identify potential sources of odor and dust.
 - 3. Identify construction activities likely to produce odor and dust.
 - 4. Identify areas of the project potentially affected, especially occupied areas.
 - a. Evaluate potential problems by severity and describe methods of control.
 - b. Describe construction ventilation to be provided, including type, and duration of ventilation, use of permanent HVAC systems, types of filters and schedule for replacement of filters.
 - c. Describe cleaning and dust control procedures.
 - d. Describe coordination with commissioning procedures.
 - 5. List of IAQ protective measures to be instituted on the site.
 - 6. Schedule for inspection and maintenance of IAQ measures, including:
 - a. Interior Finishes Installation Schedule: Identify each interior finish that either generates odors, moisture, or vapors or is susceptible to absorption of odors and vapors, and indicate air handling zone, sequence of application, and curing time.
 - b. Duct and Terminal Unit Inspections and Reports.

1.07 QUALITY ASSURANCE

- A. Perform material tests and report results in accordance with ASTM D5116.

PART 2 - PRODUCTS

2.01 SUBSTITUTIONS

- A. Should the Contractor desire to use procedures, materials, equipment, or products that are not specified but meet the intent of the specifications to protect indoor air quality on the site, the Contractor shall propose these substitutions in accordance with Section 01 6000.

2.02 MATERIALS

- A. Airborne Contaminants: Procedures and products have been specified to minimize indoor air pollutants.
 - 1. Furnish products meeting the specifications.
 - 2. Avoid construction practices that could result in contamination of installed products leading to indoor air pollution.
- B. Auxiliary Air Filters: MERV of 8, minimum, when tested in accordance with ASHRAE 52.2.

PART 3 - EXECUTION

3.01 CONSTRUCTION IAQ MANAGEMENT PLAN

- A. Meet or exceed the minimum requirements of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) "IAQ Guidelines for Occupied Buildings Under Construction" including:
 - 1. Dust and Airborne Particulates: Prevent deposition of dust and other particulates in HVAC ducts and equipment. Contractor shall bear the cost of cleaning required due to failure to protect ducts and equipment from construction dust.
 - 2. Begin construction ventilation when building is substantially enclosed.
- B. If extremely dusty or dirty work must be conducted inside the building, shut down HVAC systems for the duration; remove dust and dirt completely before restarting systems.
- C. When working in a portion of an occupied building, prevent movement of air from construction area to occupied area.
- D. Conduct regular inspection and maintenance of construction indoor air quality measures including ventilation system protection, and ventilation rate.
- E. Use wet sanding for gypsum board assemblies. Exception: Dry sanding allowed subject to Architect's approval of the following measures:
 - 1. Full isolation of space undergoing finishing.
 - 2. Plastic protection sheeting is installed to provide air sealing during sanding.
 - 3. Closure of all air system devices and ductwork.
 - 4. Sequencing of construction precludes the possibility of contamination of other spaces with gypsum dust.
 - 5. Worker protection is provided.
- F. Prevent the absorption of moisture and humidity by absorptive materials by:
 - 1. Sequencing the delivery of such materials so that they are not present in the building until wet work is completed and dry.
 - 2. Delivery and storage of such materials in fully sealed moisture-impermeable packaging.
 - 3. Provide sufficient ventilation for drying within reasonable time frame.
- G. Do not store construction materials or waste in mechanical or electrical rooms.
- H. Conduct final cleaning per the process described in the Closeout specifications and prior to removing any intake filters. Prior to use of return air ductwork without intake filters clean up and remove dust and debris generated by construction activities.
 - 1. Inspect duct intakes, return air grilles, and terminal units for dust.

2. Clean plenum spaces, including top sides of lay-in ceilings, outsides of ducts, tops of pipes and conduit.
 3. Clean tops of doors and frames.
 4. Clean mechanical and electrical rooms, including tops of pipes, ducts, and conduit, equipment, and supports.
 5. Clean return plenums of air handling units.
 6. Remove intake filters last, after cleaning is complete.
- I. Do not perform dusty or dirty work after starting use of return air ducts without intake filters.
 - J. Use safety meetings, signage, and subcontractor agreements to communicate the goals of the construction indoor air quality plan.

END OF SECTION

**SECTION 01 3900
COORDINATION AND MEETINGS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Coordination and project conditions.
- B. Related work.
- C. Discrepancies.
- D. Examination.
- E. Pre-Contract meeting.
- F. Pre-construction meeting.
- G. Site mobilization meeting.
- H. Progress meetings.
- I. Pre-installation meetings.
- J. Project coordination meetings.

1.02 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of the various portions of the Contract Documents to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Coordinate hours and days of Work with local ordinances and requirements.
- C. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical Work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.
- H. Contractor shall coordinate Work with work to be performed by separate contractors as listed in Section 01 1100 - Summary of Work.

1.03 RELATED WORK

- A. Referencing specification sections in "Related Work" articles is for convenience only and shall not be construed as to limit the coordination of the Contract Documents to referenced sections.
- B. Documents affecting the work of any section include, but are not limited to, General Conditions, Supplementary General Conditions, and Sections in Division 01 of these Specifications.
- C. Work in any section may relate to other work in these documents. The Contractor is responsible to coordinate all work.

1.04 DISCREPANCIES

- A. In the event of discrepancy in the Contract Documents or if uncovered conditions are not as anticipated, immediately notify the Architect and secure needed direction.
- B. Do not proceed in areas of discrepancy until such discrepancies have been fully resolved.
- C. Before starting work, verify governing dimensions at the premises, and examine adjoining work on which this work is dependent. No "Extra" or additional compensation will be allowed on account of differences between actual measurements and dimensions shown. Submit differences discovered during the work to Architect for interpretation before proceeding with the associated work.
- D. Any time extension or any increase or decrease of cost resulting from such changes will be adjusted in the manner provided in the General Conditions.

1.05 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work.
 - 1. Beginning new Work means acceptance of existing conditions.
- B. Examine and verify specific conditions described in individual specification sections.
- C. Verify that utility services are available, of the correct characteristics, and in the correct location.

1.06 PRE CONTRACT MEETING

- A. Architect will schedule a meeting with District and apparent low bidder prior to award of Contract.
- B. Attendance Required: Owner, Architect, and Contractor.
- C. Agenda: Execution of the Notice of Award, Review of documents required for Preconstruction Meeting.

1.07 PRECONSTRUCTION MEETING

- A. Architect will schedule a meeting after Notice of Award.
- B. Attendance Required: Owner, Architect and Contractor.
- C. Agenda:
 - 1. Execution of Owner-Contractor Agreement.

2. Submission of executed bonds and insurance certificates.
 3. Distribution of Contract Documents.
 4. Submission of schedule of values.
 5. Designation of personnel representing the parties in Contract, and the Architect/Engineer.
 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 7. Scheduling.
 8. Scheduling activities of DSA Inspector of Record.
- D. Architect will record minutes and distribute copies within five days after meeting to participants, and those affected by decisions made.

1.08 SITE MOBILIZATION MEETING

- A. Architect will schedule a meeting at the Project site prior to Contractor occupancy.
- B. Attendance Required: Owner, Architect, Special Consultants, Contractor, Contractor's Superintendent and major Subcontractors.
- C. Agenda:
1. Use of premises by Owner and Contractor.
 2. Owner's requirements and partial occupancy.
 3. Construction facilities and controls provided by Owner.
 4. Temporary utilities provided by Owner.
 5. Security and housekeeping procedures.
 6. Schedules.
 7. Application for payment procedures.
 8. Procedures for testing.
 9. Procedures for maintaining record documents.
 10. Requirements for start-up of equipment.
 11. Inspection and acceptance of equipment put into service during construction period.
- D. Architect will record minutes and distribute copies within five days after meeting to participants, and those affected by decisions made

1.09 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at bi-weekly intervals. Provide and discuss “two-week look ahead” schedule reports at these progress meetings. Coordinate progress payments and revised schedule, to monthly meeting attended by an officer of the construction company.
- B. Make arrangements for meetings, prepare agenda with copies for participants and preside at meetings.
- C. Attendance Required: Job Superintendent, major Subcontractors and suppliers, Owner, Inspector of Record and Architect as appropriate to agenda topics for each meeting.
- D. Architect will record minutes and distribute copies within five days after meeting to participants, including Owner, Contractor, and those affected by decisions made.

1.10 PREINSTALLATION MEETING

- A. When required in individual specification sections, convene a pre-installation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
- E. Review conditions of installation, preparation and installation procedures.
- F. Review coordination with related work.
- G. Architect will record minutes and distribute copies within five days after meeting to participants, with copies to Owner, Contractor and participants.

1.11 PROJECT COORDINATION MEETINGS

- A. Contractor will schedule project coordination meetings to be held weekly.
- B. Attendance Required: Contractor, job superintendent, Subcontractors, as required.
- C. Contractor will prepare agenda and preside at meeting.
- D. Contractor will record minutes and distribute copies within five days after meeting to participants, Architect and those affected by decisions made.
- E. Copies of the minutes to Architect are required as part of submission of Application for Payment.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 PROJECT FORMS

- A. The following forms are included in Section 01 1600 - Project Forms.

1. ARCHITECTS FIELD REPORT

END OF SECTION

SECTION 01 4000
QUALITY CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Quality assurance - control of installation.
- B. Tolerances.
- C. References.
- D. Mockup.
- E. Inspecting and testing laboratories services.
- F. Manufacturers' field services and reports.
- G. Field engineering and staking.

1.02 RELATED SECTIONS

- A. Section 01 3300 - Submittals: Submission of manufacturers' instructions and certificates.
- B. Section 01 4200- Reference Standards.
- C. Section 01 4523 - Testing and Inspection Services.
- D. Section 01 6000 - Material, Equipment and Substitutions: Requirements for material and product quality.
- E. Section 01 7000 - Contract Closeout.
- F. Section 09 0512 – Concrete Floor Moisture Content & pH Testing.

1.03 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Correct conditions or workmanship not in conformance with specified standards or quality.
- C. Comply with manufacturers' instructions, including each step in sequence.
- D. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- E. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- F. Perform Work by persons qualified to produce required and specified quality.
- G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.04 TOLERANCES

- A. Monitor tolerance control of installed Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.05 REFERENCES

- A. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. The contractual relationships, duties, and responsibilities of the parties in Contract or those of the Architect/Engineer shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.06 MOCK-UP

- A. Tests will be performed under provisions identified in this section and identified in the respective product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups are representative of the quality required for the Work.
- D. Where mock-up has been accepted by Architect/Engineer and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so.

1.07 TESTING AND INSPECTION AGENCY SERVICES

- A. Owner will appoint, employ, and pay for specified services of an independent Testing and Inspection Agency to perform inspecting and testing. Inspections and Testing will be performed in accordance with Section 01 4523 - Testing and Inspection Services; and the General Conditions.

1.08 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship and to initiate instructions when necessary.

1.09 FIELD ENGINEERING AND STAKING

- A. Each Contractor awarded Work for this Project shall provide all necessary surveying, layout, lines and grades required for the proper location of the Work.
- B. Contractor agrees to provide any and all false-work, templates, batter-boards and other such structures or devices necessary to provide for the Contractor's layout, lines and grades. Work installed in an incorrect location or elevation shall be removed and re-installed at the expense of the Contractor.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 4200
REFERENCES

PART 1 GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. General: This section specifies procedural and administrative requirements for compliance with governing regulations and the codes and standards imposed upon the work. These requirements include the obtaining of permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes, and standards.
 - 1. "Regulations" is defined to include laws, statutes, ordinances and lawful orders issued by governing authorities, as well as those rules, conventions and agreements within the construction industry which effectively control the performance of the work regardless of whether they are lawfully imposed by governing authority or not.
- B. Governing Regulations: Refer to General and Supplementary Conditions for requirements related to compliance with governing regulations.

1.02 DEFINITIONS

- A. General Explanation: A substantial amount of specification language constitutes definitions for terms found in other contract documents, including the drawings. (Drawings must be recognized as diagrammatic in nature and not completely descriptive of the requirements indicated thereon.) Certain terms used in contract documents are defined in this article. Definitions and explanations of this section are not necessarily either complete or exclusive, but are general for the work to the extent they are not stated more explicitly in another element of contract documents.
 - 1. Basic Contract definitions are included in the Conditions of the Contract.
- B. General Requirements: The provisions or requirements of Division 01 sections apply to entire work of Contract and, where so indicated, to other elements which are included in project.
- C. Indicated: The term "indicated" is a cross-reference to graphic representations, notes or schedules on drawings, to other paragraphs or schedules in the specifications, and to similar means of recording requirements in contract documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference, and no limitation of location is intended except as specifically noted.
- D. Directed, Requested, Etc.: Where not otherwise explained, terms such as "directed," "requested," "authorized," "selected," "approved," "required," "accepted," and "permitted" mean "directed by Architect/Engineer," "requested by Architect/Engineer," and similar phrases. However, no such implied meaning will be interpreted to extend the Architect's/Engineer's responsibility into the Contractor's area of construction supervision.
- E. Approve: Where used in conjunction with Architect's/Engineer's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of term "approved" will be held to limitations of Architect's/Engineer's responsibilities and duties as specified in General and Supplementary Conditions. In no case will "approval" by Architect/Engineer be interpreted as a release of Contractor from responsibilities to fulfill requirements of contract documents.

- F. Project Site: The term "project site" is defined as the space available to Contractor for performance of the work. The extent of project site is shown on the drawings, and may or may not be identical with the description of land upon which the project is to be built.
- G. Furnish: Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
- H. Install: Except as otherwise defined in greater detail, term "install" is used to describe operations at project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.
- I. Provide: Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.
- J. Installer: The term "installer" is defined as the entity (person or firm) engaged by Contractor, or its subcontractor or subcontractor for performance of a particular unit of work at the project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (installers) be expert in operations they are engaged to perform.
- K. Testing Laboratory: The term "testing laboratory" is defined as an independent entity engaged to perform specific inspections or tests of the work, either at project site or elsewhere; and to report and (if required) interpret results of those inspections or tests.
- L. Products: The term "products" includes materials, systems and equipment.
- M. Approved Equal, Or Equal: means as approved and accepted by the Architect.
- N. Shall: The term "shall" is mandatory.
- O. As Required, As Necessary, etc.: Words of similar import mean as required by the Contract Documents or essential to the completion of the Work.
- P. Concealed: The term "concealed" means as embedded in masonry or other construction, installed within furred spaces, within double partitions or above suspended ceilings, in trenches, in crawl spaces, or in enclosures.
- Q. Exposed: The term "exposed" means not installed underground or "concealed" as defined above, including work and surfaces open in whole or in part to the exterior or weather.
- R. Work: The term "work" shall include both labor and materials.
- S. The Contract Documents: The Contract Documents consist of the Contract, any addenda thereto, the completed Bid Form, the completed Bond and Insurance forms, the Notice Inviting Bids, the Instructions to Bidders, the General Conditions, the Supplementary General Conditions, the Labor Compliance Program, if any, the Technical Specifications, the Drawings and the Bidder's Questionnaire. All modification(s) amending or extending the work shall be as binding as if originally included in the Contract Documents. A Modification is a written amendment to the Contract signed by both parties, a Change Order, a Construction Change Directive, or a written order for a minor change in the Work issued by the Architect. The Contract Documents are complementary, and each obligation of

the Contractor, Subcontractors, material or equipment suppliers in any one shall be binding as if specified in all.

- T. The Contract: The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Architect and Contractor, between the Owner and any Subcontractor or Sub-subcontractor, or between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.
- U. The Work: The Work shall include the initial obligation of any Contractor or Subcontractor, who performs any portion of the Work, to visit the Site of the proposed Work, a continuing obligation after the commencement of the Work to fully acquaint and familiarize itself with the conditions as they exist and the character of the operations to be carried on under the Contract Documents, and make such investigation as it may see fit so that it shall fully understand the facilities, physical conditions, and restrictions attending the Work under the Contract Documents. Each such Contractor or Subcontractor shall also thoroughly examine and become familiar with the Drawings, Specifications, and associated bid documents. The "Site" refers to the grounds of the Project as defined in the Contract Documents and such adjacent lands as may be directly affected by the performance of the Work.
- V. The Project: The Project is the total construction of the Work performed in accordance with the Contract Documents in whole or in part and which may include construction by the Owner or by separate Contractors.
- W. The Drawings: The Drawings are graphic and pictorial portions of the Contract Documents prepared for the Project and approved changes thereto, wherever located and whenever issued, showing the design, location, and scope of the Work, generally including plans, elevations, sections, details, schedules, and diagrams as drawn or approved by the Architect.
- X. The Specifications: The Specifications are that portion of the Contract Documents consisting of the written requirements for material, equipment, construction systems, instructions, quality assurance standards, workmanship, and performance of related services.
- Y. The Project Manual: The Project Manual is the volume usually assembled for the Work which may include, without limitation, the bidding requirements, sample forms, Conditions of the Contract, and Specifications.
- Z. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- AA. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.03 FORMAT AND SPECIFICATION EXPLANATIONS

- A. Format Explanation: The format of principal portions of these specifications can be described as in the following paragraphs. Although some portions of these specifications may not be in complete

compliance with this format, no particular significance will be attached to such compliance or non-compliance.

1. Sections and Divisions: For convenience, the basic unit of text is a "section." Each section is identified by a descriptive title (name) and the number. Individual sections are grouped together with other sections of similar or related work groupings known as "divisions." Divisions are recognized as the present industry consensus on uniform specification organization and sequence. The section title is not intended to limit meaning or content of a section, nor to be fully descriptive of the requirements specified therein, nor to be an integral part of the text.
 2. Each section of specifications has been subdivided into 3 "parts" for uniformity and convenience (Part 1-General, Part 2-Products, and Part 3 - Execution); some sections may not require the use of all three parts. These parts do not limit the meaning of and are not an integral part of text which specifies requirements.
- B. Subordination of Text: Portions of specification text are subordinated to other portions in the following manner (lowest level to highest):
1. Indented (from left margin) paragraphs and lines of text are subordinate to preceding text which is not indented, or which is indented by a lesser amount.
 2. Paragraphs and lines of text are subordinate to sub-article titles, which are printed in upper/lower-case lettering.
 3. Sub-articles are the subordinate to article titles, which are printed in uppercase lettering.
 4. Subordination (if any) of certain sections (or portions of sections) to other sections is described within those sections.
 5. Underscoring is used strictly to assist the reader of specification text in scanning text for key words (for quick recall). No emphasis on or relative importance of text is intended where underscoring is used.
 6. Imperative language is used generally in specifications. Except as otherwise indicated, requirements expressed imperatively are to be performed by Contractor. For clarity of reading at certain locations, contrasting subjective language is used to describe responsibilities which must be fulfilled indirectly by Contractor, or when so noted, by others.
 7. Section numbering is used to facilitate cross references in the contract documents. Sections are placed in Project Manual in numeric sequence; however, numbering sequence is not complete, and listing of sections at beginning of Project Manual must be consulted to determine numbers and names of specification sections in contract documents.
 8. Page Numbering: Pages are numbered independently for each section and are recorded in the listing of sections (Index or Table of Contents) in Project Manual. The section number is shown together with the page number at the bottom of each page to facilitate the location of text in the Project Manual.
 9. Project Identification: Project name (either complete or abbreviated) is recorded at top of each page of specifications to minimize possible misuse of specifications, or confusion with other project specifications.

- C. Specification Content: Because of methods by which the project specification has been produced, certain general characteristics of content and conventions in use of language are explained as follows:
1. Specifying Methods: The techniques or methods of specifying to record requirements varies throughout text, and may include "prescriptive," "open generic-descriptive," "compliance with standards," "performance," "proprietary," or a combination of these. The method used for specifying one unit of work has no bearing on requirements for another unit of work.
 2. Overlapping and Conflicting Requirements: Where compliance with 2 or more industry standards or sets of requirements is specified, and overlapping of those different standards or requirements establishes different or conflicting minimums or levels of quality, the most stringent requirement is intended and will be enforced, unless specifically detailed language written into the contract documents clearly indicates that a less stringent requirement is to be fulfilled. Refer apparently-equal-but-different requirements, and uncertainties as to which level of quality is more stringent, to Architect/Engineer for a decision before proceeding.
 3. Contractor's Options: Except for overlapping or conflicting requirements, where more than one set of requirements are specified, for a particular unit of work, option is intended to be Contractor's regardless of whether or not it is specifically indicated as such.
- D. Minimum Quality/Quantity: In every instance, quality level or quantity shown or specified is intended to be the minimum for the work to be performed or provided. Except as otherwise specifically indicated, actual work may either comply exactly with that minimum (within specified tolerances), or may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are either minimums or maximums as noted or as appropriate for context of the requirements. Refer instances of uncertainty to Architect/ Engineer for decision before proceeding.
- E. Specialists, Assignments: In certain instances, specification text requires (or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such assignments shall be recognized as special requirements over which the Contractor has no choice or option. These requirements should not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the work; they are also not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" for indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of entire set of contract requirements remains with the Contractor.
- F. Trades: Except as otherwise indicated, the use of titles such as "carpentry" in specification text, implies neither that the work must be performed by an accredited or unionized tradesperson of corresponding generic name (such as "carpenter"), nor that specified requirements apply exclusively to work by tradespersons of that corresponding generic name.
- G. Abbreviations: The language of specifications and other contract documents is of the abbreviated type in certain instances, and implies words and meanings which will be appropriately interpreted. Actual word abbreviations of a self-explanatory nature have been included in the texts. Specific abbreviations have been established, principally for lengthy technical terminology and primarily in conjunction with coordination of specification requirements with notations on drawings and in schedules. These are frequently defined in section at first instance of use. Trade association names and titles of general standards are frequently abbreviated.

1. Singular words will be interpreted as plural and plural words will be interpreted as singular where applicable and where full context of the contract documents so indicates.

1.04 DRAWING SYMBOLS

- A. General: Except as otherwise indicated, graphic symbols used on drawings are those symbols recognized in the construction industry for purposes indicated. Where not otherwise noted, symbols are defined by "Architectural Graphic Standards," published by John Wiley & Sons, Inc., seventh edition.
- B. Mechanical/Electrical Drawings: Graphic symbols used on mechanical and electrical drawings are generally aligned with symbols recommended by ASHRAE. Where appropriate, these symbols are supplemented by more specific symbols as recommended by other recognized technical associations including ASME, ASPE, IEEE and similar organizations. Refer instances of uncertainty to the Architect/Engineer for clarification before proceeding.

1.05 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
 1. For standards referenced by applicable building codes, comply with dates of standards as listed in building codes.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.06 ABBREVIATIONS AND ACRONYMS

- A. General Applicability of Standards: Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, applicable standards of the construction industry have the same force and effect (and are made a part of contract documents by reference) as if copied directly into the contract documents, or as if published copies were bound herewith. Refer to other contract documents for resolution of overlapping and conflicting requirements which result from the application of several different industry standards to the same unit of work. Refer to individual unit of work sections for indications of which specialized codes and standard the Contractor must keep at the project site, available for reference.
 1. Referenced standards (referenced directly in contract documents or by governing regulations) have precedence over non-referenced standards which are recognized in industry for applicability to work. See also Chapter 35 of the CBC.

2. Non-referenced standards are hereby defined to have no particular applicability to the work, except as general requirements of whether the work complies with standards recognized in the construction industry.
- B. Publication Dates: Except as otherwise indicated, where compliance with an industry standard is required, comply with standard in effect as of date of contract documents.
1. Updated Standards: At the request of the Architect/Engineer, Contractor or governing authority, submit a change order proposal where an applicable industry code or standard has been revised and reissued after the date of the contract documents and before the performance of the work affected. The Architect/Engineer will decide whether to issue the change order to proceed with the updated standard.
- C. Copies of Standards: The contract documents require that each entity performing work be experienced in that part of the work being performed. Each entity is also required to be familiar with recognized industry standards applicable to that part of the work. Copies of applicable standards are not bound with the contract documents.
1. Where copies of standards are needed for proper performance of the work, the Contractor is required to obtain such copies directly from the publication source.
 2. Although certain copies of standards needed for enforcement of the requirements may be required submittals, the Architect/Engineer reserves the right to require the Contractor to submit additional copies of these standards as necessary for enforcement of the requirements.
- D. Abbreviations and Names of Industry Organizations, List: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. Abbreviations and acronyms not included in this list are to mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States." The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.
1. AABC - Associated Air Balance Council; www.aabc.com.
 2. AAMA - American Architectural Manufacturers Association; (see FGIA).
 3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
 4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
 5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
 6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
 7. ABMA - American Boiler Manufacturers Association; www.abma.com.
 8. ACI - American Concrete Institute; www.concrete.org.
 9. ACP - American Clean Power; (Formerly: American Wind Energy Association); www.cleanpower.org.

10. ACPA - American Concrete Pipe Association; www.concretepipe.org.
11. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
12. AF&PA - American Forest & Paper Association; www.afandpa.org.
13. AGA - American Gas Association; www.aga.org.
14. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
15. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
16. AI - Asphalt Institute; www.asphaltinstitute.org.
17. AIA - American Institute of Architects (The); www.aia.org.
18. AISC - American Institute of Steel Construction; www.aisc.org.
19. AISI - American Iron and Steel Institute; www.steel.org.
20. AITC - American Institute of Timber Construction; (see PLIB).
21. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
22. AMPP - Association for Materials Protection and Performance; www.ampp.org.
23. ANSI - American National Standards Institute; www.ansi.org.
24. AOSA/SCST - Association of Official Seed Analysts (The)/Society of Commercial Seed Technologists (The); www.analyzeseeds.com.
25. APA - APA - The Engineered Wood Association; www.apawood.org.
26. APA - Architectural Precast Association; www.archprecast.org.
27. API - American Petroleum Institute; www.api.org.
28. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
29. ASA - Acoustical Society of America; www.acousticalsociety.org.
30. ASCE - American Society of Civil Engineers; www.asce.org.
31. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (see ASCE).
32. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
33. ASME - ASME International; [American Society of Mechanical Engineers (The)]; www.asme.org.
34. ASSE - ASSE International; (American Society of Sanitary Engineering); www.asse-plumbing.org.
35. ASSP - American Society of Safety Professionals; www.assp.org.

36. ASTM - ASTM International; www.astm.org.
37. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
38. AVIXA - Audiovisual and Integrated Experience Association; www.avixa.org.
39. AWI - Architectural Woodwork Institute; www.awinet.org.
40. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
41. AWPAA - American Wood Protection Association; www.awpa.com.
42. AWS - American Welding Society; www.aws.org.
43. AWWA - American Water Works Association; www.awwa.org.
44. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
45. BIA - Brick Industry Association (The); www.gobrick.com.
46. BICSI - BICSI, Inc.; www.bicsi.org.
47. BIFMA - Business and Institutional Furniture Manufacturer's Association; www.bifma.org.
48. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
49. BWF - Badminton World Federation; www.bwfbadminton.com.
50. CARB - California Air Resources Board; www.arb.ca.gov.
51. CDA - Copper Development Association Inc.; www.copper.org.
52. CE - Conformite Europeenne (European Commission); www.ec.europa.eu/growth/single-market/ce-marking.
53. CEA - Canadian Electricity Association; www.electricity.ca.
54. CFFA - Chemical Fabrics and Film Association, Inc.; www.chemicalfabricsandfilm.com.
55. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
56. CGA - Compressed Gas Association; www.cganet.com.
57. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
58. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
59. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
60. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
61. CPA - Composite Panel Association; www.compositepanel.org.
62. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.

63. CRRC - Cool Roof Rating Council; www.coolroofs.org.
64. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
65. CSA - CSA Group; www.csagroup.org.
66. CSI - Cast Stone Institute; www.caststone.org.
67. CSI - Construction Specifications Institute (The); www.csiresources.org.
68. CSSB - Cedar Shake & Shingle Bureau; www.cedarbureau.org.
69. CTA - Consumer Technology Association; www.cta.tech.
70. CTI - Cooling Technology Institute; www.coolingtechnology.org.
71. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
72. DHA - Decorative Hardwoods Association; www.decorativehardwoods.org.
73. DHI - Door and Hardware Institute; www.dhi.org.
74. ECIA - Electronic Components Industry Association; www.ecianow.org.
75. EIMA - EIFS Industry Members Association; www.eima.com.
76. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
77. EOS/ESD - EOS/ESD Association, Inc.; Electrostatic Discharge Association; www.esda.org.
78. ESTA - Entertainment Services and Technology Association; www.esta.org.
79. EVO - Efficiency Valuation Organization; www.evo-world.org.
80. FCI - Fluid Controls Institute; www.fluidcontrolsinstitute.org.
81. FGIA - Fenestration and Glazing Industry Alliance; <https://fgiaonline.org>.
82. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
83. FIVB - Federation Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
84. FM Approvals - FM Approvals LLC; www.fmapprovals.com.
85. FM Global - FM Global; www.fmglobal.com.
86. FRSA - Florida Roofing and Sheet Metal Contractors Association, Inc.; www.floridarroof.com.
87. FSA - Fluid Sealing Association; www.fluidsealing.com.
88. FSC - Forest Stewardship Council U.S.; www.fscus.org.
89. GA - Gypsum Association; www.gypsum.org.

90. GS - Green Seal; www.greenseal.org.
91. HI - Hydraulic Institute; www.pumps.org.
92. HMMA - Hollow Metal Manufacturers Association; (see NAAMM).
93. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
94. IAS - International Accreditation Service; www.iasonline.org.
95. ICC - International Code Council; www.iccsafe.org.
96. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
97. ICPA - International Cast Polymer Association (The); www.theicpa.com.
98. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
99. IEC - International Electrotechnical Commission; www.iec.ch.
100. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
101. IES - Illuminating Engineering Society; www.ies.org.
102. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
103. IGMA - Insulating Glass Manufacturers Alliance; (see FGIA).
104. IGSHPA - International Ground Source Heat Pump Association; www.igshpa.org.
105. ILI - Indiana Limestone Institute of America, Inc.; www.iliai.com.
106. Intertek - Intertek Group; www.intertek.com.
107. ISA - International Society of Automation (The); www.isa.org.
108. ISFA - International Surface Fabricators Association; www.isfanow.org.
109. ISO - International Organization for Standardization; www.iso.org.
110. ITU - International Telecommunication Union; www.itu.int.
111. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.
112. LPI - Lightning Protection Institute; www.lightning.org.
113. MBMA - Metal Building Manufacturers Association; www.mbma.com.
114. MCA - Metal Construction Association; www.metalconstruction.org.
115. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
116. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
117. MHI - Material Handling Industry; www.mhi.org.

118. MMPA - Moulding & Millwork Producers Association; www.wmmpa.com.
119. MPI - Master Painters Institute; www.paintinfo.com.
120. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry, Inc.; www.msshq.org.
121. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
122. NACE - NACE International; (National Association of Corrosion Engineers International); (see AMPP).
123. NADCA - National Air Duct Cleaners Association; www.nadca.com.
124. NAIMA - North American Insulation Manufacturers Association; www.insulationinstitute.org.
125. NALP - National Association of Landscape Professionals; www.landscapeprofessionals.org.
126. NBGQA - National Building Granite Quarries Association, Inc.; www.nbgqa.com.
127. NBI - New Buildings Institute; www.newbuildings.org.
128. NCAA - National Collegiate Athletic Association (The); www.ncaa.org.
129. NCMA - National Concrete Masonry Association; www.ncma.org.
130. NEBB - National Environmental Balancing Bureau; www.nebb.org.
131. NECA - National Electrical Contractors Association; www.necanet.org.
132. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
133. NEMA - National Electrical Manufacturers Association; www.nema.org.
134. NETA - InterNational Electrical Testing Association; www.netaworld.org.
135. NFHS - National Federation of State High School Associations; www.nfhs.org.
136. NFPA - National Fire Protection Association; www.nfpa.org.
137. NFPA - NFPA International; (see NFPA).
138. NFRC - National Fenestration Rating Council; www.nfrc.org.
139. NGA - National Glass Association (The); www.glass.org.
140. NHLA - National Hardwood Lumber Association; www.nhla.com.
141. NLGA - National Lumber Grades Authority; www.nlga.org.
142. NOFMA - National Oak Flooring Manufacturers Association; (see NWFA).
143. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
144. NRCA - National Roofing Contractors Association; www.nrca.net.

145. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
146. NSF - NSF International; www.nsf.org.
147. NSI - Natural Stone Institute; www.naturalstoneinstitute.org.
148. NSPE - National Society of Professional Engineers; www.nspe.org.
149. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
150. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
151. NWFA - National Wood Flooring Association; www.nwfa.org.
152. NWRA - National Waste & Recycling Association; www.wasterecycling.org.
153. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
154. PDI - Plumbing & Drainage Institute; www.pdionline.org.
155. PLASA - PLASA; www.plasa.org.
156. PLIB - Pacific Lumber Inspection Bureau; www.plib.org.
157. PVCPA - Uni-Bell PVC Pipe Association; www.uni-bell.org.
158. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
159. RFCI - Resilient Floor Covering Institute; www.rfci.com.
160. RIS - Redwood Inspection Service; (see WWPA).
161. SAE - SAE International; www.sae.org.
162. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.
163. SDI - Steel Deck Institute; www.sdi.org.
164. SDI - Steel Door Institute; www.steeldoor.org.
165. SEFA - Scientific Equipment and Furniture Association (The); www.sefalabs.com.
166. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (see ASCE).
167. SIA - Security Industry Association; www.securityindustry.org.
168. SJI - Steel Joist Institute; www.steeljoist.org.
169. SMA - Screen Manufacturers Association; www.smainfo.org.
170. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association;
www.smacna.org.
171. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.

172. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
173. SPIB - Southern Pine Inspection Bureau; www.spib.org.
174. SPRI - Single Ply Roofing Industry; www.spri.org.
175. SRCC - Solar Rating & Certification Corporation; www.solar-rating.org.
176. SSINA - Specialty Steel Industry of North America; www.ssina.com.
177. SSPC - SSPC: The Society for Protective Coatings; (see AMPP).
178. STI/SPFA - Steel Tank Institute/Steel Plate Fabricators Association; www.steeltank.com.
179. SWI - Steel Window Institute; www.steelwindows.com.
180. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
181. TCA - Tilt-Up Concrete Association; www.tilt-up.org.
182. TCNA - Tile Council of North America, Inc.; www.tcnatile.com.
183. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.kbcdco.tema.org.
184. TIA - Telecommunications Industry Association (The); www.tiaonline.org.
185. TMS - The Masonry Society; www.masonrysociety.org.
186. TPI - Truss Plate Institute; www.tpinst.org.
187. TPI - Turfgrass Producers International; www.turfgrassod.org.
188. TRI - Tile Roofing Industry Alliance; www.tilerroofing.org.
189. UL - Underwriters Laboratories Inc.; www.ul.org.
190. UL LLC - UL LLC; www.ul.com.
191. USAV - USA Volleyball; www.usavolleyball.org.
192. USGBC - U.S. Green Building Council; www.usgbc.org.
193. USITT - United States Institute for Theatre Technology, Inc.; www.usitt.org.
194. WA - Wallcoverings Association; www.wallcoverings.org.
195. WCLIB - West Coast Lumber Inspection Bureau; (see PLIB).
196. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
197. WDMA - Window & Door Manufacturers Association; www.wdma.com.
198. WI - Woodwork Institute; www.woodworkinstitute.com.
199. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.

200. WWPA - Western Wood Products Association; www.wwpa.org.

E. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

1. DIN - Deutsches Institut für Normung e.V.; www.din.de.
2. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
3. ICC - International Code Council; www.iccsafe.org.
4. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.

F. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.

1. CPSC - U.S. Consumer Product Safety Commission; www.cpsc.gov.
2. DOC - U.S. Department of Commerce; www.commerce.gov.
3. DOD - U.S. Department of Defense; www.defense.gov.
4. DOE - U.S. Department of Energy; www.energy.gov.
5. DOJ - U.S. Department of Justice; www.ojp.usdoj.gov.
6. DOS - U.S. Department of State; www.state.gov.
7. EPA - United States Environmental Protection Agency; www.epa.gov.
8. FAA - Federal Aviation Administration; www.faa.gov.
9. GPO - U.S. Government Publishing Office; www.gpo.gov.
10. GSA - U.S. General Services Administration; www.gsa.gov.
11. HUD - U.S. Department of Housing and Urban Development; www.hud.gov.
12. LBNL - Lawrence Berkeley National Laboratory; Energy Technologies Area; www.lbl.gov/.
13. NIST - National Institute of Standards and Technology; www.nist.gov.
14. OSHA - Occupational Safety & Health Administration; www.osha.gov.
15. TRB - Transportation Research Board; National Cooperative Highway Research Program; The National Academies; www.trb.org.
16. USACE - U.S. Army Corps of Engineers; www.usace.army.mil.
17. USDA - U.S. Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; www.ars.usda.gov.

18. USDA - U.S. Department of Agriculture; Rural Utilities Service; www.usda.gov.
 19. USP - U.S. Pharmacopeial Convention; www.usp.org.
 20. USPS - United States Postal Service; www.usps.com.
- G. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
1. CFR - Code of Federal Regulations; Available from U.S. Government Publishing Office; www.govinfo.gov.
 2. DOD - U.S. Department of Defense; Military Specifications and Standards; Available from DLA Document Services; www.dsp.dla.mil/Specs-Standards/.
 3. DSCC - Defense Supply Center Columbus; (see FS).
 4. FED-STD - Federal Standard; (see FS).
 5. FS - Federal Specification; Available from DLA Document Services; www.dsp.dla.mil/Specs-Standards/.
 - a. Available from Defense Standardization Program; www.dsp.dla.mil.
 - b. Available from U.S. General Services Administration; www.gsa.gov.
 - c. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org.
 6. MILSPEC - Military Specification and Standards; (see DOD).
 7. USAB - United States Access Board; www.access-board.gov.
 8. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (see USAB).
- H. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
1. BEARHFTI; California Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation; (see BHGS).
 2. BHGS; State of California Bureau of Household Goods and Services; (Formerly: California Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation); www.bhgs.dca.ca.gov.
 3. CCR; California Code of Regulations; Office of Administrative Law; California Title 24 Energy Code; www.oal.ca.gov/publications/ccr/.
 4. CDPH; California Department of Public Health; Indoor Air Quality Program; www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/Main-Page.aspx.

5. CPUC; California Public Utilities Commission; www.cpuc.ca.gov.
6. SCAQMD; South Coast Air Quality Management District; www.aqmd.gov.
7. TFS; Texas A&M Forest Service; Sustainable Forestry and Economic Development;
<https://tfsweb.tamu.edu/>.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

**SECTION 01 4523
TESTING AND INSPECTIONS**

PART 1 GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Selection and payment of Testing and Inspection Agency
2. Testing and Inspection Agency submittals.
3. Testing and Inspection Agency responsibilities.
4. Testing and Inspection Agency reports.
5. Limits on Testing and Inspection authority.
6. Contractor's Responsibilities.
7. Architect's Responsibilities.

B. Related Sections:

1. Drawings and Contract Documents, including General and Supplemental General Conditions.
2. Section 01 3300 - Submittals: Manufacturer's certificates.
3. Section 01 3200- Construction Progress Schedule.
4. Section 01 4000 - Quality Control.
5. Section 09 0512 - Concrete Floor Moisture Content & pH Testing
6. Section 01 7000 - Contract Closeout: Project Record Documents.
7. Section 01 7500 - Starting of Systems.
8. Technical Specifications - Pertinent Sections requiring tests and inspections.

1.02 REFERENCES

- A. ASTM C802 - Practice for Conducting an Interlaboratory Test Program to Determine the Precision of Test Methods for Construction.
- B. ASTM C1021 - Practice for Laboratories Engaged in the Testing of Building Sealants.
- C. ASTM C1077 - Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
- D. ASTM C1093 - Practice for Accreditation of Testing Agencies for Unit Masonry.
- E. ASTM D290 - Recommended Practice for Bituminous Mixing Plant Inspection.

- F. ASTM D3740 - Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- G. ASTM D4561 - Practice for Quality Control Systems for an Inspection and Testing Agency for Bituminous Paving Materials.
- H. ASTM E329 - Practice for Use in the Evaluation of Inspection and Testing Agencies as Used in Construction.
- I. ASTM E543 - Practice for Determining the Qualification of Nondestructive Testing Agencies.
- J. ASTM E548 - Practice for Preparation of Criteria for Use in the Evaluation of Testing Laboratories and Inspection Bodies.
- K. ASTM E699 - Practice for Criteria for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating Building Components in Accordance with Test Methods Promulgated by ASTM Committee E6.

1.03 SELECTION AND PAYMENT

- A. An independent testing laboratory approved by DSA shall perform inspections, tests, and other services as specified by various specification sections.
- B. Owner will employ and pay for testing laboratory to provide initial testing indicated under specific specification sections and specifically noted to be paid by the Owner.
- C. Contractor shall be back-charged for testing costs when:
 - 1. Additional tests and inspections by Owner's testing agency where initial tests and inspections reveal failure to meet Contract requirements.
 - 2. Excessive inspection time by Owner's testing agency is required by Contractor's failure to provide sufficient workman or to properly pursue the progress of work.
 - 3. Test(s) deemed necessary by the Owner/Architect to evaluate any substitution proposed by the Contractor.
 - 4. Testing and inspection for the Contractor's convenience.
 - 5. Testing and inspection overtime necessitated by the Contractor's schedule.
- D. Employment of inspection firm in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- E. Employment of any testing laboratory by Contractor shall be subject to Owner approval; laboratory shall be under direct supervision of a registered Engineer and shall conform to ASTM 329. Laboratory of concrete producer shall not be acceptable for concrete mix designs.
- F. Owner reserves the right to test any material or work of Project at any time, whether or not tests are indicated in Contract Documents.

1.04 QUALITY ASSURANCE

- A. Conform to requirements of the referenced standards.
- B. Laboratory: Authorized to operate in State in which Project is located.
- C. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
- D. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

1.05 CONTRACTOR SUBMITTALS

- A. Prior to start of Work, submit testing laboratory OR inspection firm's name, address, and telephone number, and names of full time registered Engineer and responsible officer.
- B. Each Contractor responsible for the construction of a main wind- or seismic-force resisting system, designated seismic or a wind- or seismic-resisting component list in the statement of special inspections shall submit a written statement of responsibility prior to commencement of work on the system or component. A copy of this written statement shall be maintained at the project site and made available upon request. The Contractor's statement of responsibility shall contain the following:
 - C. Acknowledgment of awareness of the special requirements contained in the statement of special inspections;
 - D. Acknowledgement that control will be exercised to obtain conformance with the construction documents approved by the building official;
 - E. Procedures for exercising control within the Contractor's organization, the method and frequency of reporting and the distribution of the reports; and
 - F. Identification and qualifications of the person(s) exercising such control and their position(s) in the organization.
- G. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.

1.06 AGENCY RESPONSIBILITIES

- A. Test samples of mixes submitted by Contractor.
- B. Provide qualified personnel at site. Cooperate with Architect/Engineer and Contractor in performance of services.
- C. Perform specified sampling and testing of Products in accordance with specified standards.
- D. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- E. Promptly notify Architect/Engineer and Contractor of observed irregularities or non-conformance of Work or Products.
- F. Perform additional tests required by Architect/Engineer.

- G. Attend preconstruction meetings and progress meetings.

1.07 AGENCY AND INSPECTION REPORTS

- A. After each test, observation or inspection, promptly submit copies of report to Architect, Engineer, DSA, Owner's Inspector, Owner, Contractor and as otherwise directed.
- B. Include:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Name of inspector.
 - 4. Date and time of sampling or inspection.
 - 5. Identification of product and specifications section.
 - 6. Location in the Project.
 - 7. Type of inspection or test.
 - 8. Date of test.
 - 9. Results of tests.
 - 10. Conformance with Contract Documents.
- C. When requested by Architect/Engineer, provide interpretation of test or inspection results.

1.08 LIMITS ON TESTING and INSPECTION AUTHORITY

- A. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
- B. Agency or laboratory may not approve or accept any portion of the Work.
- C. Agency or laboratory may not assume any duties of Contractor.
- D. Agency or laboratory has no authority to stop the Work.

1.09 CONTRACTOR RESPONSIBILITIES

- A. Provide information regarding activities requiring special inspection and tests to District's inspection and testing laboratory upon request.
- B. Provide agency or laboratory representative access to any chosen location and adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
- C. Cooperate with laboratory personnel, and provide access to the Work.
- D. Provide incidental labor and facilities:
 - 1. To provide access to Work to be tested.

2. To obtain and handle samples at the site or at source of Products to be tested.
 3. To facilitate tests.
 4. To provide storage and curing of test samples.
- E. Notify agency or laboratory and Architect/Engineer forty-eight (48) hours prior to expected time for operations requiring testing services. Become familiar with time constraints of tests required. Schedule work to allow time for performance of required tests.
- F. Employ services of an independent qualified testing laboratory and pay for additional samples and tests required by Contractor beyond specified requirements.

1.10 ARCHITECT RESPONSIBILITIES

- A. Architect is not responsible for notification of the Testing Agency or scheduling its work.
- B. Architect will not be responsible for the actions of the Testing Agency.

1.11 RE-TESTING

- A. When initial tests indicate non-compliance with the Contract Documents, subsequent re-testing shall be performed by the same testing laboratory and the costs thereof shall be paid by the Owner and deducted from the Contract Sums owed to the Contractor.

1.12 SCHEDULE OF INSPECTIONS

- A. Division of State Architect Form DSA-103 Schedule of Tests and Inspections is attached.
- B. Individual Specification Sections: Other tests or inspections required; standards for testing.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 PROJECT FORMS

- A. The following forms are included in Section 01 1600 - Project Forms.
1. DIVISION OF STATE ARCHITECT FORM DSA-103 Schedule of Tests and Inspections

END OF SECTION

**SECTION 01 5000
TEMPORARY FACILITIES**

PART 1 GENERAL

1.01 SCOPE

- A. Provide all required temporary facilities and controls as shown or specified herein and such additional facilities as required for proper performance of the work.
- B. All such temporary facilities shall be located where directed and maintained in a safe and sanitary condition at all times until completion of the contract and then removed from the site for safe disposal.

1.02 TEMPORARY SANITARY FACILITIES

- A. Provide adequate temporary sanitary conveniences for the use of all employees and persons engaged on the work including subcontractors and their employees as required by law, ordinances or regulations of public authorities having jurisdiction.
- B. Toilet Facilities: Enclosed chemical toilets or water closets and urinals, types acceptable to the Architect, Owner and Authorities Having Jurisdiction.
 - 1. If fixtures are used, they shall not be incorporated into the building.
 - 2. Open pit or trench latrines will not be permitted.
- C. Permanent plumbing fixtures of the building shall not be used by construction personnel without the written consent of the Owner.
- D. Sanitary facilities locations shall be acceptable to the Architect and Owner and shall be maintained in a clean and sanitary condition during the entire course of the work. The Contractor shall keep such facilities adequately supplied with toilet paper, paper toweling, etc. as required.
- E. At completion of the work sanitary facilities shall be properly disinfected and all evidence of same removed from the site.

1.03 TEMPORARY ELECTRIC FACILITIES

- A. Provide and maintain during the progress of the work all temporary electrical power and wiring requirements to facilitate the work of all trades and services connected with the work. All payment required by the utility company for the cost of their work in providing the service installation shall be paid for by the Contractor.
- B. The Owner will permit the operation or use of portions of the permanent electrical system to provide light and power during the construction period.
- C. The Contractor shall provide adequate temporary lighting for all work.

1.04 TEMPORARY WATER

- A. The Contractor shall make arrangements for all water required for construction purposes. The Contractor shall furnish and install piping or hose to carry water to every point where needed on the project. All water used on the project shall be potable water.

- B. The Owner will permit the operation or use of portions of the permanent water system to provide water required for construction purposes during the construction period.
- C. Closest availability of water shall be determined by the Contractor.

1.05 CONSTRUCTION EQUIPMENT

- A. The Contractor shall erect, equip and maintain all construction equipment in strict accordance with all applicable statutes, laws, ordinances, rules and regulations of the Owner or other authority having jurisdiction. Provide as required for use of all trades. Hoists and scaffolding shall be installed and erected in accordance with the latest Construction Safety Orders issued by the Division of Industrial Safety, State of California and the Associated General Contractor's "Manual of Accident Prevention in Construction," latest edition.
- B. Scaffolding, staging, runways and similar equipment required for prosecution of the contract shall be provided and maintained by the Contractor.
- C. Hoists and construction elevators required for prosecution of the contract shall be provided and maintained by the Contractor complete with operators, power and signals as required.
- D. The Contractor shall provide, maintain and remove upon completion of the work all temporary rigging, scaffolding, hoisting equipment, rubbish chutes, barricades around openings and excavations, ladders between floors, fences and all other temporary work as required for all work hereunder.
- E. Temporary work shall conform to all the requirements of state, county and local authorities and underwriters which pertain to operation, safety and fire hazard. The Contractor shall furnish and install all items necessary for conformity with such requirements, whether or not called for under the separate divisions of these specifications.

1.06 FENCES AND BARRICADES

1.07 Construct and maintain fences, planking, barricades, lights, shoring and warning signs as required by local authorities and state safety ordinances and as required to protect the Owner's property from injury or loss and as necessary for the protection of the public and provide walks around any obstructions made in a public place for carrying on the work covered in this contract. Leave all protection in place and maintain until removal is authorized.

1.08 Security fencing shall be located such that clear and unobstructed access is maintained to all existing school facilities.

1.09 Relocate fences and barricades as allowed by the progress of the work to minimize the area enclosed. Avoid unnecessary encroachment on existing facilities.

1.10 PARKING AND EXTERIOR STORAGE

- A. The Contractor shall make all arrangements and pay all costs for providing parking facilities for construction personnel, delivery vehicles and authorized visitors.
- B. Where space limitations will not permit adequate facilities within the Owner's property, arrangements for off-property facilities shall be made by the Contractor with city or county authorities or other parties having jurisdiction.

- C. The Contractor shall make similar arrangements for hardstands or other necessary provision for enclosed storage areas for materials, equipment and debris. Locations and perimeters of such facilities shall be subject to the approval of the Architect and authorities having jurisdiction.

1.11 TEMPORARY FIELD OFFICES

- A. Contractor Field Office: Contractor shall provide on the site a temporary field office with a minimum of two individual offices of suitable size for Contractor staff use and for consultations with representatives of the Architect and Owner. Field Office facility shall be:
 - 1. Weatherproof and secure,
 - 2. Provided with adequate lighting, heat, cooling and ventilation.
 - 3. Equipped with a plan rack and plan table, containing a complete set of Contract Documents at all times.
 - 4. Provide conference table and chairs to seat eight (8) persons with such additional furniture as the Contractor may require.
 - 5. Provide a temporary telephone, separate line for fax and internet connection with wireless service as hereinafter specified.
 - 6. Field office location shall be approved by the Architect prior to placing the building on the site.
 - 7. The Architect and Owner and their representatives shall have free access to the field office at all times.
 - 8. The field office shall remain the property of the Contractor and shall be removed from the site upon completion of the work.
 - 9. A suitable office trailer, meeting all foregoing requirements, may be provided for the job office at the Contractor's option.
- B. Inspector Field Office: The Contractor shall provide on the site a temporary job office with a minimum of two individual offices of suitable size for the Inspector of Record. Provide the following facilities:
 - 1. Weatherproof and secure;
 - 2. Provided with adequate lighting, heat, cooling and ventilation.
 - 3. Equipped with a plan rack and plan table and shall contain a complete set of Contract Documents at all times.
 - 4. Sturdy desk with file drawers and chair. The Inspector may provide additional furniture as he or she may require.
 - 5. Copy Machine as hereinafter specified.
 - 6. Provide temporary telephone lines, separate line(s) for fax and all handsets, fax terminal equipment and wireless internet connection with wireless service as hereinafter specified.

7. Inspector's field office location shall be approved by the Architect and Inspector prior to placing the building on the site.
 8. The Architect and Owner and their representatives shall have free access to the Inspector's field office at all times. Contractor shall not have access to the Inspector's office.
 9. The Inspector's field office shall remain the property of the Contractor and shall be removed from the site upon completion of the work. The Inspector will be responsible for removing his or her files and equipment.
- C. Owner will not provide office space or furniture for the Contractor's use.
- D. Contractor shall relocate field offices as progress of the work may require.

1.12 TEMPORARY TELEPHONE, INTERNET CONNECTION AND OFFICE EQUIPMENT

- A. Provide temporary telephone service and internet connection in the temporary field offices for use by the Contractor, Owner, Architect, Inspector and their representatives for purposes related to the work. The telephone and internet connection shall be for the use of representatives mentioned above for local calls without charge to the caller.
- B. Provide separate telephone lines, fax lines and internet connection as follows:
1. Contractors Field Office: Two (2) Phone lines; one (1) internet connection.
 2. Inspector's Field Office: Two (2) Phone lines; one (1) internet connection.
- C. Inspector's Copy Machine: Provide copy machine service in the temporary Inspector's offices for use by the Owner, Architect, Inspector and their representatives for purposes related to the work. Contractor shall not use Inspector's copy machine.
- D. Contractor's Copy Machine: Contractor's Option, provide copy machine service in the temporary Field offices for use by the Contractor.
- E. Contractor's Responsibility for Costs: Make all arrangements and pay all costs, including service, maintenance and consumable supplies for the specified equipment, until final acceptance of the project.

1.13 TEMPORARY HEATING, COOLING, VENTILATING

- A. Provide temporary heating, cooling, dehumidification and ventilation from an approved source whenever necessary for curing, drying, cooling or warming spaces as may be required for the installation of materials or finishes in specified conditions.
- B. Maintain facilities or equipment as required for continuous operation of utilities in service. Do not allow interruption of utilities or services. Supply all fuel of types required.
- C. Continue temporary services uninterrupted until permanent building systems are completed, capable of maintaining specified conditions without supplemental equipment, and accepted by the Owner.

1.14 CONTINUITY OF SERVICES

- A. Provide temporary panels, raceway, conductors, piping, ductwork and other facilities or equipment as required for continuous operation of utilities in service. Do not allow interruption of utilities.

- B. All utility services, such as water, gas, sewers, electricity, data, cable television, communication, clock, bell, or fire protection system serving the project, or any part of it, shall be maintained in continuous operation at all times for the duration of the contract.
- C. Transfer of utilities function to new systems shall be coordinated in writing with the Owner at least two weeks in advance of the proposed date.
- D. Notify and obtain approval from agencies having jurisdiction over utilities prior to transfer of function.
- E. Coordinate provision and removal of temporary facilities with phasing of construction operations as indicated, or as necessary for continuity of service.

1.15 REMOVAL AT COMPLETION

- A. Upon completion of the work, or prior thereto when so directed by the Architect, the Contractor shall remove all temporary facilities, structures and installations from the Owner's property. Similarly, return all exterior areas utilized for temporary facilities to their original natural state or, when called for as part of the Work, complete areas as shown or noted.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 5600
TEMPORARY CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Barriers, enclosures and fencing.
- B. Dust control.
- C. Water control.
- D. Weed control.
- E. Protection of Installed Work.
- F. Exterior Protection.
- G. Tree and Plant Protection.
- H. Resource Protection.
- I. Progress Cleaning.

1.02 BARRIERS

- A. Construct and maintain any necessary fences, barricades and warning signs as required by local authorities and state safety ordinances and as required to protect the Owner's property from injury or loss. Leave all protection in place and maintain until removal is authorized.
- B. Provide barriers to prevent unauthorized entry to construction areas, to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

1.03 DUST CONTROL

- A. Control dust on the site. Maintain measures to prevent dust and debris from being transported outside the area of Work. Assume responsibility for damage caused by dust to the Work and for damage caused by dust outside the area of Work. Correct damages at Contractor's expense.
- B. Refer to Division 31 and 32 sections for additional requirements.

1.04 WATER CONTROL

- A. Grade site to drain. Provide, operate, and maintain pumping equipment as required to maintain excavations and site construction areas free of water.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- C. Do not permit water to stand in locked-in areas of buildings to receive concrete slabs-on-grade, nor on such slabs following their placement. Provide pumping or dewatering facilities and monitor during storm events to prevent these conditions.

1.05 WEED CONTROL

- A. Remove weeds from site that grow over the duration of the project.
- B. Prevent incorporation of organic materials into grading or topdressing.

1.06 PROTECTION OF INSTALLED WORK

- A. Protect installed Work throughout to maintain undamaged. Provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- D. Prohibit traffic from landscaped areas.

1.07 EXTERIOR PROTECTION

- A. Provide temporary weather-tight enclosure of exterior walls for successive areas of building as necessary to:
 - 1. Allow for progress of work;
 - 2. Provide acceptable working conditions;
 - 3. Provide weather protection for materials;
 - 4. Permit effective heating, cooling, dehumidification or ventilation as circumstances may require;
 - 5. Prevent entry of unauthorized persons.
- B. Bear all costs for replacement of damage to existing or new construction, construction materials and equipment from effects of weather, theft and unauthorized entry.

1.08 TREE AND PLANT PROTECTION

- A. Preserve and protect existing trees and plants at site which are designated to remain, and those adjacent to site.
- B. Following consultation with Architect, remove roots and branches which interfere with indicated construction.
- C. Employ a qualified tree surgeon to prune and treat cuts.
- D. Provide temporary barriers to a height of six feet, around each, or around each group, of trees and plants.
- E. Protect root zones of trees and plants:
 - 1. Do not allow vehicular traffic and parking.

2. Do not store materials or products.
 3. Prevent dumping of refuse or chemically injurious materials or liquids.
 4. Prevent puddling or continuous running water.
- F. Carefully supervise excavating, grading and filling, and subsequent construction operations, to prevent damage.
- G. Replace, or suitably repair, trees and plants designated to remain which are damaged or destroyed due to construction operations.

1.09 PROGRESS CLEANING AND WASTE REMOVAL

- A. Comply with requirements of Section 01 7419 and the following.
- B. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition. Provide on-going, daily housekeeping and cleanup, including all debris boxes or method for disposal of debris. Contractor will not be permitted to leave debris, trash, leavings, dirt, garbage, rubbish, material containers, etc. on the site. No unsafe and un-workmanlike conditions will be permitted.
- C. Collect and remove waste materials, debris, and rubbish from site weekly and dispose off-site.

1.10 REMOVAL OF CONTROLS

- A. Remove temporary controls prior to inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Procedures for Owner-supplied products.
- F. Spare parts and maintenance materials.

1.02 RELATED SECTIONS

- A. Document – Notice Inviting Bids: Products designated by Owner as “District Standards.”
- B. Document - Instructions to Bidders: Product options and substitution procedures prior to bid date.
- C. Document – General Conditions of the Contract: Product options and substitution procedures prior to bid date.
- D. Section 01 4000 - Quality Control: Product quality monitoring.

1.03 DEFINITIONS

- A. Request For Substitution: Requests for changes in products, materials, or equipment required by Contract Documents proposed by the Contractor prior to and after award of the Contract are considered requests for substitutions. The following are not considered substitutions;
- B. Revisions to Contract Documents requested by the Owner or Architect.
- C. Specified options of products, materials, and equipment included in Contract Documents.

1.04 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
 - 1. Submit within 15 days after date of Agreement.
 - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. Shop Drawing Submittals: Prepared specifically for this Project.

- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- E. For selection from standard finishes, submit samples of the full range of the manufacturer's colors, textures, and patterns.
- F. Indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances

PART 2 PRODUCTS

2.01 PRODUCTS

- A. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- B. Provide interchangeable components of the same manufacturer for components being replaced.
- C. Products or equipment referenced with a manufacturer's name and/or model number shall be provided with all standard materials, components, compliance requirements and features normally furnished for that model or product. These items and requirements are inherent in the specification whether or not individually itemized.
- D. Manufacturer's Requirements: Any deviation from design requirements shown or specified, resulting either from Contractor's or supplier's change of model, or manufacturer's recommendation, or from submitted alternates or accepted substitutions, shall be clearly indicated on the Contractor's submittals. Contractor shall provide all such manufacturer or supplier supplemental requirements at no additional cost.
- E. Owner's Requirements:
 - 1. Pursuant to the requirements of California Public Contract Code 3400, the Owner may designate certain products as "District Standards" in order that a field test or experiment may be made to determine the product's suitability for future use, or in order to match other products in use on a particular public improvement, either completed or in the course of construction.
 - 2. A list of these designated products as may be applicable to the project is contained in the Notice Inviting Bids, as required by PCC 3400. These products shall be provided as specified and are not subject to substitution. All bids shall be deemed to include these listed items as specified without additional costs.
 - 3. In the event of a conflict between the Notice Inviting Bids and the technical specifications for a product's provision for substitutions, the Notice Inviting Bids shall govern.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming a Single Manufacturer with a Provision for Substitutions: Submit a request for substitution in accordance with specified procedures for products meeting specifications

from any manufacturer not named. For such specifications, the Architect is aware of only one manufacturer providing products meeting the specification, pursuant to PCC 3400.

- C. Products Specified by Naming Multiple Manufacturers with a Provision for Substitutions: Submit a request for substitution in accordance with specified procedures for products meeting specifications from any manufacturer not named.
- D. Products Specified by Naming A Single Manufacturer or Multiple Manufacturers without Provision for Substitution: Use only a product of one of the manufacturers named and meeting specifications. No options or substitutions allowed.
- E. Products Specified by Naming A Single Manufacturer or Multiple Manufacturers as listed in the Notice Inviting Bids: Use only a product of one of the manufacturers named and meeting specifications. No options or substitutions allowed

2.03 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra products of types and in quantities specified in individual specification sections.
- B. Deliver to Project site, prior to final payment.
- C. Provide materials list for all items turned over to the Owner including quantities.
- D. Deliver items in presence of Owner designated representative to the location identified by the Owner.
- E. Obtain Owner designated representative sign-off of materials list attesting to receipt of items in triplicate. Retain one copy, provide one copy to Owner representative receiving items, and submit one copy to Architect.

PART 3 EXECUTION

3.01 LIMITATIONS ON SUBSTITUTIONS SUBMITTED PRIOR TO THE RECEIPT OF BIDS

- A. The Bid shall be based upon the standards of quality established by those items of equipment and/or materials which are indicated in the Contract Documents, including those products designated as "District Standards".
- B. Architect may consider requests for substitutions of specified equipment and/or materials only when requests are received by Architect within twenty-one (21) days prior to the date of bid, in conformance with Public Contract Code Section 3400. Do not request substitutions for products designated as "District Standards".
- C. Architect will consider a substitution request only if request is made in strict conformance with provisions of this Section. Request shall be fully responsive to all product requirements of the specified product, including those requirements noted in this section in the article titled PRODUCTS.
- D. Burden of proof of merit of requested substitution is the responsibility of the proposer requesting the substitution.
- E. It is the sole responsibility of the proposer requesting the substitution to establish proper content of submittal for requests for substitutions. Incomplete submittals will be rejected.

- F. When substitution is not accepted, provide specified product.
- G. Substitute products shall not be included within the bid without written acceptance by Addendum.
- H. Substitution products must meet or exceed specified product sustainability criteria.

3.02 LIMITATIONS ON SUBSTITUTIONS SUBMITTED AFTER THE AWARD OF THE CONTRACT

- A. The Contract is based upon the standards of quality established by those items of equipment and/or materials which are indicated in the Contract Documents, including those products designated as "District Standards".
- B. Architect will consider substitution requests received after the established date of the receipt of bids or contract award only when one or more of the following conditions are met and documented:
 - 1. Specified item fails to comply with regulatory requirement.
 - 2. Specified item is no longer manufactured.
 - 3. Specified item, through no fault of the Contractor, unavailable in the time frame required to meet project schedule.
 - 4. Specified item, through subsequent information disclosure, will not perform properly or fit in designated space.
 - 5. Manufacturer declares specified product to be unsuitable for use intended or refuses to warrant installation of product,
 - 6. Substitution would be, in the sole judgment of the Architect, a substantial benefit to the Owner in terms of cost, time, energy conservation, or other consideration of merit.
- C. Notwithstanding other provisions of this section and the above, the Architect may consider a request for substitution after the date of the receipt of bids or contract award, if in the sole discretion of the Architect, there appears to be just cause for such a request. The acceptance of such a late request does not waive any other specified requirement.
- D. Architect will consider a request for substitution after the date of the receipt of bids or contract award only if request is made in strict conformance with provisions of this section. Request shall be fully responsive to all product requirements of the specified product, including those requirements noted in this section in the article titled PRODUCTS.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
 - 1. Review of shop drawings does not constitute acceptance of substitutions indicated or implied on shop drawings.
 - 2. Substitutions will not be considered when requested or submitted directly by subcontractor or supplier.
- F. Contractor's failure or inability to pursue the work promptly or coordinate activities properly shall not establish a cause for consideration of Substitutions.

- G. Burden of proof of merit of requested substitution is the responsibility of the Contractor.
- H. It is the sole responsibility of the Contractor to establish proper content of submittal for requests for substitutions. Incomplete submittals will be rejected.
- I. When substitution is not accepted, provide specified product.
- J. Substitute products shall not be provided without written acceptance by Change Order.
- K. Substitute products must meet or exceed specified product sustainability criteria.

3.03 SUBSTITUTION PROCEDURES

- A. Document each request on Architect's Request For Substitution (RFS) form with complete data substantiating compliance of proposed substitution with Contract Documents. All requests for substitution must be submitted on the specified form which may be obtained from the Architect. Requests received without the Request Form will be rejected.
- B. A request for substitution constitutes a representation that the proposer:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty or bonds for the substitution as for the specified product.
 - 3. Will coordinate installation of an accepted substitution and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives all claims for additional costs or time extension which may subsequently become apparent.
 - 5. Will reimburse the Owner for services provided by Owner and Architect for review or redesign services associated with re-approval by authorities.
- C. Regulatory Requirements: Proposer requesting the substitution shall be responsible for obtaining all regulatory approvals required for proposed substitutions.
 - 1. All regulatory approval shall be obtained for proposed substitutions prior to submittal of substitution request to Architect, unless Architect participation is required by the regulating agency.
 - 2. All substitutions that affect structural safety, fire and life safety, access compliance or energy (as applicable) shall be submitted to Division of State Architect for review and approval.
 - 3. All costs incurred by the Owner in obtaining regulatory approvals for proposed substitutions, including the costs of the Architect and any authority having jurisdiction over the project shall be reimbursed to the Owner. Costs of these services shall be reimbursed regardless of final acceptance or rejection of substitution.
- D. Substitution Submittal Procedure:

1. Submit one original signature copy of only the Request For Substitution Form included in this Project Manual for consideration. Forms provided by proposer or other agencies or organizations are not acceptable. Limit each request to one proposed substitution.
2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence, including:
 - a. Statement of cause for substitution request.
 - b. Identify product by specification section and article number.
 - c. manufacturer's name, address, and phone number.
 - d. List of fabricators, suppliers, and installers as appropriate.
 - e. List of similar Projects where proposed products have been used, date of installation and names of Architect and Owner.
 - f. Confirmation of regulatory approvals
 - g. Product data, including drawings and product samples.
 - h. Fabrication and installation procedures.
 - i. Comparison of the qualities of the proposed substitution with that specified.
 - j. Cost data comparing the proposed substitution with the product specified.
 - k. Any required license fees or royalties.
 - l. Availability of maintenance service and source of replacement materials.
 - m. Coordination information, including a list of changes or modifications needed to other items of work that will be required to accommodate Proposed substitution.
 - n. Statement on the Substitution's effect on the Construction Schedule.
 - o. Written certification by the proposer that the Substitution is equal or better in every respect to that required by the contract Documents and that substitution will perform adequately in the application intended.
 - p. Written certification that the proposer will pay for all permits, fees, and costs required to implement the substitution, and including waiver of all claims for additional costs or time extension which may subsequently become apparent, and reimbursement of Owner and Architect for review or redesign services associated with re-approval by authorities.
 - q. Written certification by the proposer with evidence that the proposed substitution product meets or exceeds specified product sustainability criteria

3.04 ARCHITECT'S REVIEW OF SUBSTITUTIONS

- A. The Architect will accept or reject proposed substitutions within fourteen (14) days of receipt of request.

- B. If a decision on a substitution cannot be made within the time allocated, the product specified shall be used.
- C. No extension of bid period or contract time will be made for substitution review.
- D. Final acceptance of a substitution submitted prior to the date established for the receipt of bids will be in the form of a Bid Clarification or Addendum.
- E. Final acceptance of a substitution submitted after the award of the contract will be in the form of an Architect Supplemental Instruction and/or Construction Change Direction.
- F. Architect/Engineer shall be the judge of the acceptability of the proposed substitution. Architect's decision on substitution requests is final and does not require documentation or justification.
- G. Rejection Of Substitution Request: Any of the following reasons shall be cause for rejection, all as determined by the Architect;
 - 1. Vagueness or incompleteness of Substitution submittal,
 - 2. Insufficient data, failure to meet specified requirements, (including warranty).
 - 3. Qualification of the requirements of the Substitution Form, including modification of any of the requirements.
- H. The Architect/Engineer will notify Contractor in writing of decision to accept, accept as noted, or not accept the request for substitution.
- I. Substitute products shall not be ordered or installed without written acceptance.
- J. Owner shall receive full benefit of any cost reduction as a result of any request for substitution.
- K. Provide submittals for accepted substitutions in accordance with specified requirements of the respective section and provisions of Section 01 2500.
 - 1. An accepted substitution is not acceptable as a submittal under Section 01 2500. Provide separate submittals for each review.

3.05 OWNER-SUPPLIED PRODUCTS

- A. See Section 01 1100- Summary for identification of Owner-supplied products.

3.06 Owner's Responsibilities:

- A. Arrange and pay for product delivery to site.
- B. On delivery, inspect products jointly with Contractor.
- C. Submit claims for transportation damage and replace damaged, defective, or deficient items.
- D. Arrange for manufacturers' warranties, inspections, and service.

3.07 Contractor's Responsibilities:

- A. Receive and unload products at site; inspect for completeness or damage jointly with Owner.

- B. Handle, store, install and finish products.
- C. Repair or replace items damaged after receipt.
- D. Coordinate installation with other trades.

3.08 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

3.09 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- F. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.
- I. Provide bonded off-site storage and protection only when site does not permit on-site storage or protection. Obtain Owner's permission prior to initiating such off-site storage.

3.10 PROJECT FORMS

- A. The following forms are included in Section 01 1600 - Project Forms:
 - 1. REQUEST FOR SUBSTITUTION FORM

END OF SECTION

SECTION 01 6116
VOLATILE ORGANIC COMPOUND (VOC) RESTRICTIONS

PART 1 GENERAL

1.01 SUMMARY

- A. VOC restrictions for product categories listed below under "DEFINITIONS."
 - 1. California Code of Regulations, Title 24, Part 11 California Green Building Standards Code, "CAL-Green".
- B. All products of each category that are installed in the project must comply; applicable laws and ordinances do not allow for partial compliance.
 - 1. Regional Air Quality Management District (AQMD) requirements may vary from district to district. Products used shall comply with local AQMD requirements.
- C. Listing of a product in these specifications shall not be construed as a solicitation or requirement to use any product or combination of products in violation of the requirements of South Coast Air Quality Management District (SCAQMD) Rule No.1168, as described in Rule 1168(g).
 - 1. If a listed product does not meet the requirements of this rule, request approval for use of an alternate product by the same or another manufacturer meeting the requirements of this rule.
 - 2. Do not use products which do not meet the requirements of this rule.
- D. Listing of a product in these specifications shall not be construed as a solicitation or requirement to use any product or combination of products in violation of the requirements of South Coast Air Quality Management District Rule (SCAQMD) No.1113.
 - 1. If a listed product does not meet the requirements of this rule, request approval for use of an alternate product by the same or another manufacturer meeting the requirements of this rule.
 - 2. Do not use products which do not meet the requirements of this rule.

1.02 RELATED REQUIREMENTS

- A. Divisions 01 through 33 contain related requirements specific to the work of each of these Sections. Requirements may or may not include reference to this section.
- B. Section 01 8113 "Sustainable Design Requirements".

1.03 DEFINITIONS

- A. VOC-Restricted Products: All products of each of the following categories when installed or applied on-site:
 - 1. Adhesives, sealants, and sealer coatings and caulks, regardless of specification section or division.
 - 2. Paints and coatings.
 - 3. Carpet systems, including cushions and adhesives.

4. Resilient flooring systems, including adhesives.
 5. Composite wood products; plywood, particleboard, wood fiberboard.
 6. Thermal insulation.
 7. Acoustical ceilings and wall panels.
- B. Adhesives: All gunnable, trowelable, liquid-applied, adhesive primers, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- C. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.

1.04 REFERENCE STANDARDS

- A. California Code of Regulations, Title 24, Part 11 California Green Building Standards Code, "CAL-Green".
- B. Collaborative for High Performance Schools (CHPS), California Adaptation, CA-CHPS Criteria v2.0; Low-Emitting Materials prerequisite and credit requirements
- C. CARB 2007 SCM – California Air Resources Board Suggested Control Measure for Architectural Coatings <https://ww2.arb.ca.gov/our-work/programs/coatings/architectural-coatings/suggested-control-measure>.
- D. California Department of Public Health (CDPH) Standard Test Method v1.2-2017 per 2022 midcycle update to calgreen (effective July 1, 2024)
- E. CRI (GLCC) - Green Label Testing Program - Approved Product Categories for Carpet Cushion; Carpet and Rug Institute; Current Edition.
- F. CRI (GLP) - Green Label Plus Carpet Testing Program - Approved Products; Carpet and Rug Institute; Current Edition.
- G. GEI (SCH) - GREENGUARD "Children and Schools" Certified Products; GREENGUARD Environmental Institute; current listings at www.greenguard.org.
- H. GreenSeal GS-36 - Commercial Adhesives; Green Seal, Inc.
- I. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.
- J. SCAQMD 1113 - South Coast Air Quality Management District Rule No.1113; current edition; www.aqmd.gov.
- K. SCS (CPD) - SCS Certified Products; Scientific Certification Systems; current listings at www.scs-certified.com.
- L. Local Air Quality Management District (AQMD)

1. San Francisco Bay Area Air Quality Management District (BAAQMD)
<https://www.baaqmd.gov/>. Projects under BAAQMD jurisdiction shall comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.
2. Colusa County Air Pollution Control District (CCAPCD)
<https://www.countyofcolusa.org/461/Air-Pollution-Control-District>
3. Lake County Air Quality Management District (LCAQMD) <https://www.lcaqmd.net/>
4. Mendocino County Air Quality Management District (MCAQMD)
<http://www.co.mendocino.ca.us/aqmd/index.html>

Mendocino County Air Quality Management District (MCAQMD)
<http://www.co.mendocino.ca.us/aqmd/index.html>
5. Monterey Bay Unified Air Resources District (MBARD) <https://www.mbard.org/>
6. Northern Sonoma County Air Pollution Control District (NSCAPCD) <https://nosocoair.org/>
7. Sacramento Metropolitan Air Quality Management District (SMAQMD)
<https://www.airquality.org/>
8. San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD)
<https://www.valleyair.org/Home.htm>
9. Yolo-Solano Air Quality Management District (YSAQMD) <https://www.ysaqmd.org/>

1.05 SUBMITTALS

- A. See Section 01 3300 - Submittals Procedures.
- B. Evidence of Compliance: Submit for each different product in each applicable category.
 1. Identify evidence submittals with the words "CAL-Green VOC Compliance Report".
- C. Product Data: For each VOC-restricted product used in the project, submit product data showing compliance, except when another type of evidence of compliance is required.
 1. Proof of General Emissions Evaluation per material category requirements in Part 2.
 2. Total VOC content of wet-installed products.
- D. Installer Certifications for Accessory Materials: Require each installer of any type of product, (not just the products for which VOC restrictions are specified) to certify that either 1) no adhesives, joint sealants, paints, coatings, or composite wood or agrifiber products have been used in the installation of their products, or 2) that such products used comply with these requirements.
 1. Use the form following this section for installer certifications.

1.06 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General: Provide only products having volatile organic compound (VOC) content not greater than required by South Coast Air Quality Management District Rule No.1168 or Rule No.1113 and less where required by code.
 - 1. These products may be specified in multiple sections throughout these specifications.
 - 2. Products used but not specifically specified are subject to the reporting requirements of this VOC Restrictions section. For these products, use the form following this section.
- B. Adhesives, including carpet: Comply with Title 24, Part 11, Table 5.504.4.1 1 and California Code of Regulations Title 17, Sections 94509 and 94522. Ninety percent by volume of all adhesives installed shall comply with VOC emission limits in CHPS criteria for Low-Emitting Materials.
 - 1. Provide documentation verifying that finish materials are certified to meet pollutant limits. Acceptable types of evidence are:
 - a. Report of laboratory testing performed in accordance with requirements.
 - b. Published product data showing compliance with requirements.
 - c. Certification by manufacturer that product complies with requirements.
 - d. Provide products that comply with the most stringent requirements specified in the following:
 - 1) 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - 2) South Coast Air Quality Management District Rule No. 1168.
- C. Aerosol Adhesives: Comply with Title 24, Part 11, Table 5.504.4.1. and California Code of Regulations Title 17, Sections 94509 and 94522. Ninety percent by volume of all adhesives installed shall comply with VOC emission limits in CHPS criteria for Low-Emitting Materials.
 - 1. Provide documentation verifying that finish materials are certified to meet pollutant limits. Acceptable types of evidence are:
 - a. Current GreenSeal Certification.
 - b. Report of laboratory testing performed in accordance with GreenSeal GS-36 requirements.
 - c. Published product data showing compliance with requirements.
 - d. Provide coatings that comply with the most stringent requirements specified in the following:
 - 1) 40 CFR 59, Subparts D & E--National Volatile Organic Compound Emission Standards for Architectural and Aerosol Coatings.
 - 2) South Coast Air Quality Management District Rule No. 1168.

- D. Sealants: Sealants: Comply with Title 24, Part 11, Table 5.504.4.2 and California Code of Regulations Title 17, Sections 94509 and 94522. Ninety percent by volume of all sealants installed shall comply with VOC emission limits in CHPS criteria for Low-Emitting Materials.
1. Provide documentation verifying that finish materials are certified to meet pollutant limits. Acceptable types of evidence are:
 - a. Report of laboratory testing performed in accordance with requirements.
 - b. Published product data showing compliance with requirements.
 - c. Certification by manufacturer that product complies with requirements.
- E. Paints and Coatings: Comply with Title 24, Part 11, Table 5.504.4.3 and California Code of Regulations Title 17, Sections 94509 and 94522.; California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. Ninety percent by volume of all paints and coatings installed shall comply with VOC emission limits in CHPS criteria for Low-Emitting Materials.
1. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
 - a. Provide documentation verifying that finish materials are certified to meet pollutant limits. Acceptable types of evidence are:
 - 1) Report of laboratory testing performed in accordance with requirements.
 - 2) Published product data showing compliance with requirements.
 - 3) Certification by manufacturer that product complies with requirements.
 - 4) Other method acceptable to enforcing agency.
 - b. Provide coatings that comply with the most stringent requirements specified in the following:
 - 1) 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - 2) South Coast Air Quality Management District Rule No.1113.
- F. Aerosol Paints and Coatings: Comply with Title 24, Part 11, Table 5.504.4.3 and California Code of Regulations Title 17, Sections 94509 and 94522. Ninety percent by volume of all paints and coatings installed shall comply with VOC emission limits in CHPS criteria for Low-Emitting Materials.
1. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subparts D & E (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
 - a. Provide documentation verifying that finish materials are certified to meet pollutant limits. Acceptable types of evidence are:
 - 1) Report of laboratory testing performed in accordance with requirements.

- 2) Published product data showing compliance with requirements.
 - 3) Certification by manufacturer that product complies with requirements.
 - b. Provide coatings that comply with the most stringent requirements specified in the following:
 - 1) 40 CFR 59, Subparts D & E--National Volatile Organic Compound Emission Standards for Architectural and Aerosol Coatings.
 - 2) South Coast Air Quality Management District Rule No. 1113.
- G. Carpet System Products: Comply with Title 24, Part 11, 5.504.4.4. One hundred percent of floor area receiving carpet shall have flooring complying with VOC emission limits in CHPS criteria for Low-Emitting Materials.
 1. Meet testing and product requirements of California Department of Public Health Standard Practice for testing of VOC's (Specification 01350).
 2. Provide documentation verifying that finish materials are certified to meet pollutant limits. Acceptable types of evidence are:
 - a. Carpet & Rug Institute "Green Label Plus".
 - b. NSF/ANSI 140 at Gold Level.
 - c. Scientific Certification Systems Sustainable Choice.
 - d. Other method acceptable to enforcing agency.
 - e. All carpet cushion installed shall meet requirements of Carpet & Rug Institute "Green Label Program".
 3. Accessory Materials Requirements:
 - a. All carpet cushion installed shall meet requirements of Carpet & Rug Institute "Green Label Program".
 - b. All carpet cushion installed shall meet requirements of Title 24, Part 11, Table 5.504.4.1.
 - c. All carpet adhesive installed shall meet the requirements of Title 24, Part 11, Table 5.504.4.1.
 - d. Accessory materials are subject to the same evidence of compliance requirements as the primary product.
- H. Composite Wood Products: Comply with Title 24, Part 11, Table 5.504.4.5 and California Code of Regulations Title 17, Section 93120.2 formaldehyde limits for hardwood plywood, particleboard, and medium density fiberboard composite wood products. Ninety percent of installed area of composite wood products shall comply with VOC emission limits in CHPS criteria for Low-Emitting Materials.
 1. Comply with Title 24, Part 11, Table 5.504.4.5 Composite Wood Products Maximum Formaldehyde Emissions in Parts per Million.

2. Provide documentation verifying that finish materials are certified to meet pollutant limits.
Acceptable types of evidence are:
 - a. Chain of custody certifications
 - b. Published product data showing compliance with requirements.
 - c. Certification by manufacturer that product complies with requirements.
 - d. Compliant executive order from CARB: ww2.arb.ca.gov/resources/documents/nafullef-executive-orders
 - e. Other method acceptable to enforcing agency.
- I. Resilient Flooring Products: Comply with Title 24, Part 11, 5.504.4.6. One hundred percent of floor area receiving resilient flooring shall have flooring complying with VOC emission limits in CHPS criteria for Low-Emitting Materials and certified under the Resilient Floor Covering Institute (RFCI) FloorScore program.
 1. Meet testing and product requirements of California Department of Public Health Standard Practice for testing of VOC's (Specification 01350).
 2. Provide documentation verifying that finish materials are certified to meet pollutant limits.
Acceptable types of evidence are:
 - a. Published product data showing compliance with requirements.
 - b. Inclusion on one of the following lists:
 - 1) www.rfci.com/int_FS-ProdCert.htm
 - 2) www.greenguard.org/default.aspx?tabid=135
 - 3) Other method acceptable to enforcing agency.
 3. Accessory materials requirements:
 - a. All flooring adhesive installed shall meet the requirements of Title 24, Part 11, Table 5.504.4.1.
 - b. Accessory materials are subject to the same evidence of compliance requirements as the primary product.
- J. Thermal Insulation Products: Comply with Title 24, Part 11, 5.504.4.7. Ninety percent of wall and ceiling area receiving insulation shall have insulation complying with VOC emission limits in CHPS criteria for Low-Emitting Materials.
 1. Meet testing and product requirements of California Department of Public Health Standard Practice for testing of VOC's (Specification 01350).
 2. Provide documentation verifying that finish materials are certified to meet pollutant limits.
Acceptable types of evidence are:

- a. Published product data showing compliance with requirements.
 - b. Inclusion on one of the following lists:
 - 1) www.greenguard.org/default.aspx?tabid=135
 - 2) Other method acceptable to enforcing agency.
- K. Acoustical Ceiling and Wall Panel Products: Comply with Title 24, Part 11, 5.504.4.8. Ninety percent of wall and ceiling area receiving panels shall have panels complying with VOC emission limits in CHPS criteria for Low-Emitting Materials.
1. Meet testing and product requirements of California Department of Public Health Standard Practice for testing of VOC's (Specification 01350).
 2. Provide documentation verifying that finish materials are certified to meet pollutant limits. Acceptable types of evidence are:
 - a. Published product data showing compliance with requirements.
 - b. Inclusion on one of the following lists:
 - 1) www.greenguard.org/default.aspx?tabid=135
 - 2) Other method acceptable to enforcing agency.

PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

- A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.
- B. All additional costs to restore indoor air quality, including fines by authorities, due to installation of non-compliant products will be borne by Contractor.

3.02 RESTRICTED COMPONENTS

- A. Restricted Components:
 1. Adhesives, sealants, caulks, paints and coatings shall comply with California Code of Regulations Title 17, Section 94509 and shall not contain any of the following:
 - a. Acrolein.
 - b. Acrylonitrile.
 - c. Antimony.
 - d. Benzene.
 - e. Butyl benzyl phthalate.
 - f. Cadmium.

- g. Chloroform.
- h. Di (2-ethylhexyl) phthalate.
- i. Di-n-butyl phthalate.
- j. Di-n-octyl phthalate.
- k. 1,2-dichlorobenzene.
- l. Diethyl phthalate.
- m. Dimethyl phthalate.
- n. Ethylbenzene.
- o. Ethylene dichloride
- p. Formaldehyde.
- q. Hexavalent chromium.
- r. Isophorone.
- s. Lead.
- t. Mercury.
- u. Methyl ethyl ketone.
- v. Methyl isobutyl ketone.
- w. Methylene chloride.
- x. Naphthalene.
- y. Perchloroethylene.
- z. Toluene (methylbenzene).
- aa. 1,1,1-trichloroethane.
- bb. Trichloroethylene.
- cc. Vinyl chloride.

3.03 PROJECT FORMS

A. Refer to section 01 6116.01 for the following form:

- 1. ACCESSORY MATERIAL VOC CONTENT CERTIFICATION FORM.

END OF SECTION

SECTION 01 6116.01

ACCESSORY MATERIAL VOC CONTENT CERTIFICATION FORM

PART 1 - GENERAL

1.01 FORM

A. Use of This Form:

1. Because installers are allowed and directed to choose accessory materials suitable for the applicable installation, there is a possibility that such accessory materials might contain VOC (VOLATILE ORGANIC COMPOUND) content in excess of that permitted, especially where such materials have not been explicitly specified.
2. Contractor is required to obtain and submit this form from each installer of work on this project.
3. For each product category listed, circle the correct words in brackets: either [HAS] or [HAS NOT].
4. If any of these accessory materials has been used without being submitted and reviewed without exception, attach to this form product data sheets showing VOC content in g/L for each such product.

1.02 PRODUCT CERTIFICATION

A. I certify that the installation work of my firm on this project:

1. [HAS] [HAS NOT] required the use of any ADHESIVES.
2. [HAS] [HAS NOT] required the use of any SEALANTS or CAULKS.
3. [HAS] [HAS NOT] required the use of any PAINTS OR COATINGS.
4. [HAS] [HAS NOT] required the use of any COMPOSITE WOOD or AGRIFIBER PRODUCTS.

B. Product data sheets showing VOC content in g/L are attached.

PART 2 - PRODUCTS

2.01 PRODUCT DATA

A. Any products used that were not submitted and reviewed without exception shall have:

1. Product data sheets showing VOC content in g/L attached to this form.
2. Proof of General Emissions Evaluation per Section 01 6116.

CERTIFIED BY: (Installer/Manufacturer/Supplier Firm)

A. Firm Name: _____

B. Print Name: _____

C. Signature: _____

- D. Title: _____ (officer of company)
- E. Date: _____
- F. Product data sheets showing VOC content in g/L are attached.

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 7000
CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Acceptance of site.
- E. Project record documents.
- F. Operation and maintenance data.
- G. Spare parts and maintenance Products.
- H. Warranties and bonds.
- I. Maintenance service.

1.02 RELATED SECTIONS

- A. Section 01 5600 - Temporary Controls.
- B. Section 01 7500 - Starting of Systems
- C. Section 01 2900 - Applications for Payment
- D. Section 23 0000 – Heating, Ventilating, Air Conditioning: Additional requirements for air filters.

1.03 REFERENCES

- A. California Code of Regulations, Title 24, Part 11 California Green Building Standards Code, “CAL-Green”.
- B. Collaborative for High Performance Schools (CHPS), California Adaptation, CA-CHPS Criteria v2.0.
- C. United States Green Building Council (USGBC), Leadership in Energy & Environmental Design (LEED), Reference for Building Design and Construction (BD+C), v4 and v4.1.

1.04 CLOSEOUT PROCEDURES

- A. Submit written certification including:
 - 1. The Work is substantially complete in accordance with Contract Documents and ready for Architect/Engineer's review.
 - 2. A comprehensive list of work which is incomplete or in need of correction.
 - 3. Draft closeout submittals for the Work, or designated portions thereof.

- B. Within a reasonable time after receipt of this certification, the Architect will perform initial review. Incremental review will not be performed.
- C. If the Architect determines that the Work is not substantially complete:
- D. The Architect will promptly notify the Contractor and Owner in writing, setting forth reasons for the determination.
- E. The Contractor shall correct or complete deficiencies in the Work and send a second written certification as above.
- F. The Architect will perform a subsequent review as above.
- G. Coordinate corrective work under provisions of Section 01 3900 - Coordination and Meetings.
- H. Upon the Architect's determination that the Work is substantially complete, the Architect will provide to the Contractor a document co-signed by the Owner's Representative indicating remainder of work to be accomplished prior to completion of the project, or contract recognized portion thereof.

1.05 FINAL INSPECTION

- A. Submit written certification that:
 - 1. Contract Documents have been reviewed,
 - 2. Work has been inspected, and that
 - 3. Work, or a designated portion thereof, is complete in accordance with Contract Documents and
 - 4. Systems and equipment have been tested in the presence of the Owner.
 - 5. Work is ready for Architect review.
- B. Within a reasonable time after receipt of this certification, the Architect will perform a review to verify the status of the Work.
- C. If the Architect determines that the Work is not substantially complete, defective or otherwise in need of correction:
- D. The Architect will promptly notify the Contractor and Owner in writing, setting forth reasons for the determination and listing the deficient work.
- E. The Contractor shall immediately correct or complete deficiencies in the Work and send a second written certification that the Work is complete.
- F. The Architect will perform a subsequent review as above.
- G. Additional review time by the Architect due to incomplete corrections may be "backcharged" to the Contractor by the Owner.
- H. When the Architect determines that the Work is complete in accordance with the Contract Documents, the Architect will request the Contractor to make closeout submittals.

1.06 CLOSEOUT SUBMITTALS

- A. Submittals for review shall be subdivided according to design consultant review.
- B. Submittals required by governing or other authorities.
- C. Evidence of payment and release of liens under the provisions of Section 01 2900 - Applications for Payment.
- D. Certificates of insurance for products and completed operations.
- E. Record Drawings
- F. Warranties and Bonds.
- G. Operations and Maintenance information and manuals.
- H. Submit final Application for Payment identifying total adjusted Contract Price, previous payments, and sum remaining due. Adjustments include:
 - 1. Approved Change Orders.
 - 2. Unit price calculations.
 - 3. Allowances.
 - 4. Liquidated Damages.
 - 5. Deductions for reinspection.
 - 6. Deductions for deficient work uncorrected.
 - 7. Other adjustments.
 - 8. Approved payments.
 - 9. Contract Sum as adjusted.
 - 10. Amount remaining due.
- I. Whole building flush-out report and attachments.
- J. CalGreen Final Report and any supporting attachments.

1.07 FINAL CLEANING

- A. Execute final cleaning prior to Architect's initial review.
- B. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned. Remove excess lubrication and other substances.
- C. All marks, stains, fingerprints, dust, dirt, splattered paint and blemishes resulting from the various operations shall be removed throughout the Project.
 - 1. Stair treads and risers shall be wet-mopped.

2. Glass shall be left clean and polished both inside and outside.
 3. Clean and buff all metalwork.
 4. Plumbing fixtures and light fixtures shall be washed clean.
 5. Vacuum carpeted and soft surfaces with a high-efficiency particulate air (HEPA) filter vacuum that meets or exceeds the Carpet and Rug Institute Seal of Approval (CRI SOA) program.
 6. Hard surfaces shall either be vacuumed with a high-efficiency particulate air (HEPA) filter vacuum that meets or exceeds the Carpet and Rug Institute Seal of Approval (CRI SOA) program, or wet-mopped with microfiber mops, cloths, or sponges that capture dust.
 7. Hardware and other unpainted metals shall be cleaned and all building papers and other temporary protections and labels shall be removed throughout the building, or portion of the building where Contractor was involved, all to the satisfaction of the Architect and District.
- D. Contractor shall replace filters and clean heating and ventilating equipment used for temporary heating, cooling and ventilation.
- E. Clean debris from roofs, gutters, downspouts, and drainage systems.
- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste, surplus materials and rubbish from the site.

1.08 WHOLE BUILDING FLUSH-OUT

- A. After construction ends, prior to occupancy and with all interior finishes installed, perform a building flush-out by supplying the CAL-GREEN, CHPS, or LEED required total volume of outside air while maintaining an internal temperature of at least 60 deg F and no greater than 80 deg F and a relative humidity no higher than 60%.
1. Complete, sign, and submit 01 7000.01 PRE-OCCUPANCY BUILDING FLUSHOUT REPORTING FORM
 2. Include flushout calculations as described in the reporting form.
 3. Include photographic documentation to accompany report validating recorded values.
- B. If occupancy is desired prior to flush-out completion, the space may be occupied following delivery of a minimum volume of outside air to the space per CAL-GREEN, CHPS, or LEED . Once a space is occupied, it shall be ventilated at a minimum rate of 0.30 cfm per sq. ft. of outside air or the design minimum outside-air rate, whichever is greater. During each day of the flush-out period, ventilation shall begin a minimum of three hours prior to occupancy and continue during occupancy. These conditions shall be maintained until the (CalGreen/CHPS/LEED) required total volume of outside air has been delivered to the space.
1. Complete, sign, and submit 01 7000.02 POST-OCCUPANCY BUILDING FLUSHOUT REPORTING FORM
 2. Include flushout calculations as described in the reporting form.

3. Include photographic documentation to accompany report validating recorded values.
- C. All interior finishes such as millwork, doors, paint, carpet, acoustic tiles and movable furnishings must be installed prior to commencing flush procedure.
- D. Prohibit use of tobacco products inside building and within 25 feet of all entrances during construction.

1.09 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 1. Drawings.
 2. Specifications.
 3. Addenda.
 4. Change Orders and other modifications to the Contract.
 5. Reviewed Shop Drawings, Product Data, and Samples.
 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and modifications.
- F. CalGreen Checklist:
 1. DSA Projects: refer to the submitted DSA 403-C for CalGreen measures applicable to the project. Provide signed final report and attachments per 01 7000.03 CALGREEN COMPLIANCE REPORTING FORM.
 2. Projects under other AHJs: refer to the submitted local CalGreen checklist for measures applicable to the project. Refer to the AHJ's list of approved CalGreen inspectors. The Contractor is responsible for hiring a CalGreen inspector to confirm compliance with CalGreen requirements. Provide copies of the CalGreen Inspection reports to the AOR in addition to those required by the AHJ.
- G. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 1. Measured depths of foundations in relation to finish floor datum.

2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 4. Field changes of dimension and detail.
 5. Details not on original Contract drawings.
- H. Submit reproducible documents to Architect prior to final Application for Payment, including indexed PDF(s) of all required documents. Provide one PDF file each for:
1. Complete Record Specifications
 2. Complete Record Drawings
 3. Complete Record Shop Drawings
- I. Receipt and acceptance of Record Documents by the Owner is a condition precedent for filing Notice of Completion.

1.10 OPERATION AND MAINTENANCE DATA

- A. Submit data on 8-1/2 x 11 inch (A4) text pages, bound in three-ring "slant D" binders with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project and subject matter of binder when multiple binders are required.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, typed on white paper, in three parts as follows:
 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 2. Part 2: Operation and maintenance instructions arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.

- f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - g. Receipts for spare parts, maintenance products and keys, attested by the Owner.
- 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Originals of warranties and bonds
- E. Submit draft copy of completed volumes as an indexed PDF of all required documents. This copy will be reviewed and returned with Architect comments. Revise content of all document sets as required prior to final submission.
- F. Submit Indexed PDF of revised final volumes, within 10 days after final inspection of all required documents. Provide a minimum of two sets of subdivided binders as defined above, if requested by Owner.
- G. Receipt and acceptance of Operations and Maintenance Documents by the Owner is a precondition for filing Notice of Completion.

1.11 WARRANTIES AND BONDS

- A. Submit guarantees as specified in the General Conditions.
 - 1. Provide duplicate copies.
- B. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.
- C. Provide Table of Contents and assemble in a three ring binder with durable plastic cover. Also provide indexed PDF of scan of all warranties and bonds.
- D. Submit prior to final Application for Payment.
- E. In the case that any portion of the work is eligible for a warranty start period prior to Notice of Completion as designated by above article 1.09.F, Contractor shall conform to procedures defined by articles 1.03 through 1.09, applicable to portion of work. Upon the Architect's determination that the Work is substantially complete, the Architect will:
 - 1. Prepare the Certificate of Substantial Completion upon AIA Form G704 with the Contractor's list of items to be completed or corrected, as verified and amended by the Architect.
 - 2. Submit the completed Certificate of Substantial Completion to the Contractor and the Owner for written acceptance of their respective duties set forth therein.

- F. For items of Work delayed beyond date of Notice of completion or Substantial Completion where applicable, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

1.12 MAINTENANCE SERVICE

- A. Furnish service and maintenance of components indicated in specification sections during the warranty period.
- B. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- D. Maintenance service shall not be assigned or transferred to any agent or Subcontractor without prior written consent of the Owner.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01 7419
CONSTRUCTION WASTE MANAGEMENT**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of each prime Contract, including General and Supplementary Conditions and other Division 1 Specifications Sections, apply to this Section.

1.02 SUMMARY:

- A. Contractor shall implement procedures to divert 65% of construction waste. As many of the waste materials as economically feasible shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized.
- B. The Contractor shall develop a Waste Management Plan as defined in this Section and submit for review by the Owner, Construction Manager, and Architect.

1.03 RELATED REQUIREMENTS

- A. Section 01 2900 - Applications for Payment.
- B. Section 01 8113 - Sustainable Design Requirements.

1.04 DEFINITIONS

- A. Waste Materials: construction materials that are excess to the contract requirements and which can not be effectively used in the Work.
- B. Salvage Materials: waste materials or materials that exist on the site that can be reused, either on site or by another entity.
- C. Recyclable Waste: waste materials that exist on site or are generated during the construction process that can be recycled/remanufactured into another material.
- D. Categories or Streams of salvageable or recyclable waste include the following:
 - 1. Concrete, Masonry, and Other Inert Fill Material: concrete, brick, rock, broken up asphalt pavement, clay, and other inert (non-organic) materials.
 - 2. Metals: metal scrap including iron, steel, copper, brass, and aluminum; includes beverage containers, packaging materials (such as metal banding), fencing, reinforcing bar, wiring, plumbing, etc.
 - 3. Untreated Wood: unpainted, untreated dimensional lumber, wood edging, wood shipping pallets, etc. Does not include pressure treated or creosote treated wood.
 - 4. Engineered Wood Products: plywood, oriented strand board, "Masonite", particleboard, manufactured trusses and beams, and glue-laminated timbers.
 - 5. Gypsum Wallboard: excess drywall construction materials including cuttings, other scrap, and excess materials.

6. Cardboard: clean, corrugated cardboard such as used for packaging, etc.
7. Paper Goods:
 - a. Office paper: includes any paper, such as manufacturer instruction, specification sheets, files, correspondence, packaging, stiffeners, etc.
 - b. Newsprint: shredded or whole newspaper goods.
8. Plastic: beverage containers, packaging materials (such as polystyrene “peanuts” and expanded polystyrene), containers (other than those used for hazardous materials), vinyl products, etc.
9. Glass: includes glass beverage containers, and recyclable glass building materials.
10. Insulation: rigid foam, batt, and loose fill insulation materials.
11. Carpet: face fiber, backing, padding, and carpet cushion scrap.
12. Paints: unused portions of paints and coatings applied on-site.
13. Fabric: uncontaminated fabric scraps.
14. Rubber: uncontaminated rubber scraps, including but not limited to recycled-content rubber flooring, rubber edging, tires that are no longer serviceable, etc.
15. Other: any additional materials identified on-site to be valued for salvage, reuse, or recycling by the Contractor, Owner, Construction Manager, or Architect.
- E. Non-Recyclable Waste: All waste materials that are not able to be recycled, due to contamination, lack of recycling facilities or salvage options, or high cost.
- F. Source Separated: Materials that are separated on-site by category.
- G. Co-Mingled: Several types of construction waste that are combined in a single container. Co-mingling of recycling waste must be approved by the identified recycling facility.
- H. Hazardous Waste: Any substance whose handling and/or disposal is regulated as hazardous waste by local, state, or federal authorities.
- I. Alternative Daily Cover (ADC): Non-earthen material placed over a landfill in order to prevent vector dispersal, fires, odors, or blowing debris, which is then disposed of as waste itself. ADC is not a permitted diversion stream on projects seeking LEED certification and shall be counted as non-diverted waste.

1.05 REFERENCE STANDARDS

- A. California Code of Regulations, Title 24, Part 11 California Green Building Standards Code, “CAL-Green”.
- B. Collaborative for High Performance Schools (CHPS), California Adaptation, CA-CHPS Criteria v2.0.
- C. United States Green Building Council (USGBC), Leadership in Energy & Environmental Design (LEED), Reference for Building Design and Construction (BD+C), v4 and v4.1.

1.06 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with all applicable federal, state, and local ordinance and regulation requirements for recycling and waste management.
- B. Disposal Sites, Recyclers, and Waste Materials Processors: Use only facilities properly permitted by state and local authorities.
- C. Preconstruction Waste Management Conference: Prior to beginning work at the site, schedule and conduct a conference to review the Construction Waste Management Plan and discuss procedures, schedules and specific requirements for waste materials recycling and disposal. Discuss coordination and interface between the Contractor and other construction activities. Identify and resolve problems with compliance with requirements. Record minutes of the meeting, identifying all conclusions reached and matters requiring further resolution.
- D. Plan Revision: Make any revisions to the Construction Waste Management Plan agreed upon during the meeting and incorporate resolutions agreed to be made subsequent to the meeting. Submit the revised plan to the Contracting Officer's Representative for approval.
- E. Sorting Facility Qualifications: On projects seeking LEED certification, any recycling facility destination engaged in sorting waste from co-mingled collection and hauling containers shall be certified by the Recycling Certification Institute.
- F. Implementation:
 - 1. Designate an on-site party responsible for instructing workers and implementing the Construction Waste Management Plan.
 - 2. Distribute copies of the Construction Waste Management Plan to the job site foreman and each subcontractor.
 - 3. Include waste management and recycling in worker orientation.
 - 4. Provide on-site instruction on appropriate separation, handling, recycling, and salvaging methods to be used by all parties at the appropriate stages of the work at the site.
 - 5. Prominently display Waste Management Plan and clearly mark all containers and areas on site dedicated to source separation.
 - 6. Include waste management and recycling discussion in pre-fabrication meetings with subcontractors and fabricators.
 - 7. Also include discussion of waste management and recycling in regular job meetings and job safety meetings conducted during the course of work at the site.

1.07 STORAGE AND HANDLING

- A. Salvage Materials: Provide protective handling and storage as required for all items identified for salvage and reuse by the Owner, Construction Manager, or Architect.

- B. Recyclable Waste: Remove all recyclable materials, as identified in the Waste Management Plan, from the work location to approved containers daily. Failure to remove waste materials will be considered cause for withholding payment and/or termination of Contract.
 - 1. Provide separate collection containers as required by recycling haulers and to prevent contamination of materials, including protection from rain as applicable.
 - a. A minimum of four (4) waste streams (or categories) shall be collected.
 - 2. Replace loaded containers with empty ones as demand requires but not less than weekly.
 - 3. If waste will be collected co-mingled in a single container for off-site sorting, facility delivery receipts must show recycling rates for each material stream. A minimum of four (4) waste streams (or categories) shall be shown.
- C. Personal waste (lunch wrappers, etc.) must be collected separately from construction waste.
- D. Handling: Deposit all indicated recyclable materials in the containers in a clean (no mud, adhesives, solvents, petroleum contamination), debris-free condition. Do not deposit contaminated materials into the containers until such time as such materials have been cleaned.
 - 1. If contamination chemically combines with the material so that it cannot be cleaned, do not deposit into the recycle containers.

1.08 PROJECT/SITE CONDITIONS

- A. Environmental Requirements: Transport recyclable waste materials from the Work Area to the recycle containers and carefully deposit in the containers in a manner to minimize noise and dust. Close container covers immediately after materials are deposited. Do not place recyclable waste materials on the ground adjacent to a container.
- B. Existing Conditions: Coordinate with "Instructions to Bidders" and "Supplementary Conditions".

1.09 SUBMITTALS

- A. Construction Waste Management Plan: Contractor must submit complete Construction Waste Management Plan for review within 30 days from the Notice to Proceed.
- B. Updated Construction Waste Management Plan with delivery receipts to accompany each application for payment. Production of Delivery Receipts are a condition precedent to payment.

PART 2 PRODUCTS

2.01 CONSTRUCTION WASTE MANAGEMENT PLAN

- A. Construction Waste Management Plan: Contractor shall develop a construction waste management plan indicating proposed methods for collection, segregation, and removal of all construction wastes and debris produced by the work of this Contract, including all costs associated with this plan as part of awarded construction scope and cost. Those waste materials produced during the course of this Contract that can be recycled cost-effectively, shall be. The Waste Management Plan shall include, at a minimum, the following:
 - 1. Provide an analysis of jobsite waste to be generated, including types and quantities.

2. Provide strategies for salvage, reuse, or recycling for a minimum of all materials listed below. Include additional waste materials that are deemed cost-effective to salvage, reuse, or recycle. See "Definitions" above for material categories.
 3. Provide documentation to justify decision not to recycle any items listed below.
 4. Show compliance with applicable state and local ordinances and regulations.
 5. Include a list of recycling facilities to which indicated recyclable materials will be distributed for disposal.
 6. Identify materials that are not recyclable or otherwise conservable that must be disposed of in a landfill or other means acceptable under governing State and local regulations.
 7. List permitted landfills and/or other disposal means to be employed.
 8. Indicate any instances where compliance with requirements of this Section does not appear to be possible and request resolution from the Architect.
- B. Waste Materials: The following materials shall be salvaged or recycled according to this specification. Strategies for salvage and recycling shall be identified in the Waste Management Plan as required above.
1. Salvage Materials: Identify materials existing on site that are candidates for salvage and reuse, either on this Project or through sale or donation to local organizations.
 2. Recyclable Materials: The following materials, at a minimum, shall be salvaged or recycled. Applies to all such listed waste materials produced during the course of this Contract.
 - a. Concrete, Masonry, and Other Inert Fill Material
 - b. Metals
 - c. Untreated Wood
 - d. Gypsum Wallboard Scrap
 - e. Cardboard
 - f. Paper Goods
 - g. Beverage Containers
 - h. Plastic
 - i. Glass
 - j. Carpet
- C. Delivery Receipts: Maintain copies of delivery receipts for waste materials salvaged and sent to permitted waste materials processors or recyclers that include the following information:
1. Location and name of firm accepting waste material.

2. Waste Stream materials including:
 - a. Recyclable.
 - b. Non recyclable.
 - c. Salvage material.
 - d. Waste material.
 3. Net weights of eachwaste stream material.
 4. Date of delivery.
- D. Maintain working copy of Construction Waste Management Plan at site for review by Owner, Construction Manager, Architect, and all Trades involved in Project.

PART 3 EXECUTION

3.01 WASTE MANAGEMENT

- A. General: Implement waste management procedures in accordance with approved construction waste management plan. Maintain procedure throughout the life of this Contract.
- B. Source Separation: Separate, store, protect, and handle at the project site all identified recyclable and salvageable waste products to prevent contamination of materials and maximize recyclability and salvageability of materials.
- C. Collection: Arrange for timely pickups from the site or deliveries to approved recycling facilities of designated waste materials to keep construction site clear and prevent contamination of recyclable materials. Maintain records accessible to the Contracting Officer's Representative for verification of construction waste materials recycling.
- D. Delivery Receipts: Keep and maintain records of all deliveries to recycling facilities and all pickups of waste materials at the site by others as specified above.
- E. Salvage and Reuse: Identify salvage and reuse options for all materials that are deemed to be reusable, but will not be reused on this Project.
- F. Non-Recyclable Waste: Collect and segregate non-recyclable waste for delivery to a permitted landfill site.
- G. Hazardous Waste: Control and dispose of hazardous waste in accordance with local, state, and federal regulations.

END OF SECTION

**SECTION 01 7500
STARTING OF SYSTEMS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Starting of Systems:
- B. New systems in this Contract.
- C. Existing systems relocated or disturbed by the Work of this Contract.
- D. Demonstration and instructions.
- E. Testing, adjusting, and balancing.

1.02 RELATED SECTIONS

- A. Section 01 4000 - Quality Control: Manufacturers field reports.
- B. Section 01 7000 - Contract Closeout: System operation and maintenance data and extra materials.

1.03 STARTING SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractors' personnel in accordance with manufacturers' instructions.
- G. Submit a written report in accordance with Section 01 3300 - Submittals that equipment or system has been properly installed and is functioning correctly.

1.04 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel two weeks prior to date of Substantial Completion, including existing telephone, intercom and fire alarm.
- B. Demonstrate Project equipment by a qualified manufacturers' representative who is knowledgeable about the Project.
- C. For equipment or systems requiring seasonal operation, perform demonstration for other season within four months.

- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owners' personnel in detail to explain all aspects of operation and maintenance.
- E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at designated location.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

**SECTION 01 7513
EXECUTION REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Execution and installation requirements.
- B. Products and installation for patching and extending work.
- C. Transition and adjustments.
- D. Repair of damaged surfaces, finishes, and cleaning.
- E. Existing Systems: Relocation and restoration of function, testing.

1.02 RELATED SECTIONS

- A. Section 01 3300 - Submittals: Submittals procedures.
- B. Section 01 4000 - Quality Control: Testing and inspection procedures.
- C. Section 01 5000 - Temporary Facilities and Section 015600 - Temporary Controls: Exterior enclosures, temporary heating/cooling/ventilating facilities.
- D. Section 01 7000 - Contract Closeout: Closeout Submittals; Project record documents, operation and maintenance data, warranties and bonds.

1.03 SUBMITTALS

- A. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in conformance with Contract Documents.
 - 3. Submit surveys and survey logs as for the project record.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.

1.04 QUALIFICATIONS

- A. For survey work employ a land surveyor registered in California and acceptable to Architect. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.

1.05 PROJECT CONDITIONS

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- D. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere.
- E. Erosion and Sediment Control: Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
- F. Noise Control: Provide methods, means, and facilities to minimize noise from demolition, earthwork and noise produced by construction operations.
- G. Pest Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
- H. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.
- I. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.06 COORDINATION

- A. Coordinate work of alterations and renovations to expedite completion sequentially and to accommodate occupancy requirements.
- B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as

closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000.

2.02 FABRICATION

- A. Machine-roll components or elements required to be curved or radiused. Do not field bend or "walk-down". Provide true curves minimizing joints, segmented fabrication not allowed.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Beginning new work means acceptance of existing conditions.
- B. Verify that demolition is complete in alterations areas and areas are ready for installation of new work.
- C. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- D. Examine and verify specific conditions described in individual specification sections.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Cut, move, or remove items as necessary for access to alterations and renovation work. Replace and restore at completion.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Close openings in exterior surfaces to protect existing work and salvage items from weather and extremes of temperature and humidity. Insulate ducts and piping to prevent condensation in exposed areas.
- E. Prepare surfaces and remove surface finishes to provide for proper installation of new work and finishes.
- F. Clean substrate surfaces prior to applying next material or substance.
- G. Seal cracks or openings of substrate prior to applying next material or substance.
- H. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Architect of any discrepancies discovered.
- C. Contractor shall locate and protect survey control and reference points.
- D. Control datum for survey is that indicated on Drawings.
- E. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- F. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- G. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
- H. Utilize recognized engineering survey practices.
- I. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations, ground floor elevations.

- 4. All other work as indicated or necessary.
- J. Periodically verify layouts by same means.
- K. Maintain a complete and accurate log of control and survey work as it progresses.

3.04 GENERAL INSTALLATION REQUIREMENTS

- A. Install Products as specified in individual sections.
- B. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new Work abuts or aligns with existing, perform a smooth and even transition.
- C. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
- D. Grind or bush split-faced or textured masonry to achieve hairline fit to adjacent trim, flashings, inserts, escutcheons or other penetrating elements.
- E. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
- F. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
- G. Trim existing doors as necessary to clear new floor finish. Refinish trim as required.
- H. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat transition to adjacent finishes.
- I. Re-cover and refinish work that exposes mechanical and electrical work exposed accidentally during the work.

3.05 CUTTING AND PATCHING

- A. Execute cutting and patching including excavation and fill to complete the work, to uncover work to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit Products together to integrate with other work.
- B. Execute work by methods to avoid damage to other work, and which will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- C. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- E. Restore work with new Products in accordance with requirements of Contract Documents.

- F. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- G. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07840, to full thickness of the penetrated element.
- H. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- I. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections. Repair substrate prior to patching finish. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.06 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and rubbish from site periodically and dispose off-site.

3.07 PROTECTION OF INSTALLED WORK

- A. Protect installed work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

3.08 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.
- B. Testing, adjusting, and balancing HVAC systems: See Division 23 and Sections 01 4000 and 01 7500.

3.09 EXISTING SYSTEMS

- A. Examine and test existing building systems and utilities with components requiring relocation during performance of this work. Examples may include but are not limited to:

1. Mechanical Systems
 2. Plumbing Systems
 3. Electrical Systems, line voltage, low voltage, signal alarm, or data.
 4. Fiber-optic data or communication cabling systems.
- B. Remove or relocate these components while work is performed.
1. Fiber-optic data cabling systems are extremely fragile and subject to mechanical damage. Relocate these systems with great care. Do not disconnect or remove these systems, which must remain in place and in operation during the Work.
 - a. Restore these components to the former location upon completion of the Work.
 - b. Test systems under provisions of Section 01 7500 to confirm proper operation. Conduct tests in the presence of the Architect and Owner's Representative.
 - c. Perform remedial work as necessary to establish proper operation. Assume responsibility for proper operation of systems following completion of Work.

END OF SECTION

SECTION 01 8113
SUSTAINABLE DESIGN REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes general requirements and procedures for compliance with the California Code of Regulations, Title 24, Part 11 California Green Building Standards Code, "CAL-GREEN".
 - 1. Chapter 5- Non-Residential Mandatory Measures.
 - 2. Appendix A5 – Non-Residential Voluntary Measures.
- B. Project is also intended to achieve Collaborative for High-Performance Schools (CHPS) CA v2.0, "CHPS" rating as specified in the related section.
 - 1. CHPS-Designed (enter target point total CRB: 110/85 or Non-CRB 85/64)
 - 2. CHPS-Verified (enter target point total CRB: 110/85 or Non-CRB 85/64)
 - 3. CHPS-Verified Leader (enter target point total CRB: 160/135 or Non-CRB 135/114)
- C. Project is also intended to achieve USGBC Leadership in Energy and Environmental Design (LEED) v4.0/v4.1.
 - 1. New Construction – Schools
 - a. Certified (40-49 points)
 - b. Silver (50-59 points)
 - c. Gold (60-79 points)
 - d. Platinum (80-110 points)
- D. In the event that sustainability provisions conflict across specification sections, to protect the sustainability goals of the project, the most stringent shall govern. Document conflict and confirm the method of proceeding in writing with the Architect subject to administrative requirements provisions of this section.

1.02 RELATED REQUIREMENTS

- A. Pertinent sections specifying erosion control.
- B. Section 01 3329 - Sustainable Design Reporting and associated forms.
- C. Section 01 3546 - Construction Indoor Air Quality Management Planning and associated forms.
- D. Section 01 3566.05 - Project Sustainability Goal Credit Summary.
- E. Section 01 3566.12 - Sustainability Certification Project Procedures and associated forms.
- F. Section 01 5000 - Temporary Facilities and Controls and associated forms.

- G. Section 01 6116 - Volatile Organic Compound (VOC) Restrictions and associated forms.
- H. Section 01 7000 - Contract Closeout and associated forms.
- I. Section 01 7419 - Construction Waste Management and Disposal.
- J. Pertinent sections specifying commissioning.
- K. Pertinent sections for specifying demolition and/or deconstruction.
- L. Pertinent sections specifying landscape irrigation.

1.03 DEFINITIONS

- A. CAL-GREEN Definitions: Certain terms are defined by CAL-GREEN in Chapter 5 of the Code. Words and terms used in this section shall have the meanings shown therein.
- B. CHPS Definitions: Certain terms are defined by CHPS in the CHPS Manual. Refer to CHPS Manual for definitions.
- C. LEED Definitions: Certain terms are defined by LEED in the LEED Guidebook. Refer to LEED Guidebook for definitions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Respond to questions and requests from the Architect regarding CAL-GREEN measures, CHPS credits, or LEED credits that are the responsibility of the Contractor, that depend on product selection or product qualities, or that depend on the Contractor's procedures. Document responses as informational submittals.
- B. The contractor is to review the project-specific Energy Compliance (Title-24) Report and provide the verified and completed compliance documents as required by the California Energy Commission.
- C. Review the project's approved CAL-GREEN Checklist (form 403-C for DSA projects).
- D. Review the project's CHPS and/or LEED Checklist (included in the Project Manual).

1.05 INFORMATIONAL SUBMITTALS

- A. General: Submit Sustainability Submittals required by code and other Specification Sections. See Section 01 3300 - Submittals for additional submittal procedure requirements.
- B. Sustainability Submittals are in addition to other submittals. If the submitted item is identical to that submitted to comply with other requirements, submit duplicate copies as a separate submittal to verify compliance with indicated sustainability requirements.
- C. Acceptable verification submittals are specified in the related sections.
- D. Building Material Optimization Submittals: The scope of required documentation is specified in this section and in applicable individual specification sections. CHPS v2.0 and/or LEED v4 Product Data Submittals – Use the Sustainable Materials Submittal Cover Sheet from section 01 06100 Project Forms. The following documentation is required for products used on-site:

1. General: Submit third-party sustainability documentation where applicable:
 - a. Materials cost data:
 - 1) Each contractor providing a schedule of values must provide a total materials cost for all permanently installed construction materials including tax and shipping and excluding labor.
 - 2) Each product for which any sustainability documentation is submitted must include a complete Sustainable Materials Submittal Cover Sheet with the total cost of that material. Different materials may not be grouped under one cover sheet unless they have identical sustainability documentation.
 - 3) Receipt for the purchase of the materials with a notation clarifying any products that are excluded from the cost total provided on the submittal cover sheet.
2. Global Warming Potential (GWP) Data:
 - a. Lifecycle Assessment (LCA), product-specific and industry-wide as applicable
 - b. Environmental Product Declarations (EPDs), product-specific and industry-wide as applicable.
3. Material Sourcing Data: submit the dated manufacturer's sustainability documentation where applicable:
 - a. Extended Producer Responsibility Program.
 - b. Percentage of bio-based material content.
 - c. FSC certification of sawmill/manufacturing facility in good standing.
 - d. FSC chain of custody shown on purchasing receipts.
 - e. Recycled content:
 - 1) Percentage of post-consumer content.
 - 2) Percentage of pre-consumer/post-industrial content.
 - 3) Plant location (for aluminum, steel, and cementitious products).
 - 4) Heat number (for steel and aluminum products).
4. Material ingredient inventories, as applicable:
 - a. Health Product Declarations (HPDs)
 - b. Cradle to Cradle Certificates
 - c. Declare Labels
 - d. Other ingredient inventories

5. VOC emissions and content – for all wet-applied products applied on site.
 - a. VOC content in g/L or mg/L.
 - b. Applicable CARB 2007/SCAQMD 1113 or 1168 Category.
 - c. Total volume used on site.
 - d. VOC emissions and content – for all products
 - 1) VOC emissions testing certificate, documentation indicating that products comply with the testing and product requirements of the California Department of Public Health’s (formerly, the California Department of Health Services) “Standard Method for the testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers.”
 - 2) On-Site Application: Where odorous and/or high VOC emitting products are applied on-site, apply prior to installation of porous and fibrous materials. Where this is not possible, protect porous materials with polyethylene vapor retarders.
 - 3) Complete interior finish material installation no less than fourteen (14) days prior to Substantial Completion to allow for building flush out
6. Local Sourcing Data: Submit the manufacturer’s location data for sustainable products that also qualify for the local sourcing bonus. Local sourcing alone does not contribute to CHPS and/or LEED materials credits.
 - a. Names and addresses of all suppliers and extraction locations.
 - b. Map of all addresses and indicate those within a 100-mile radius of the construction site.

1.06 QUALITY ASSURANCE

- A. Environmental Project Management and Coordination: Contractor to identify one person on Contractor’s staff to be responsible for environmental issues compliance and coordination.
 1. Experience: Environmental project manager to have experience relating to sustainable building construction.
 2. Responsibilities: Carefully review Contract Documents for environmental issues, coordinate work of trades, subcontractors, and suppliers; instruct workers relating to environmental issues; and oversee Project Environmental Goals.
 3. Meetings: Discuss Environmental Goals at following meetings.
 - a. Pre-construction meeting.
 - b. Pre-installation meetings.
 - c. Regularly scheduled job-site meetings.
 - d. Special sustainability issues meetings.

PART 2 PRODUCTS

2.01 REQUIREMENTS - GENERAL

- A. Provide products and procedures necessary to confirm sustainability compliance required in this Section. Although other Sections may specify some sustainability requirements, the Contractor shall determine additional materials, techniques, means, methods, and procedures necessary to comply with such requirements.
- B. The omission of requirements for CAL-GREEN measures, CHPS credits, or LEED credits from other sections shall not be construed as an exemption from those requirements.

2.02 STORMWATER POLLUTION PREVENTION

- A. CAL-GREEN Section 5.106.1 (or 5.106.2 as applicable for projects disturbing more than 1 acre): Comply with requirements of this code section, local ordinances, General Conditions, Special Provisions, specifications, and related drawings delineating erosion control scope.
- B. CHPS Prerequisite SS P3.0 Erosion & Pollutant Control During Construction and Credit SS C3.1 Stormwater & Sedimentation Management: Comply with the requirements of this prerequisite and credit and related specifications and drawings regarding erosion control.
- C. LEED Prerequisite SSp1 Construction Activity Pollution Prevention: Comply with the requirements of this prerequisite and related specifications and drawings regarding erosion control.

2.03 OUTDOOR WATER USE

- A. CAL-GREEN Section 5.304.6: Outdoor Potable Water Use in Landscape Areas: Comply with requirements of this code section, local ordinances, and Division 32.
- B. CHPS Prerequisite WE P2.0 Outdoor Water Use Budget and Credit WE C2.1 Outdoor Water Use Reduction: Comply with the requirements of this prerequisite and credit, and Division 32.
- C. LEED Prerequisite WEp1 Outdoor Water Use Reduction and Credit WEc1 Outdoor Water Use Reduction: Comply with the requirements of this prerequisite and credit, and Division 32.

2.04 OUTDOOR MOISTURE MANAGEMENT

- A. CAL-GREEN Section 5.407 Water Resistance and Moisture Management: Comply with requirements of this code section, local ordinances, and related sections including sections addressing building envelope systems, landscape irrigation systems, flatwork, canopies and awnings, flashing, and grading. The omission of a related section shall not be interpreted as an exemption from a requirement that may apply.
- B. CHPS Prerequisite EQ P3.0 Outdoor Moisture Management: Comply with the requirements of this prerequisite and related sections.

2.05 CONSTRUCTION WASTE REDUCTION

- A. CAL-GREEN 5.408 Construction Waste Management, Diversion, and Recycling: Comply with requirements of this code section, local ordinances, and Section 01 7419. Produce a Construction Waste Management Plan that complies with Section 01 7419.

- B. CHPS Prerequisite MW P2.0 Construction Site Waste Management and Credit MW C2.1 Construction Site Waste Management: Comply with the requirements of this prerequisite and credit, and Section 01 7419. The Construction Waste Management Plan shall describe methods for meeting CHPS requirements.
- C. LEED Prerequisite MRp2 Construction and Demolition Waste Management Planning and Credit MRc5 Construction and Demolition Waste Management: Comply with the requirements of this prerequisite and credit, and Section 01 7419. The Construction Waste Management Plan shall describe methods for meeting LEED requirements.

2.06 LIFE CYCLE ASSESSMENT (LCA) AND EMBODIED CARBON REDUCTIONS

- A. CAL-GREEN Section 5.409 Life Cycle Assessment: Comply with the requirements of this code section, local ordinances, and related sections. Where exempt from CAL-GREEN
 - 1. Global Warming Potential (GWP): Where GWP limits are specified, provide product-specific Environmental Product Declaration (EPD) complying with the following:
 - a. Facility-specific manufacturer declaration, either for one manufacturing facility OR with separate Life Cycle Impact Assessment Results for each facility.
 - b. Includes description of product type that matches the product being submitted.
 - c. Developed according to the guidelines of the applicable Product Category Rule (PCR) acceptable under the BCCA, or if for a product type not listed under the BCCA, acceptable to the awarding authority.
 - d. Independently verified and in accordance with ISO 14025 with signature.
 - e. Valid at the time of material purchase and installation.
 - f. Shows GWP for scopes A1-A3 (cradle-to-gate scope).
 - g. Reported GWP is based on the Tool for Reduction and Assessment of Chemicals and Other Environmental Impacts (TRACI) 2.1 or the Intergovernmental Panel on Climate Change, IPCC AR5.
 - 2. EPD submittals shall also include quantity of material purchased and installed as well as any attic stock. The Units provided shall match the Declared Unit used in the corresponding EPD.

2.07 BUILDING MAINTENANCE AND OPERATION

- A. CAL-GREEN Section 5.410.4 Commissioning for new buildings less than 10,000 sf: Participate in commissioning, provide functional performance testing as required by these code sections, as specified in related sections, and according to the Commissioning Agent's Commissioning Plan, and participate in trainings and documentation for covered building systems.
- B. CAL-GREEN Section 5.410.2 Commissioning for new buildings of 10,000 sf or more: Participate in Commissioning and provide functional performance testing as required by these code sections, as specified in related sections, and according to the Commissioning Agent's Commissioning Plan, and participate in trainings and documentation for covered building systems.

- C. CHPS Prerequisite EE P2.0 Commissioning, Credit II C2.1 Enhanced Commissioning, and credit WE C3.1 Irrigation Systems Commissioning: Comply with the requirements of these prerequisites and credits, related sections, and the Commissioning Plan, and participate in trainings and documentation for covered building systems.
- D. LEED Prerequisites EAp1 Fundamental Commissioning and Verification and credit EAcl Enhanced Commissioning: Comply with the prerequisites of this prerequisite and credit, related sections and the commissioning plan, and participate in trainings and documentation for covered building systems.

2.08 POLLUTANT CONTROL

- A. CAL-GREEN Section 5.504.1,3 Temporary Ventilation and Covering of Duct Openings and Protection of Mechanical Equipment During Construction: Comply with requirements of these code sections, local ordinances, and Sections 01 3546 and 01 7000.
- B. CHPS Prerequisites SS P3.0 Erosion & Pollutant Control During Construction and credits SS C3.1 Stormwater & Sedimentation Management and EQ C4.1 Construction IAQ Management: Comply with the requirements of these prerequisites and credits and section 01 3546.
- C. LEED EQc3 Construction Indoor Air Quality Management Plan: Comply with the requirements of this credit and section 01 3546.
- D. CAL-GREEN Section 5.504.4 Finish Material Pollutant Control: All finish materials shall comply with the requirements of this code section, local ordinances, and Section 01 6116.
- E. CHPS Prerequisites EQ P2.0 Off-Gassing and EQ P6.0 Low Emitting Materials and credit EQ C6.1 Additional Low Emitting Materials: Comply with the requirements of these prerequisites and credits and section 01 6116. Provide product data as required for covered materials.
- F. LEED EQc2 Low Emitting Materials: Comply with the requirements of this credit and section 01 6116. Provide product data as required for covered materials.
- G. CAL-GREEN Section 5.504.5 Filters: Comply with the requirements of this code section, local ordinances, Section 01 3546 and 01 7000, and related sections.
- H. CHPS Credit EQ C4.1 Construction IAQ Management: Comply with the requirements of this credit and section 01 3546.
- I. LEED EQc3 Construction Indoor Air Quality Management Plan: Comply with the requirements of this credit and section 01 3546.
- J. CAL-GREEN Section 5.504.7 Environmental Tobacco Smoke Control: Comply with the requirements of this code section, local ordinance, and related sections.
- K. LEED EQp2 Environmental Tobacco Smoke Control: Comply with the requirements of this credit.

2.09 BUILDING MATERIAL OPTIMIZATION

- A. CHPS Credits EQ C7.1 Material Health Disclosures, MW C3.1 Certified Wood & Recycled Content and MW C5.1 Environmental Product Declarations: Comply with the requirements of these credits. Provide product data including materials cost as required for covered materials.

- B. LEED Credits MRc2, 3 and 4. Building Product Disclosure and Optimization and EQc2 Low Emitting: Comply with the requirements of these credits. Provide product data including material costs as required for covered materials.

PART 3 EXECUTION

3.01 GENERAL

- A. Comply with Section 01 3546 - Construction Indoor Air Quality Management Planning.
- B. Comply with Section 01 6116 - Volatile Organic Compound (VOC) Restrictions.
- C. Comply with Section 01 7000 - Contract Closeout.
- D. Comply with Section 01 7419 - Construction Waste Management and Disposal.
- E. Comply with execution requirements of related sections and applicable local codes and ordinances.

END OF SECTION

SECTION 03 1000

CONCRETE FORMING AND ACCESSORIES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: All labor, materials and equipment and all operations required to complete all formwork as indicated on the drawings; to produce shapes and configurations as shown, as required; and as specified herein, including:
 - 1. Forms, shores, bracing, removal and other operations as necessary for all cast-in-place concrete placed.
 - 2. Setting and securing anchor bolts and other metal items embedded in concrete into formwork, using materials and layouts furnished and delivered to jobsite as specified under other sections.
- B. Related Sections:
 - 1. Pertinent Sections of Division 03 specifying concrete construction.
 - 2. Pertinent Sections of other Divisions specifying work to be embedded in concrete or work penetrating concrete foundations and formwork.

1.02 REFERENCES

- A. California Code of Regulations, Title 24, latest adopted edition (herein noted as CBC): Chapter 19A Concrete.
- B. American Concrete Institute (ACI) PRC-347 "Guide to Formwork for Concrete".
- C. American Plywood Association (APA) "Concrete Forming Guide".
- D. West Coast Lumberman Inspection Bureau (WCLIB) "Standard Grading Rules for West Coast Lumber".
- E. ACI MNL-066 "ACI Detailing Manual".
- F. ACI SPEC-301 "Specifications for Concrete Construction".
- G. Concrete Reinforcing Steel Institute (CRSI) "Manual of Standard Practice".

1.03 DESIGN REQUIREMENTS

- A. Design, engineer, and construct formwork, shoring and bracing to conform to design and code requirements, resist imposed loads; resultant concrete to conform to required shape, line and dimension.

1.04 SUBMITTALS

- A. Limitation of review: Structural Engineer's review will be required only where specifically requested for general architectural applications and features only. Contractor is responsible for structural stability, load-resisting characteristics and sufficiency of form work design.

1.05 QUALITY ASSURANCE

- A. General: All form materials shall be new at start of work. Produce high quality concrete construction. Minimize defects due to joints, deflection of forms, roughness of forms, nonconforming materials, concrete or workmanship.
- B. Reuse of Forms: Plywood forms may be reused, if thoroughly cleaned of all dirt, mortar, and foreign materials, and undamaged at edges and contact face. Reuse shall be subject to permission from the Architect without exception, and issued in writing. Reuse of any panel which will produce a blemish on exposed concrete, will not be permitted.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Form Materials:
 - 1. Non-Exposed Surface Formwork Facing: Forms for concrete which is not exposed to view, may be of plywood as specified for exposed surfaces, or square edge 1x nominal Douglas Fir, Construction Grade, S4S.
 - 2. Exposed Surface Formwork Facing:
 - a. Forms for all exterior and interior concrete flat surfaces unless otherwise specified as board formed shall be new Douglas Fir Plywood (APA) ply, 5/8-inch, B-B Plyform, Class 1, Exterior Type, oiled and edged and edge-sealed conforming to U.S. Product Standard PS 1 in large sheet sizes to achieve joint patterns shown.
 - b. All exposed concrete edges shall be chamfered 3/4" minimum or as noted on the drawings.
- B. Earth Forms: Allowed, subject to soil standing in excavations without ravel or caving.
- C. Form Release Agent: Spray-on compound, not affecting color, bond or subsequent treatment of concrete surfaces. Maximum VOC content shall comply with local requirements and California Green Building Code.
- D. Accessories: Types recommended by manufacturers or referenced standards to suit conditions indicated;
 - 1. Anchors, spacers, void in-fill materials: sized to resist imposed loads.
 - 2. Form Ties: Prefabricated rod, flat band, or wire snap ties with 1" break-back or threaded internal disconnecting type with external holding devices of adequate bearing area. Ties shall permit tightening and spreading of forms and leave no metal closer than 1" to surface.
- E. Corner Chamfers and Rustications: Filleted, wood strip or foam type; sizes and shapes as detailed, or 3/4 x 3/4 inch size minimum if not detailed; maximum possible lengths.
- F. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Inspect the substrate and the conditions under which concrete formwork is to be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected. Commencement of work indicates acceptance of substrates and conditions.
- B. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.02 EARTH FORMS

- A. If natural soil or compacted fill can be accurately cut and maintained, foundations and grade beams may be poured against earth without forming. Provide positive protection of trench top corners.
- B. Maintain earth forms free of water and foreign materials.

3.03 ERECTION – FORMWORK

- A. General: Construct formwork in accordance with calculations, and recommendations of ACI PRC-347. Construct forms to the sizes, shapes, lines and dimensions shown, and as required to obtain accurate alignment, location, grades, level and plumb work in finished structure. Provide for openings, offsets,

sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required. Use selected materials to obtain required finishes.

1. Schedule the work and notify other trades in ample time so that provisions for their work in the formwork can be made without delaying progress of the project. Install all sleeves, pipes, etc. for building services systems, or other work. Secure information about and provide for all openings, offsets, recessed nailing blocks, channel chases, anchors, ties, inserts, etc. in the formwork before concrete placement.
 2. Deflection: Formwork and concrete with excessive deflection after concrete placement will be rejected. Excessive deflection is that which will produce visible and noticeable waves in the finished concrete.
- B. Formwork Construction: Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI SPEC-301. Uniform, substantial and sufficiently tight to prevent leakage of concrete paste, readily removable without impact, shock or damage to cast-in-place concrete surfaces and adjacent materials. Tie, brace, shore, and support to insure stability against pressures from any source, without failure of any component part and without excessive deflection. Solidly butt joints and provide backup material at joints as required to prevent leakage and fins.
- C. Provide all openings, offsets, inserts, anchorages, blocking, and other features of the work as shown or required. See INSERTS, EMBEDDED PARTS, AND OPENINGS for detailed requirements.
- D. Warped, checked, or scuffed forms will be rejected.
- E. Maintain membranes, reinforcing and other work free of damage; protect with plywood runway boards or other positive, durable means.
- F. Align joints and make watertight. Keep form joints to a minimum.
- G. Provide fillet and chamfer strips on external corners of exposed locations and as indicated to form patterns in finished work. Extend patterns around corners and into alcoves, on backs of columns and similar locations not otherwise shown.
1. Produce beveled, smooth, solid, unbroken lines, except as otherwise indicated to conform to patterns.
 2. Form corners and chamfers with 3/4 inch x 3/4 inch strips, unless otherwise indicated, accurately formed and surfaced to produce uniformly straight lines and tight edge joints. Extend terminal edges to required limit and miter chamfer at changes in direction.
- H. Unexposed corners may be formed either square or chamfered.
- I. Ties and Spreaders: Arrange in a pattern acceptable to the Architect when exposed. Snap-ties may be used except at joints between pours where threaded internal disconnecting type shall be used.
- J. Coordinate this section with other sections of work that require attachment of components to formwork.

3.04 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
- B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.
- C. Do not allow excess form coating material to accumulate in the forms or to come into contact with reinforcement or surfaces which will be bonded to fresh concrete.
- D. Leave no residue or stain on the face of the concrete, nor affect bonding of subsequent finishes or work specified in other sections.

3.05 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for items to be embedded in passing through concrete work.

1. Provide openings in concrete formwork to accommodate work of other sections including those under separate contracts (if any). Size and location of openings, recesses and chases shall be in accordance with the section requiring such items. Accurately place and securely support items to be built into forms.
- B. Construction Joints: Construct and locate generally as indicated on Drawings and only at locations approved by Structural Engineer, so as not to impair the strength of the structure. Form keys in all cold joints shown or required.
- C. Locate and set in place items that will be cast directly into concrete.
- D. Rough Hardware and Miscellaneous Metal: Set inserts, sleeves, bolts, anchors, angles, and other items to be embedded in concrete. Set embedded bolts and sleeves for equipment to template and approved shop drawings prepared by trades supplying equipment.
- E. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other work.
- F. Wood Inserts and Nailers: Provide approved preservative-treated lumber. Set all required nailing blocks, grounds, and other inserts as required to produce results shown. Wood plugs shall not be used.
- G. Install accessories in accordance with manufacturer's instructions, so they are straight, level, and plumb. Ensure items are not disturbed during concrete placement.
- H. Piping: Do not embed piping in structural concrete unless locations specifically approved by Structural Engineer.
- I. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain.
 1. Provide openings for the introduction of vibrators at intervals necessary for proper placement.
 2. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted so joints will not be apparent in exposed concrete surfaces.
- J. Install waterstops in accordance with manufacturer's recommendations to provide continuous waterproof barrier.

3.06 FORM CLEANING

- A. Clean forms as erection proceeds, remove foreign matter within forms.
- B. Clean formed cavities of debris prior to placing concrete.
 1. Remove all dirt, chips, sawdust, rubbish, water and foreign materials detrimental to concrete.
 2. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.

3.07 FOOTINGS

- A. Verify elevations and provide final excavation required for footings prior to placing of concrete.

3.08 SUPPORT STAKES

- A. Where required to support formwork, steel stakes located within the concrete placement area shall be sleeved with PVC pipe of as small of size practical to fit the stake. Sleeves shall be filled with grout after removal of stake. Such stakes shall be located no closer than 48 inches on center each way.
- B. Wood stakes shall not be used within the area of concrete placement.

3.09 FORMWORK TOLERANCES

- A. Construct formwork to maintain tolerances required by ACI SPEC-301.

3.10 FIELD QUALITY CONTROL

- A. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and to verify that supports, fastenings, wedges, ties, and items are secure.
- B. Do not reuse wood formwork more than 2 times for concrete surfaces to be exposed to view. Do not patch formwork.
- C. Clean and repair surfaces to be re-used in the work. Split, frayed, delaminated or otherwise damaged form facing material will not be acceptable. Apply new form coating compound material to concrete contact surfaces as specified for new formwork.
- D. When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close all joints. Align and secure joints to avoid offsets.

3.11 FORM REMOVAL

- A. Do not loosen or remove forms before minimum curing period has elapsed without employment of appropriate alternate curing methods, approved by the Architect in writing.
- B. Do not remove forms until the concrete has hardened sufficiently to permit safe removal and the concrete has attained sufficient strength to safely support imposed loads. The minimum elapsed time for removal of forms after concrete has been placed shall be as follows:
Footings: 7 days minimum. If backfilled immediately, side forms may be removed 24 hours after concrete is placed.
- C. Durations listed above are minimums and are subject to extension at the sole judgment of the Architect/Engineer.
- D. Do not subject concrete to superimposed loads (structure or construction) until it has attained full specified design strength, nor for a period of at least 14 days after placing.
- E. Store removed forms to prevent damage to form materials or to fresh concrete. Discard damaged forms.

3.12 CLEANING

- A. Remove excess material and debris associated with this work from the job site.

END OF SECTION

SECTION 03 2000

CONCRETE REINFORCING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Reinforcing steel work for all concrete and masonry work as indicated on the drawings and specified herein.
 - 2. Coordinate this work with other work affected by these operations, such as forms, electrical work, mechanical work, structural steel, masonry and concrete.
- B. Related Sections:
 - 1. Pertinent Sections of Division 01 specifying Quality Control and Testing Laboratory services.
 - 2. Pertinent Sections of Divisions 03 specifying concrete construction.
 - 3. Pertinent Sections of other Divisions specifying work to be embedded in concrete or work penetrating concrete work.

1.02 REFERENCE STANDARDS

- A. California Code of Regulations, Title 24, latest adopted edition (herein noted as CBC) Chapter 19A Concrete.
- B. American Concrete Institute (ACI) SPEC-301 "Specifications for Concrete Construction".
- C. ACI CODE-318 "Building Code Requirements for Structural Concrete and Commentary".
- D. ACI MNL-066 "ACI Detailing Manual".
- E. ASTM A615 "Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement".
- F. ASTM A706 "Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement".
- G. Concrete Reinforcing Steel Institute (CRSI) "Manual of Standard Practice".

1.03 SUBMITTALS

- A. Submit in accordance with pertinent sections of Division 01 specifying submittal procedures. Submit for review prior to fabrication.
- B. Limitation of Review: Structural Engineer's review will be for general conformance with design intent as indicated in the Contract Documents and does not relieve Contractor of full responsibility for conformance with the Contract Documents. The General Contractor shall review and approve shop drawings prior to submittal to the Architect/Engineer.
- C. Shop Drawings: Show complete fabrication and placing details of all reinforcing steel. Comply with requirements of ACI MNL-66. Include:
 - 1. Bar sizes and schedules;
 - 2. Shapes of bent bars, layout and spacing of bars, location of splices.
 - 3. Stirrup spacing, arrangements and assemblies.
 - 4. References to Contract Document detail numbers and designations.
- D. Product Data: Submit manufacturer's product data, specifications, location and installation instructions for proprietary materials and reinforcement accessories. Provide samples of these items upon request.

- E. Certificates: Submit all certifications of physical and chemical properties of steel for each heat number as manufactured, including location of material in structure as specified below in Article titled QUALITY ASSURANCE. All materials supplied shall be tagged with heat numbers matching submitted Mill Test Report analyses.
- F. Samples: Provide to the Owner's Testing laboratory as specified in Article SOURCE QUALITY CONTROL.

1.04 QUALITY ASSURANCE

- A. Perform work of this Section in accordance with CRSI DA4, CRSI P1, ACI SPEC-301, and ACI CODE-318.
- B. Requirements of Regulatory Agencies, refer to pertinent Sections of Division 01 and CBC.
- C. Certification and Identification of Materials and Uses: Provide Owner's Testing Agency with access to fabrication plant to facilitate inspection of reinforcement. Provide notification of commencement and duration of shop fabrication in sufficient time to allow inspection and all material identification/test information listed below.
 - 1. Provide manufacturer's Mill Test Reports for all materials. Include chemical and physical properties of the material for each heat number manufactured. Tag all fabricated materials with heat number.
 - 2. Provide letter certifying all materials supplied are from heat numbers covered by supplied mill certificates. Include in letter the physical location of each grade of reinforcing and/or heat number in the project (i.e. foundations, walls, etc.).
 - 3. Unidentified Material Tests: Where identification of materials by heat number to mill tests cannot be made, Owner's Testing Agency shall test unidentified materials as described below.
- D. Testing and Inspection: Tests and Inspections required by Independent Testing Agency are specified below in Articles SOURCE QUALITY CONTROL and FIELD QUALITY CONTROL. Duties and limitations of Independent Testing Agency, test costs and test reports in conformance with pertinent Sections of Division 01.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Comply with pertinent requirements of Division 01.
- B. Deliver reinforcement to project site in bundles marked with durable tags indicating heat number, mill, bar size and length, proposed location in the structure and other information corresponding with markings shown on placement diagrams.
- C. Handle and store materials above ground to prevent damage, contamination or accumulation of dirt or rust.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Reinforcing Steel: Deformed billet steel bars, ASTM A706 Grade 60 or ASTM A615 Grade 60.
 - 1. All reinforcement to be unfinished.
- B. Tie Wire: No. 16 AWG or heavier, black annealed.
- C. Concrete Blocks: On-grade conditions only, as required to support reinforcing bars in position.
- D. Reinforcing Supports: Plastic or galvanized steel chairs, bolsters, bar supports, or spacers sized and shaped for adequate support of reinforcement and construction loads imposed during concrete placement, meeting ACI and CRSI standards.

2.02 FABRICATION

- A. Fabricate concrete reinforcing in accordance with CRSI (DA4), unless specifically shown otherwise. Details not specifically shown or indicated shall conform to SP-066 and specified codes and standards.
 - 1. Accurately shop-fabricate to shapes, bends, sizes, gauges and lengths indicated or otherwise required.
 - 2. Bend bars once only. Discard bars improperly bent due to fabricating or other errors and provide new material; do not re-bend or straighten unless specifically indicated. Rebending of reinforcement in the field is not allowed.
 - 3. Do not bend reinforcement in a manner that will injure or weaken the material or the embedding concrete.
 - 4. Do not heat reinforcement for bending. Heat-bent materials will be rejected.
- B. Unacceptable materials: Reinforcement with any of the following defects will not be permitted in the work.
 - 1. Bar lengths, depths and bends exceeding specified fabrication tolerances.
 - 2. Bends or kinks not indicated on Drawings or final shop drawings.
 - 3. Bars with reduced cross-section due to rusting or other cause.
- C. Tag reinforcement with durable identification to facilitate sorting and placing.

2.03 SOURCE QUALITY CONTROL

- A. The Testing Agency, as specified in the Article QUALITY ASSURANCE, will perform the following:
 - 1. Sampling and Tests of Reinforcing Bars per CBC 1910A.2.
 - 2. Material Testing:
 - a. Identified Steel: When samples are taken from bundled steel identified by heat number, matched with accompanying mill analyses as delivered from the mill, Owner's Testing Agency will perform one tensile test and one bend test per each ten tons or fraction thereof for each required size of reinforcing steel.
 - b. Unidentified Steel: When identification of materials by heat number matched to accompanying mill analyses cannot be made, perform one tensile test and one bend test per each two and one-half tons or fraction thereof for each required size of reinforcing steel. Tests of unidentified steel shall be performed by the Owner's Testing Agency and costs for these tests shall be paid by the Contractor by deductive change order.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspect the conditions under which concrete reinforcement is to be placed. Do not proceed with the work until unsatisfactory conditions have been corrected.
- B. Coordinate with work of other sections to avoid conflicts or interference. Bring conflicts between reinforcement and other elements to Architect's attention. Resolve conflicts before concrete is placed.
- C. Notify Architect, Structural Engineer, and Authority Having Jurisdiction for review of steel placement not less than 48 hours before placing concrete.

3.02 PLACEMENT

- A. General: Comply with the specified codes and standards, and Concrete Reinforcing Steel Institute recommended practice for "Placing Reinforcing Bars", for details and methods of reinforcement placement and supports, and as herein specified.
- B. Clean bars free of substances which are detrimental to bonding. Maintain reinforcement clean until embedded in concrete.

- C. Place reinforcement to obtain the minimum coverages for concrete protection. Do not deviate from required position. Maintain required distance, spacing and clearance between bars, forms, and ground.
- D. Location and Support: Provide metal chairs, runners, bolsters, spacers and hangers, as required.
- E. Provide additional steel reinforcement as necessary or as directed, to act as spreaders or separators to maintain proper positioning.
- F. Tying and Attachment: Securely tie at all intersections and supports with wire. Prevent dislocation or movement during placement of concrete. Direct twisted ends of wire ties away from exposed concrete surfaces.
- G. Separate reinforcing from pipes or conduits with approved non-metallic separators. Do not use wood or steel form stakes or reinforcement used as stakes as support for reinforcement.
- H. Accommodate placement of formed openings required by other sections.
- I. Obstructions:
 - 1. Where obstructions, block-outs, or penetrations (conduits, raceways, ductwork) prevent continuous placement of reinforcement as indicated, provide additional reinforcing as detailed and as directed by the Structural Engineer to supplement the indicated reinforcement around the obstruction.
 - 2. Place additional trim bars, ties, stirrups, or other elements as detailed and as directed at all opening, sleeves, pipes or other penetrations through structural elements.

3.03 REINFORCING SPACING AND COVERAGE

- A. Spacing: Do not space bars closer than four (4) diameters of the largest of two adjacent bars, except at bar laps, which shall be placed such that a minimum of 2 bar diameters is clear between bars.
- B. Where reinforcing in members is placed in two layers, the distance between layers shall not be less than four bar diameters of the largest bar and the bars in the upper layers shall be placed directly above those in the bottom layer, unless otherwise detailed or dimensioned.
- C. Coverage of bars (including stirrups and columns ties) shall be as follows, unless otherwise shown:
 - 1. Concrete cast against earth or grade: 3 inches.
 - 2. Concrete exposed to weather or formed and exposed to earth:
 - a. #5 & smaller: 1-1/2 inches.
 - b. #6 & larger: 2 inches.
 - 3. Concrete not exposed to earth or weather:
 - a. #5 & smaller: 1 inch.
 - b. #6 & larger: 1-1/2 inches.

3.04 DOWELS, SPLICES, OFFSETS AND BENDS

- A. Provide standard reinforcement splices at splices, corners, and intersections by lapping ends, placing bars in contact, and tightly tying with wire at each end. Comply with details shown on structural drawings and requirements of ACI CODE-318.
- B. Provide minimum 1-1/2 inch clearance between sets of splices. Stagger splices in horizontal bars so that adjacent splices will be 4 feet apart.
- C. Splices of reinforcement shall not be made at points of maximum stress. Provide splice lengths as noted on the structural drawings, with sufficient lap to transfer the stress between bars by bond and shear.
- D. Spacing:
 - 1. Space bars minimum distance specified and all lapped bars 2 bar diameters (minimum) clear of the next bar.

2. Stagger splices of adjacent bars where possible and where required to maintain bar clearance.
 3. Request Architect/Engineer review prior to placement for all splices not shown on the drawings.
- E. Reinforcement Couplers: Install at all locations indicated. Install couplers in accordance with manufacturer's recommendations.

3.05 MISPLACED REINFORCEMENT

- A. Notify Architect/Engineer immediately if reinforcing bars are known to be misplaced after concrete has been placed.
- B. Perform no correction or cutting without specific direction. Do not bend or kink misplaced bars.
- C. Correct misplaced reinforcing only as directed in writing by the Architect/Engineer. Bear all costs of redesign, new, or additional reinforcing required because of misplaced bars at Contractor's expense.

3.06 FIELD QUALITY CONTROL

- A. The Testing Agency as specified in the Article QUALITY ASSURANCE, will inspect the work for conformance to contract documents before concrete placement.
 1. Inspection: Provide inspection and verification of installed reinforcement. Confirm that the surface of the rebar is free of form release oil or other coatings.
 2. Inspect all preheat and welding activities for steel reinforcement, when these occur.
 3. Exception: Non-structural patios, driveways, and sidewalks do not require special inspection.

3.07 CLEANING

- A. Remove excess material and debris associated with this work from the job site.

END OF SECTION

SECTION 03 3000

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Provide all labor, materials, equipment and services to complete all concrete work required, including, but not limited to, the following:
 - 1. Foundations, slabs-on-ground.
 - 2. Installation of all bolts, inserts, sleeves, connections, etc. in the concrete.
 - 3. Joint devices associated with concrete work.
 - 4. Miscellaneous concrete elements, including, but not limited to: equipment pads, light pole bases, flagpole bases, thrust blocks, and manholes.
 - 5. Concrete curing.
 - 6. Coordination with other sections:
 - a. Make all preparations and do all work necessary to receive or adjoin other work. Install all bolts and anchors, including those furnished by other sections, into formwork and provide all required blocking.
 - b. Install all accessories embedded in the concrete and provide all holes, blockouts and similar provisions necessary for the work of other sections. Provide all patching or cutting made necessary by failure or delay in complying with this requirement at the Contractor's expense.
 - c. Coordinate with other sections for the accurate location of embedded accessories.
- B. Related Sections:
 - 1. Pertinent Sections of Division 01 specifying Quality Control and Testing Laboratory services.
 - 2. Pertinent Sections of Division 03 specifying concrete construction.
 - 3. Pertinent Sections of other Divisions specifying work to be embedded in concrete or work penetrating concrete.

1.02 REFERENCES

- A. California Code of Regulations, Title 24, latest adopted edition (herein noted as CBC) Chapter 19A Concrete.
- B. American Concrete Institute (ACI) PRC-211.1 "Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete"
- C.
- D. ACI SPEC-301 "Specifications for Concrete Construction".
- E. ACI PRC-302.1 "Guide for Concrete Floor and Slab Construction".
- F. ACI PRC-304 "Guide for Measuring, Mixing, Transporting, and Placing Concrete".
- G. ACI SPEC-305.1 "Specification for Hot Weather Concreting".
- H. ACI SPEC-306.1 "Standard Specification for Cold Weather Concreting".
- I. ACI SPEC-308.1 "Specification for Curing Concrete".
- J. ACI CODE-318 "Building Code Requirements for Structural Concrete and Commentary".

1.03 SUBMITTALS

- A. Submit in accordance with pertinent sections of Division 01 specifying submittal procedures. The General Contractor shall review and approve shop drawings prior to submittal to the Architect/Engineer. Submittals that do not meet these requirements will be returned for correction without review. Submit for review prior to fabrication.
- B. Limitation of Review: Structural Engineer's review will be for general conformance with design intent as indicated in the Contract Documents and does not relieve Contractor of full responsibility for conformance with the Contract Documents.
- C. Product Data: Submit manufacturers' data on manufactured products and other concrete related materials such as bond breakers, cure/sealer, admixtures, etc. Demonstrate compliance with specified characteristics. Provide samples of items upon request. Submit material certificates for concrete aggregates and cementitious materials. Certificates shall show compliance to applicable ASTM's, the CBC, and additional requirements stated herein.
- D. Mix Designs: Submit Mix Designs for each structural concrete type required for work per requirements of articles CONCRETE MIXES and QUALITY ASSURANCE. Resubmit revised designs for review if original designs are adjusted or changed for any reason. Non-Structural mixes need not be submitted for review by Structural Engineer.
- E. Shop Drawings: Proposed location of construction and cold joints. Proposed location of all slab construction/dowel joints, control joints, and blockouts.
- F. Manufacturer's Installation Instructions: Indicate installation procedures and interface required with adjacent construction for concrete accessories.
- G. Batch Plant Ticket: Include with delivery of each load of concrete. Provide ticket to the Testing Agency and the Architect/Engineer as separate submittals. Concrete delivered to the site without such ticket shall be rejected and returned to the plant. Each ticket shall include all information specified in Article SOURCE QUALITY CONTROL below.
- H. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.

1.04 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI SPEC-301 and ACI CODE-318.
- B. Concrete construction verification and inspection to conform to CBC 1705A.3.
- C. Common Sourcing: Provide each of the following materials from consistent sources for entire project.
 - 1. Cement.
 - 2. Fly ash.
 - 3. Aggregate.
 - 4. Slag Cement.
- D. Follow requirements of ACI SPEC-305.1 when concreting during hot weather. Follow requirements of ACI SPEC-306.1 when concreting during cold weather.
- E. Services by the Independent Testing Agency (includes "Special" Inspections) as specified in this Section and as follows:
 - 1. Perform tests and inspections specified below in articles SOURCE QUALITY CONTROL and FIELD QUALITY CONTROL. Duties and limitations of Independent Testing Agency, test costs and reports to be in conformance with pertinent Sections of Division 01.
- F. Contractor shall bear the entire cost of remediation, removal, and/or replacement of concrete determined defective or non-conforming, including Architect/Engineer fees for redesign.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Materials specified by brand name shall be delivered in unbroken packages bearing manufacturer's label and shall be brand specified or an approved equal.
- B. Delivery, Handling and Storage of other materials shall conform to the applicable sections of the current editions of the various reference standards listed in this Section.
- C. Protect materials from weather or other damage. Sort to prevent inclusion of foreign materials.
- D. Specific Requirements:
 - 1. Cement: Protect against dampness, contamination, and warehouse set. Store in weather tight enclosures.
 - 2. Aggregates: Prevent excessive segregation, or contamination with other materials or other sizes of aggregates. Use only one supply source for each aggregate stock pile.
 - 3. Admixtures:
 - a. Store to prevent contamination, evaporation, or damage.
 - b. Protect liquid admixtures from freezing and extreme temperature ranges.
 - c. Agitate emulsions prior to use.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Cold Weather (Freezing or near-freezing temperatures) per ACI SPEC-306.1:
 - 1. Heat concrete materials before mixing, as necessary to deposit concrete at a temperature of at least 50°F but not more than 90°F.
 - 2. Do not place concrete during freezing, near-freezing weather, snow, rain or sleet unless protection from moisture and/or cold is provided.
 - 3. Protect from freezing and maintain at a temperature of at least 50°F for not less than seven days after placing. Take special precautions to protect transit-mixed concrete.
 - 4. No salts, chemical protection or admixture are permitted without written approval of Architect/Engineer.
 - 5. Contractor shall maintain an air temperature log for the first 7 days after placement with entry intervals not to exceed 8 hours.
- B. Hot Weather per ACI SPEC-305.1:
 - 1. Cool concrete materials before mixing, or add ice in lieu of mix water as necessary to deposit concrete at a temperature below 85°F.
 - 2. Do not place concrete in hot/windy weather without Architect/ Engineer review of procedures.
 - 3. Provide sunshades and/or wind breakers to protect concrete during finishing and immediate curing operations. Do not place concrete at air temperature exceeding 90°F.
 - 4. Provide modified mix designs, adding retarders to improve initial set times and applying evaporation reducers during hot/windy weather for review by Independent Testing Agency prior to use.

1.07 SCHEDULING AND SEQUENCING

- A. Organize the work and employ shop and field crew(s) of sufficient size to minimize inspections by the Testing Agency.
- B. Provide schedule and sequence information to Testing Agency in writing upon request. Update information as work progresses.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Comply with requirements of Section 03 1000.

2.02 REINFORCEMENT

- A. Comply with requirements of Section 03 2000.

2.03 MATERIALS

- A. General Requirements: All materials shall be new and best of their class or kind. All materials found defective, unsuitable, or not as specified, will be condemned and promptly removed from the premises.
- B. Cementitious Materials:
1. Portland Cement: ASTM C150, Type II, low alkali.
 2. Fly Ash (Pozzolan): ASTM C618, Class F.
 3. Slag Cement: ASTM C989, Grade 100 or 120.
- C. Concrete Aggregates:
1. Coarse and Fine Aggregates: ASTM C33; Stone aggregate and sand. Specific source aggregate and/or sand or shrinkage characteristics as required for class of concrete specified.
 - 2.
 3. Source shall remain constant throughout the duration of the job. The exact portions of the fine aggregates and coarse aggregates to be used in the mix shall be determined by the mix design.
 4. Recycled concrete products: Returned plastic concrete may not be used in a mix. Recycled Concrete Aggregate (RCA) is not permitted. Reclaimed coarse aggregate is permitted and shall comply with ASTM C33. Reclaimed fine aggregate is not permitted.
- D. Water: ASTM C1602. Potable, clean, from domestic source.
- E. Admixtures: All admixtures shall be used in strict accordance with the manufacturer's recommendations. Admixtures containing calcium chlorides or other accelerators shall not be used without the approval of the Architect/Engineer and the Owner's Testing Laboratory.
1. Normal or Mid Range Water Reducing Admixtures: ASTM C494 Type A, "MasterPozzolith" series or "MasterPolyheed" series by Master Builders Solutions, "WRDA" series by W.R. Grace, or equal.
 2. Water Reducing Admixture and Retarder: ASTM C494 Type B or D, "MasterSet R" series or "MasterSet DELVO" series by Master Builders Solutions, "Plastiflow-R" by Nox-crete, or equal.
 3. High Range Water-Reducing Admixtures: ASTM C494 Type F, "MasterRheoBuild 1000" or "MasterGlenium" series by Master Builders Solutions or equal.
 4. Air Entraining Admixtures: ASTM C260, "MasterAir" series by Master Builders Solutions or equal.
 5. Viscosity Modifiers: ASTM C494 Type S.
- F. Slurry: Same proportion of cement to fine aggregates used in the regular concrete mix (i.e. only coarse aggregate omitted); well mixed with water to produce a thick consistency.
- G. High Strength Grout: See section 05 1100 for requirements.
- H. Dry Pack: Dry pack (used only for cosmetic concrete repairs) shall consist of:
1. One part cement to 2-1/2 parts fine aggregate (screen out all materials retained on No.4 sieve), mixed with a minimum amount of water, added in small amounts.
 2. Mix to consistency such that a ball of the mixture compressed in the hand will retain its shape, showing finger marks, but without showing any surface water.

2.04 ACCESSORIES

- A. Bonding Agent: ASTM C881, Type II Grade 2 Class B or C. Do not allow epoxy to set before placing fresh concrete.
1. "MasterEmaco ADH 326" by Master Builders Solutions;

2. “Rezi-Weld 1000” by W.R. Meadows.
- B. Chemical Hardener: Fluorosilicate solution designed for densification of cured concrete slabs. “MasterKure HD 300 WB” by Master Builders Solutions, “LIQUI-HARD” W.R. Meadows Co, or equal.
- C. Moisture-Retaining Cover: ASTM C171, type 1, one of the following;
 1. Regular Curing Paper, Type I, reinforced waterproof: Fortifiber Corporation “Orange Label Sisalkraft”, “Pabcotite” paper, or equal.
 2. Polyethylene Film: ASTM D 2103, 4 mil thick, clear or white color.
 3. White-burlap-polyethylene sheet, weighing not less than 10 oz/per linear yd.
- D. Liquid Curing Compound: ASTM C 309, Type 1, Class B, clear or translucent, 25% minimum solids, water base acrylic cure/sealer which will not discolor concrete and compatible with bonding of finishes specified in related sections. W.R. Meadows Co. “Vocomp 25” or equal. Maximum VOC content shall comply with local requirements and California Green Building Code.
- E. Evaporation Reducer: “MasterKure ER 50”, by Master Builders Solutions.
- F. Permeability Reducer: Use only where specifically referred to.
 1. ASTM C494 Type S.
 2. Admixture Type: Xypex Chemical Corporation “XYPEX Admix C-500” or Master Builders Solutions “MasterLife 300” series. Dosage: per manufacturer.
 3. Surface-Applied Type: Xypex Chemical Corporation “XYPEX Concentrate. Brush application: 1.25-1.50lb/sq. yd., 5 parts powder to 2 parts water. Master Builders Solutions “MasterSeal 500”. Slurry coat: one part water to 2.25-2.5 parts powder by volume.
 4. Approved equal.

2.05 JOINT DEVICES AND MATERIALS

- A. Waterstops: Resilient type, meeting Corps of Engineers CRD-C 572. Consult manufacturer for appropriate product for specific use. Submit for review. Install per manufacturers recommendation. Provide W. R. Meadows “Seal Tight” PVC waterstop, Sika “Greenstreak” PVC waterstop, or approved equal.
- B. Expansion Joint Filler: ASTM D1751, Nonextruding, resilient asphalt impregnated fiberboard or felt, 3/8 inch thick and 4 inches deep; tongue and groove profile.
 1. Products: “Serviced Products”, W.R. Meadows, Inc., “National Expansion Joint Company”, “Celotex Corporation”, or equal.
- C. Joint Filler: ASTM D944, Compressible asphalt mastic with felt facers, 1/4 inch thick and 4 inches deep.
- D. Sealant and Primer: As specified in Section 07 9200.
- E. Slab Joint Sealant: Compatible with floor finishes specified in related sections.

2.06 CONCRETE MIXES

- A. General requirements for mix design and submittal of structural class concrete:
 1. Provide Contractor submittals to Architect/Engineer not less than 15 days before placing concrete.
 2. Contractor shall review mix designs and proposed placing requirements prior to submittal for compatibility to ensure that the concrete as designed can be placed in accordance with the drawings and specifications.
 3. Changes or revisions require re-submittal: All variations to approved mix designs, including changing type and/or quantity of admixtures shall be resubmitted to the Architect/Engineer for review prior to use.
 4. Mix design(s) for all structural classes of concrete to be prepared by qualified person experienced in mix design. Allow for time necessary to do trial batch testing when required.

5. Preparer to provide backup data and certify in writing that mix design meets:
 - a. Requirements of the specifications for concrete durability and quality;
 - b. Requirements of the California Building Code and ACI CODE-318, including break histories, trial batching test results, and/or a mix designed by a California Registered Civil Engineer per ACI CODE-318 and bearing the Engineer's seal & signature.
 6. Clearly note on mix designs with specified maximum W/CM if design permits addition of water on site, or clearly identify in the mix design that no water is to be added on site.
 7. Deviations: Clearly indicate proposed deviations, and provide written explanation explaining how the deviating mix design(s) will provide equivalent or better concrete product(s) than those specified.
 8. Include adjustments to reviewed mix designs to account for weather conditions and similar factors.
- B. Proportioning - General: The following provisions apply to all mix designs:
1. Proportion concrete mixes to produce concrete of required average strength (as defined by ACI CODE-318). Select slump, aggregate sizes, shrinkage, and consistency that will allow thorough compaction without excessive puddling, spading, or vibration, and without permitting the materials to segregate, or allow free water to collect on the surface.
 2. Select aggregate size and type to produce dense, uniform concrete with low to moderate shrinkage, free from rock pockets, honeycomb and other irregularities.
 3. Mix designs may include water reducing and retarding admixtures to meet or exceed minimum set times (time required to place and finish) and to minimize Water-Cementitious Materials Ratios (W/CM). Minimum and maximum criteria presented in this section are guidelines and do not represent a specific mix design.
 4. Cement Content: Minimum cement content indicates minimum sacks of cementitious material. Increasing cement content to increase early strengths or to achieve specified W/CM while maintaining water content is discouraged in order to minimize effects of shrinkage.
 - a. Substitution of fly ash for Portland cement on an equivalent weight basis up to 25% replacement is permitted, except at high early strength concrete. Replacement in excess of 25% is not permitted unless part of a specified mix design that has been submitted for review.
 - b. Substitution of slag cement for Portland cement on an equivalent weight basis up to 45% replacement is permitted, except at high early strength concrete. Replacement in excess of 45% is not permitted unless part of a specified mix design that has been submitted for review.
 - c. Such substitution requests may be denied by the Engineer.
 5. Water Content: Mix designs with a specified maximum W/CM may be designed with a lower W/CM than specified in order to allow addition of water at the site.
 6. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI SPEC-301 and this section.
 - a. For trial mixtures method, employ independent testing agency acceptable to Architect/Engineer for preparing and reporting proposed mix designs.
 7. Placement Options: Mix designs may, at the Contractor's option, be designed for either pump or conventional placement with aggregate size, slumps, etc. to be maintained as specified in this section.
- C. Proportioning Normal Weight Concrete: Comply with ACI PRC-211.1 recommendations and this section.

D. Mix Design Minimum Requirements:

Concrete Class	Coarse Aggregate Size (Inches) & Fine Aggregate ³	Maximum W/CM or Maximum Nominal Slump & Tolerance (Inches) ^{1,2}	Minimum 28-Day Design Strength	Minimum Cement Sacks/per yd ⁴
NON-STRUCTURAL				
1) Lean Concrete (use only where specified)	---	---	---	3.0
STRUCTURAL				
2) Foundations / Piers	1" x #4	W/CM = .53	3,000	5.0

1. The tolerance is the maximum deviation allowable without rejection. The mix design shall be based on the nominal value specified and is without water reducing mixtures. Slump to be measured at the end of the hose.
2. The maximum W/CM is limited at time of placement as noted. No water is to be added on site such that the specified W/CM or maximum slump is exceeded without approval of the testing laboratory and the Architect/Engineer. Workability is to be achieved utilizing an acceptable mid range to high range water reducing admixture.
3. Gradation of aggregate is per ACI CODE-318 and ASTM C33.
4. Minimum cement content includes all cementitious materials.

2.07 MIXING CONCRETE

- A. Batch final proportions in accordance with approved mix designs. All adjustments to approved proportions, for whatever reason, shall be reviewed by the Architect/Engineer prior to use.
- B. Batch and mix concrete in accordance with ASTM C94, at an established plant. Site mixed concrete will be rejected.
- C. Provide batch and transit equipment adequate for the work. Operate as necessary to provide concrete complying with specified requirements.
- D. Place mixed concrete in forms within 1-1/2 hours from the time of introduction of cement and water into mixer or 300 revolutions of the drum whichever comes first. Use of, re-mixing, and/or tempering mixed concrete older than 1 hour will not be permitted.
- E. Do not add water at the site to concrete mixes with a maximum specified W/CM unless the water content at batch time provides for a W/CM less than specified and this provision, including the quantity of water which may be added at the site, is specifically noted on the mix design and certification by the mix preparer. See ASTM C94 for additional requirements.

2.08 SOURCE QUALITY CONTROL

- A. Services by independent Testing Agency:
 1. Where aggregate alkali reactivity testing (and, when applicable, mitigation testing) per the MATERIALS section is not available, the Testing Agency shall perform this testing to verify materials conformance to CBC section 1903A.5.
 2. Batch Plant inspection at automated plants to occur at commencement of concrete work each day (first truck). Batch Plant inspection at non-automated plants and when accuracy is questionable shall be continuous. Additionally, water cement ratio (WCR) is to be verified where a WCR is specified herein. The computed WCR is to be written on the Batch Plant Certificate to be taken to the job site prior to the truck leaving the plant. See requirements of CBC 1705A.3.3.

3. Batch Plant Certificates: Obtain the weighmaster's Batch Plant Certificate at arrival of truck at the site. If no batch plant certificate is provided, recommend to the General Contractor that the truckload of concrete be rejected. So note in daily log, along with the location of the load of concrete in the structure if the load is not rejected. See requirements of CBC 1705A.3.3.
 - a. Laboratory's inspector shall obtain for each transit mixer Batch Plant Certificates to verify mix design quantities and condition upon delivery to the site.
 - b. Certificates to include: Date, time, ingredient quantities, water added at plant and on job, total mixer revolutions at time of placement, and time of departure.
 - c. Concrete with specified water cement ratio: Add no water on site unless mix design and batch records each show additional water may be added. See ASTM C94 for additional requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.
- B. Verify work of other sections is complete and tested as required before proceeding.

3.02 PREPARATION

- A. Observation, Inspection and Testing:
 1. Architect/Engineer: Notify not less than 2 working days before each concrete placement, for observation and review of reinforcing, forms, and other work prior to placement of concrete.
 2. Testing Agency: Notify not less than 24 hours before each placement for inspection and testing.
- B. Placement Records: Contractor shall maintain records of time, temperature and date of concrete placement including mix design and location in the structure. Retain records until completion of the contract. Make available for review by Testing Agency and Architect/Engineer.
- C. Coordinate placement of joint devices with erection of concrete formwork and placement of form accessories.
- D. Verify location, position and inclusion of all embedded and concealed items.
- E. Cleaning and Preparation:
 1. Remove loose dirt, mud, standing water, and foreign matter from excavations and cavities.
 2. Close cleanout and inspection ports securely.
 3. Thoroughly clean reinforcement and other embedded items free from loose rust and foreign matter. Maintain reinforcing securely in place. Do not place concrete on hot reinforcing.
 4. At cold joints, remove laitance from previously placed concrete surface.
 5. Dampen form materials and substrates on which concrete is to be placed at least 1 hour in advance of placing concrete; repeat wetting as necessary to keep surfaces damp. Do not saturate. Do not place concrete on saturated material.
 - a. Thoroughly wet wood forms (except coated plywood), bottom and sides of trenches, adjacent concrete or masonry and reinforcement.
 6. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.
- F. Drill holes in existing concrete at locations where new concrete is doweled to existing work. Insert steel dowels and prepare connections as detailed.
- G. Do not overcut at existing concrete work to remain. Contractor is responsible for repair/replacement of overcut concrete to the Owner's satisfaction.

3.03 PIPES AND CONDUITS IN CONCRETE

A. Sleeving and Wrapping:

1. Foundations: Sleeve or wrap all individual pipe penetrations, minimum 1-1/2 inches clear to reinforcing all around.
 - a. Sleeves: PVC. Provide 1 inch minimum clear all around O.D. pipe to I.D sleeve, UNO at ends, fill void space with mastic or plastic bituminous cement.
 - b. Wrapped Vertical Pipes: Provide 1/8 inch nominal sheet foam with three wraps minimum, UNO.
 - c. Wrapped Horizontal Pipes: Provide 1/8 inch nominal sheet foam with eight wraps minimum, UNO.
 - d. Underground Fire Lines 4" and Larger: At sleeves provide 2 inch minimum clear all around O.D. pipe to I.D sleeve. At wrapped pipes, provide 1/8 inch nominal sheet foam with sixteen wraps minimum.
2. Slabs or Curbs: Wrap pipes as described above.

B. Space groups of pipes/conduits at least 3 sleeve diameters apart, do not interrupt specified concrete and reinforcement.

1. Provide block-outs as detailed when grouping of pipes/conduits in foundation or other structural member prevents spacing as described. Notify Architect/Engineer for review of any conditions not conforming to details.
2. Center pipe/conduit penetrations in the depth and/or thickness of foundations.
3. Maximum size of pipe/conduit penetrations shall not exceed the least dimension of concrete divided by 3.

3.04 CONCRETE PLACEMENT

A. Transporting:

1. Provide clean, well-maintained equipment of sufficient quantity and capacity to execute the work and produce concrete of quality specified.
2. Handle and transport concrete from mixer to final deposit location as rapidly as practicable. Prevent separation or loss of ingredients.

B. Perform concrete placement by methods which will not puncture, damage or disturb vapor retarder membrane. Repair all damage to vapor retarder membrane before covering.

C. Placement - General: Placement, once started, shall be carried on as a continuous operation until section of approved size and shape is completed. Provide construction joints as detailed on the drawings. Engineer's written approval required for all deviations.

1. Deposition:
 - a. Deposit concrete to maintain an approximately horizontal plastic surface until the completion of the unit placement.
 - b. Deposit as neatly as practicable in final position, minimize re-handling or flow.
 - c. Do not drop concrete freely where reinforcing bars, embeds, or obstructions occur that may cause segregation. Provide spouts, elephant trunks, or other means to prevent segregation during placement.
2. Progress Cleaning: Remove all concrete spilled on forms or reinforcing steel in portions of structure not immediately concreted. Remove completely before concrete sets.
3. Interruptions: Shut down placement operations and dispose of all remaining mixed concrete and concrete in hoppers or mixers following all interruption in placement longer than 60 minutes.
 - a. If such interruption occurs, provide new or relocate existing construction joints as directed by Engineer.
 - b. Cut concrete back to the designated line, cleaning forms and reinforcing as herein specified.
 - c. Prepare for resumption of placement as for new unit when reason for interruption is resolved.

D. Consolidation:

1. Consolidate all concrete thoroughly during placement with high-speed mechanical vibrators and other suitable tools. Perform manual spading and tamping to work around reinforcement, embedded fixtures, and into corners of formwork as required to obtain thorough compaction.
 - a. Provide vibrators with sufficient amplitude for adequate consolidation.
 - b. Use mechanical vibrators at each point of concrete placement.
 - c. Keep additional spare vibrators, in addition to those required for use, at the site for standby service in case of equipment failure.
 2. Consolidate each layer of concrete as placed.
 - a. Insert vibrators vertically at points 18 to 30 inches apart; work into top area of previously placed layer to reconsolidate, slowly withdraw vibrator to surface.
 - b. Avoid contact of vibrator heads with formwork surfaces.
 - c. Systematically double back and reconsolidate wherever possible. Consolidate as required to provide concrete of maximum density with minimized honeycomb.
- E. Unacceptable Materials:
1. Do not place concrete that has started to set or stiffen. Dispose of these materials.
 2. Do not add water on site to concrete except as specified in the approved mix design, see PART 2 above.
- F. Protection of installed work:
1. Do not introduce any foreign material into any specified drainage, piping or duct systems.
 2. Contractor shall bear all costs of work required to repair or clean affected work as a result of failure to comply with this requirement.

3.05 CONCRETE JOINTS

- A. Structural Joints (Construction/Cold Joints):
1. Locate joints only where shown, or as approved.
 2. Review Required: Joints not indicated on the plans shall be located to meet the minimum requirements below, shall not impair the strength of the structure and shall be submitted to Architect/Engineer for review prior to placement of concrete.
 - a. Indicate proposed location(s) of construction/cold/expansion joints on shop drawing submittals for review prior to placing concrete.
 3. Clean and roughen all surfaces of previously placed concrete at construction joints by washing and sandblasting to expose aggregate to 1/4 inch amplitude.
 4. Foundations: Maximum Length of continuous placement shall not exceed 200 foot increments. Provide “keyed” shut-off locations made up with form boards. Extend reinforcing one lap length or more through shut-off.
 - a. All reinforcement shall be continuous through construction/cold joint, lapping to adjacent reinforcing in future placement.

3.06 FORMED SURFACES

- A. Form all concrete members level and plumb, except as specifically indicated. Comply with tolerances specified in ACI CODE-318, ACI SPEC-301, and this specification, except that maximum permissible deviation is 1/4 inch end-to-end for any single member.

3.07 CONCRETE FINISHES

- A. Other Concrete: Provide as required to achieve appearance indicated on structural and architectural drawings and related sections.
1. Repair surface defects, including tie holes, immediately after removing formwork.
 2. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height.
 3. Exposed Form Finish: Finish concrete to match forms. Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
 - a. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.

- b. Grout Cleaned Finish: Wet areas to be cleaned and apply grout mixture by brush or spray; scrub immediately to remove excess grout. After drying, rub vigorously with clean burlap, and keep moist for 36 hours.
- c. Cork Floated Finish: Immediately after form removal, apply grout with trowel or firm rubber float; compress grout with low-speed grinder, and apply final texture with cork float.
- 4. Intermediate joint and score marks and edges: Tool smooth and flush unless otherwise indicated or as directed by the Architect.
- 5. Use steel tools of standard patterns and as required to achieve details shown or specified. All exposed corners not specified to be chamfered shall have radiuses edges.

3.08 TOLERANCES

A. Formed Surface Tolerances:

- 1. Permanently Exposed Joints and Surfaces: Provide maximum differential height within two feet of, and across construction joints of 1/16 inch.
- 2. Vertical Elevations: Elevation of surfaces shall be as shown or approved.

3.09 CONCRETE CURING

- A. Curing - General: Cure in accordance with ACI SPEC-308.1. Maintain concrete water content for proper hydration and minimize temperature variations. Begin curing immediately following finishing.
- B. Protection During Curing: Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury. The General Contractor is responsible for the protection of the finished slab from damage.
 - 1. Avoid foot traffic on concrete for minimum of 24-hours after placement.
 - 2. Protect concrete from sun and rain.
 - 3. Maintain concrete temperature at or above 50 degrees F. during the first 7 days after placement. See Article ENVIRONMENTAL REQUIREMENTS.
 - 4. Do not subject concrete to design loads until concrete is completely cured, and until concrete has attained its full specified 28-day compressive strength or until 21 days after placement, whichever is longer.
 - 5. Protect concrete during and after curing from damage during subsequent building construction operations. See Article PROTECTION.
- C. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
 - 1. Normal concrete: Not less than 7 days.
 - 2. High early strength concrete: Not less than 4 days.
- D. Begin curing immediately following finishing.
- E. Foundations: Apply curing compound immediately after floating.

3.10 CONCRETE HARDENER

- A. Apply hardener to all floor slabs not receiving other finishes after 30 days minimum curing. Clean slabs of non-compatible cure/sealers or other foreign material(s) and apply in strict accordance with the manufacturer's directions.

3.11 GROUTING AND DRY PACK

- A. Set steel plates on concrete with high strength grout bed, completely fill all voids; thoroughly compact in place. See Section 05 1100.
- B. Bolts or inserts dry packed or grouted in place shall cure for minimum 7 days before tensioning.

3.12 FIELD QUALITY CONTROL

- A. Testing and Inspections by Independent Testing Agency: Provided verification and inspection of concrete per CBC Table 1705A.3. Provide written reports for to Engineer, Architect, Contractor and Building Official for the following tests and inspections:
- B. Testing & Inspection: Provide periodic inspection of reinforcing steel. Provide continuous inspection during placement of structural class concrete, 3000 psi or more. Non-structural class concrete with a design strength of 2500 psi or less to have periodic inspection on a 150 cubic yard basis as required to assure conformance.
 - 1. Provide periodic inspection of bolts in concrete prior to and during placement where so noted on the construction documents.
 - 2. Structural Concrete Cylinder Tests: Form in accordance with ASTM C31.
 - a. Take four standard 6 inch x 12 inch (or five 4 inch x 8 inch) cylinder specimens on the site, of each class of concrete as specified in PART 2, not less than once a day or for each 50 cubic yards or 2000 sq ft or fraction thereof placed each day.
 - b. Record the location of each concrete batch in the building in a log and also note on each specimen.
 - c. Perform standard compression test of cylinders in accordance with ASTM C39, one at 7 days and two (three for 4x8 cylinders) at 28 days.
 - d. Hold fourth (fifth) cylinder untested until specified concrete strengths are attained.
 - 3. Structural Concrete Slump Test and Air Tests: Perform slump in accordance with ASTM C143 and air content in accordance with C231 or C173 at the time of taking test cylinders, and/or at one-hour intervals during concrete placing.
 - 4. Measure and record concrete temperature in accordance with ASTM C1064 upon arrival of transit mixers and when taking specimens. Note weather conditions and temperature.
 - 5. Determine concrete density in accordance with ASTM C138 at the time of forming test cylinders.
 - 6. Propose adjustments to reviewed mix designs for Architect / Engineer review to account for variations in site or weather conditions, or other factors as appropriate.
 - 7. Water Vapor Transmission Tests: Floors receiving floor finishes specified in related sections will be tested prior to installation of flooring systems. Refer to sections specifying floor finishes for related requirements.
- C. Services by Contractor:
 - 1. Rejection of Concrete Materials: Do not use the following without prior written approval of the Architect/Engineer;
 - a. Materials without batch plant certificates.
 - b. Materials not conforming to the requirements of these specifications.

3.13 ADJUSTING

- A. Inspect all concrete surfaces immediately upon formwork removal. Notify Architect/Engineer of identified minor defects. Repair all minor defects as directed.
- B. Surface and Finish Defects: Repair as directed by the Architect/Engineer, at no added expense to the Owner. Repairs include all necessary materials; reinforcement grouts, dry pack, admixtures, epoxy and aggregates to perform required repair.
 - 1. Repair minor defective surface defects by use of drypack and surface grinding. Specific written approval of Architect/Engineer is required. Submit proposed patching mixture and methods for approval prior to commencing work.
 - 2. Grind high spots, fins or protrusions caused by formwork; Fill-in pour joints, voids, rock pockets, tie holes and other void not impairing structural strength. Provide surfaces flush with surrounding concrete.

3.14 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required compressive strength, lines, details, dimensions, tolerances, finishes or specified requirements; as determined by the Architect/Engineer.
- B. Repair or replacement of defective concrete will be determined by the Architect/Engineer who may order additional testing and inspection at his option. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- C. Specific Defects:
 - 1. "Low-Strength"; Concrete Not Meeting Specified Compressive Strength after 28 days:
 - a. Concrete with less than 25% Fly Ash or 35% Slag as cementitious material: Test remaining cylinder(s) at 56 days. If strength requirements are met, concrete strength is acceptable.
 - b. Concrete with 25% or more Fly Ash or 35% or more Slag as cementitious material: Test remaining cylinder(s) at 70 days. If strength requirements are met, concrete strength is acceptable.
 - 2. Excessive Shrinkage, Cracking, Crazing or Curling; Defective Finish: Remove and replace if repair to acceptable condition is not feasible.
 - 3. Lines, Details, Dimensions, Tolerances: Remove and replace if repair to acceptable condition is not feasible.
 - 4. Slab sections not meeting specified tolerances for trueness/flatness or lines/levels: Remove and replace unless otherwise directed by the Architect/Engineer. Minimum area for removal: Fifteen square feet area unless directed otherwise by the Architect/Engineer.
 - 5. Defective work affecting the strength of the structure or the appearance: Complete removal and replacement of defective concrete, as directed by the Architect/Engineer.

3.15 CLEANING

- A. Maintain site free of debris and rubbish. Remove all materials and apparatus from the premises and streets at completion of work. Remove all drippings; leave the entire work clean and free of debris.
- B. Slabs to Receive Floor Finishes Specified in other sections: Remove non-compatible cure/sealers or other foreign material(s) which may affect bonding of subsequent finishes. Leave in condition to receive work of related sections.

3.16 PROTECTION

- A. Protect completed work from damage until project is complete and accepted by Owner.
- B. Construction Loads: Submit engineering analysis for equipment loads (including all carried loads) specified in article submittals.
- C. Keep finished areas free from all equipment traffic for a minimum of 4 additional days following attainment of design strength and completion of curing.
- D. Protection of Drainage Systems:
 - 1. Care shall be taken not to introduce any foreign material into any specified drainage, piping or duct system.
 - 2. Cost of work to repair or clean drainage system as a result of failure to comply with this requirement will be back charged to the contractor.
- E. Cover traffic areas with plywood sheets or other protective devices; maintain protection in place and in good repair for as long as necessary to protect against damage by subsequent construction operations.

END OF SECTION

SECTION 03 37 10
DRILLED CONCRETE PIERS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes: Provide all labor, materials, equipment, and services to complete all drilled concrete pier work noted on drawings. The work shall include, but not be limited to the following:
 - 1. Machine drilled shaft.
 - 2. Placing concrete and reinforcing.
- B. Related Sections:
 - 1. Pertinent Sections of Division 00 specifying Information Available to Bidders: Subsurface Investigation Report.
 - 2. Pertinent Sections of Division 01 specifying Quality Control and Testing Laboratory services.
 - 3. Pertinent Sections of Division 03 specifying concrete construction.

1.2 REFERENCES

- A. American Concrete Institute (ACI) 336.1 “Specification for the Construction of Drilled Piers”.

1.3 SUBMITTALS

- A. Limitation of Review: Structural Engineer's review will be for general conformance with design intent as indicated in the Contract Documents and does not relieve Contractor of full responsibility for conformance with the Contract Documents.
- B. Contractor shall maintain records of time, depth of pier, water level if encountered, temperature and date of concrete placement including mix design, and location in the structure. Retain records until completion of the contract. Make records available for review by testing agency and architect/engineer.

1.4 QUALITY ASSURANCE

- A. Installer: Company specializing in performing the work of this section with minimum three years documented experience.
- B. Contractor shall bear the entire cost of remediation, removal, and/or replacement of drilled piers determined defective or non-conforming, including Architect/Engineer fees for redesign.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent requirements of Division 03.

1.6 SCHEDULING AND SEQUENCING

- A. Organize the work and employ shop and field crew(s) of sufficient size to minimize inspections by the testing agency and geotechnical engineer.

- B. Provide schedule and sequence information in writing upon request. Update information as work progresses.

PART 2 – PRODUCTS

2.1 CONCRETE MATERIALS AND MIX

- A. Comply with requirements of Section 03 30 00.

2.2 REINFORCEMENT

- A. Comply with requirements of Section 03 20 00.

2.3 EQUIPMENT

- A. Appropriate equipment to dewater excavated shaft. Where water is encountered, notify GEOR and SEOR of proposed mitigation techniques.

PART 3 - EXECUTION

1.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.
- B. Verify work of other sections is complete and tested as required before proceeding.
- C. Verify site conditions.
- D. Verify site conditions will support equipment for performing pier drilling operations and testing.
- E. Verify location, position, and inclination of all drilled pier locations and any embedded or concealed items. Any discrepancies are to be brought to the attention of the architect/engineer so clarification can be made prior to commencing work.

1.02 PREPARATION

- A. Use placement method which will not cause damage to nearby structures.
- B. Notify adjacent and affected landowners and building occupants with 7 days notice before proceeding with the work.

1.03 INSTALLATION

- A. Drill concentric and vertical pier shafts to diameters and depths indicated.
- B. Clean shaft and bottom of loose material including dirt, mud, standing water and foreign matter from all pier excavations.
- C. All pier excavations shall be reviewed by the GEOR before reinforcement and concrete is placed.
- D. Place reinforcing steel in accordance with Section 03 20 00. All steel reinforcement shall be placed, tied and secured within the pier excavation before concrete is placed. Contractor to place centralizers at every other vertical bar around the perimeter of the cage @ 10'-0" oc.

- E. Place concrete in accordance with Section 03 30 00 with equipment designed for vertical placement of concrete.
- F. Where groundwater is encountered, concrete shall be placed by the tremie method by placing the concrete through a pipe to the interior of the concrete being poured, thus preventing contact with the surrounding water.
- G. Upon completion of pier drilling, concrete is to be placed within a reasonable timeframe, determined by the GEOR. If excavation is to be left unfilled for more than 24 hours, contractor shall provide shaft casing to protect the integrity of the hole. Shaft casing shall be removed gradually as concrete is poured.
- H. Concrete Deposition:
 - 1. Deposit concrete to maintain an approximately horizontal plastic surface until the completion of the unit placement.
 - 2. Deposit as neatly as practicable in final position. Minimize rehandling or flow.
 - 3. Do not drop concrete freely where reinforcing bars, embeds, or obstruction occur that may cause segregation. Provide spouts, elephant trunks, or other means to prevent segregation during placement.
- I. Once placement has started, it shall be carried on as a continuous operation until the approved size and shape is completed.
- J. Provide dowels for connection of grade beams as indicated in drawings. Extend reinforcement as required.

1.04 TOLERANCES

- 1. Maximum variation from vertical: 1 in 48.
- 2. Top elevation: Maximum +/- 4 inches from elevation indicated.

1.05 FIELD QUALITY CONTROL

- A. Field inspection will be performed under provisions of pertinent sections of Division 01 specifying quality control and testing laboratory services.
- B. Accurately record the following:
 - 1. Sizes, lengths, and locations of piers
 - 2. Sequence of placement
 - 3. Final base and top elevations
 - 4. Deviation from indicated locations

END OF SECTION

SECTION 05 1100

STRUCTURAL AND MISCELLANEOUS STEEL

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: All labor, materials, equipment and operations required to complete structural and miscellaneous metals in shapes and configurations indicated; including:
 - 1. Miscellaneous structural steel and connections; fabricated connectors and hangers installed by related sections.
 - 2. Anchor bolts and steel inserts embedded in concrete, installed by related sections.
 - 3. Fabricated steel items embedded in concrete or masonry installed by related sections.
 - 4. Supervision of anchor bolt setting, leveling and elevations to ensure required fit of steel work.
 - 5. Shop priming and field touch-up, galvanizing.
 - 6. Bracing, Shoring, Fabrication and Erection.
- B. Related Sections:
 - 1. Pertinent sections of Division 01 specifying Quality Control and Testing Agency services.
 - 2. Pertinent Sections of other Divisions specifying concrete reinforcement, formwork, concrete, structural and miscellaneous metal fabrications, cold-formed metal framing, rough carpentry.

1.02 REFERENCES

- A. California Code of Regulations, Title 24, latest adopted edition (herein noted as CBC): Chapter 22A Steel.
- B. American Institute of Steel Construction (AISC) 303 "Code of Standard Practice for Steel Buildings and Bridges".
- C. AISC 360 "Specification for Structural Steel Buildings".
- D. American Welding Society (AWS) D1.1 "Structural Welding Code - Steel".
- E. Underwriters Laboratories (UL) FRD "Fire Resistance Directory".

1.03 SUBMITTALS

- A. Submit in accordance with pertinent sections of Division 01 specifying submittal procedures. The General Contractor shall review and approve shop drawings prior to submittal to the Architect/Engineer. Submittals that do not meet these requirements will be returned for correction without review.
- B. Limitation of Review: Structural Engineer's review will be for general conformance with design intent as indicated in the Contract Documents and does not relieve Contractor of full responsibility for conformance with the Contract Documents.
- C. Product Data: Submit manufacturer's product data, specifications, location and installation instructions for proprietary materials and reinforcement accessories. Provide samples of these items upon request.
- D. Shop drawings: Submit each building as a complete unit. Do not mix components from multiple buildings or units of work in a submittal. Include all of the following;
 - 1. Profiles, sizes, spacing, attachments, and fasteners.
 - 2. Fabrication tolerances for all steel.
 - 3. Connections: All, including type and location of shop and field connections.

4. Indicate welded connections with AWS A2.4 welding symbols. Indicate net weld lengths, type, size, and sequence. Designate demand critical welds.
 5. Cross-reference all shop drawing detail references to contract document detail references.
 6. Secure all field measurements as necessary to complete this work prior to submitting shop drawings for review.
 7. Provide holes, welded studs, etc. as necessary to secure work of other sections.
 8. Provide the following as separate submittals for each building or unit of work:
 - a. Bolt and anchor setting plans.
 - b. Layout, fabrication and erection drawings.
- E. Certifications:
1. Steel Materials: Submit the following for identified materials.
 - a. Manufacturer's Mill Certificate: Certify that products meet or exceed specified requirements.
 - b. Mill Test Reports: Indicate structural strength, destructive test analysis, and non-destructive test analysis.
 - c. Contractor's affidavit certifying that all identified steel materials provided are of the grades specified and match the certificates supplied.
 2. Welders Certificates: Certify welders employed on the Work, verifying AWS qualification per AWS D1.1.
- F. Samples: Provide samples to the Testing Agency as specified in Article SOURCE QUALITY CONTROL, at no additional costs.

1.04 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies, refer to pertinent sections of Division 01 and CBC Chapter 17A.
- B. All tests shall be performed by a recognized testing agency as specified in pertinent sections of Division 01.
- C. Certification and Identification of Materials and Uses: Provide Testing Agency with access to fabrication plant to facilitate inspection of steel. Provide notification of commencement and duration of shop fabrication in sufficient time to allow inspection and all material identification/test information listed below.
1. Test all steel as required by ASTM A6.
 2. Provide manufacturer's Mill Test Reports for all materials. Include chemical and physical properties of the material for each heat number manufactured. Tag all fabricated materials with heat number.
 3. Provide letter certifying all materials supplied are from heat numbers covered by supplied mill certificates. Include in letter the physical location of each material type and/or heat number in the project (i.e. walls, braced frames etc.).
 4. Unidentified Material Tests: Where identification of materials by heat number or mill tests cannot be made, Owner's Testing Agency shall test unidentified materials.
 5. Provide all certification, verifications, and other test data required to substantiate specified material properties at no additional cost to the Owner.
- D. Testing and Inspection: Tests and Inspections performed by Independent Testing Agency are specified below in Articles SOURCE QUALITY CONTROL and FIELD QUALITY CONTROL. Duties and limitations of Independent Testing Agency, test costs and test reports in conformance with pertinent sections of Division 01.
- E. The following standards are the minimum level of quality required. Provide higher quality work as specifically indicated in the Contract Documents.
1. Workmanship and details of structural steel work shall conform to the CBC and AISC 360.
 2. The quality of materials and the fabrication of all welded connections shall conform to AWS D1.1.
 3. Comply with Section 10 of AISC 303 for architecturally exposed structural steel.

- F. The Testing Agency will review all submittals and testing of materials.
- G. All re-inspections made necessary by non-conforming work shall be at the Contractor's expense.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to project site in bundles marked with durable tags indicating heat number, mill, member size and length, proposed location in the structure and other information corresponding with markings shown on placement diagrams.
- B. Handle and store materials above ground to prevent damage, contamination or accumulation of dirt or rust.

1.06 SCHEDULING AND SEQUENCING

- A. Organize the work and employ shop and field crew(s) of sufficient size to minimize inspections by the Testing Agency.
- B. Provide schedule and sequence information to Testing Agency in writing upon request. Update information as work progresses.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Structural Steel Plates: ASTM A36 or ASTM A572 Gr. 50 or ASTM A529 Gr. 50
- B. Pipe: ASTM A53, Grade B.
- C. Bolts, Nuts, and Washers: ASTM A307 Grade A machine bolts with ASTM A563 Grade A nuts and ASTM F844 washers to match. See FINISHES section for galvanization, where required.
- D. Anchor Bolts/Rods, Nuts, and Washers: ASTM F1554 Gr. 36 or 55 with ASTM A563 Grade A nuts, and ASTM F436 Type 1 washers. Grade DH nuts where Grade 105 rod is specified. No upset thread allowed.
- E. Arc-Welding Electrodes: AWS Standards E70 or equivalent, except no E70T-4 allowed.
- F. Other Welding Materials: AWS D1.1; type required for materials being welded.
- G. Welded Headed/Threaded Studs: AWS D1.1 Type B.

2.02 ACCESSORIES

- A. High Strength Grout: ASTM C1107, non-shrink, premixed compound consisting of aggregate, cement, and water reducing plasticizing agents. Minimum compressive strength $f'_c = 7000$ psi at 28 days, placed in a "fluid" state. Non-metallic where exposed to view. BASF "MasterFlow 928" or equivalent.
- B. Building Structural Steel Primers: Comply with local VOC limitations of authorities having jurisdiction and the California Green Building Code. Verify compatibility with finish coats specified in other sections. Follow manufacturers printed instructions. Apply one coat unless otherwise directed.
 - 1. Type A: Self-Crosslinking Hydrophobic Acrylic passing 2000 hours ASTM D4585 & 7000 hours ASTM D5894. "Series 115 Uni-Bond DF" by Tnemec (2.0 to 4.0 mils DFT).
 - 2. Type B: Organic Zinc-Rich Urethane passing 50,000 hours ASTM B117 and 15000 hours ASTM G855. "Series 90-97 Tneme-Zinc" by Tnemec (2.5 to 3.5 mils DFT) or "Series 94-H20 Hydro-Zinc" by Tnemec (2.5 to 3.5 mils DFT).
 - 3. Type C: MIO-Zinc Filled Urethane passing 10,000 hours ASTM B117 and 5000 hours ASTM

D4585. “Series 394 PerimePrime” by Tnemec (2.5 to 3.5 mils DFT).

- C. Galvanizing: ASTM A153 and A123.
- D. Touch-Up Primer for Galvanized Surfaces: Type B primer.

2.03 FABRICATION

- A. Shop fabricate to greatest extent possible.
- B. Fabricate connections for bolt, nut, and washer connectors.
- C. Protect all materials, before and after fabrication, from rust, corrosion, dirt, grease, and other foreign matter.
- D. Exposed Steel: Straight, smooth, free of nicks, scars or dents.
- E. Gas Cutting: Gas cutting of holes in a member shall not be permitted.
- F. Welding: Welding of structural steel connections shall be performed by qualified welders in accordance with AWS Standards. All weld sizes shall match those shown on the drawings.
 - 1. Preparation: Clean all surfaces free of rust, paint and all foreign matter. Remove paint or scale by brushing, chipping or hammering as required. Chip clean and wire brush burned or flame cut edges before welding. Space and alternate welds, clamping as necessary to prevent warp or misalignment.
 - 2. Sequence Welding: When welds enclose, or partially enclose, the perimeter or portion of the surface of a member, make weld bead in sequence, or staggered. Minimize internal stresses. Weld groups of members occurring in a single line in staggered sequence to minimize distortion of the structural frame.
 - 3. Faulty and Defective Welding: Welds failing to meet AWS standards and the Contract Documents shall be rejected and remade at Contractor expense. All welds showing cracks, slag inclusion, lack of fusion, bad undercut or other defects, ascertained by visual or other means of inspection shall be removed and replaced with conforming work.
 - 4. Minimum Weld Strengths: All welds shall match the minimum weld sizes recommended by AISC. Details of fabrication not specifically shown shall match similar details which are specifically shown. All bevel and groove welds shall be full penetration unless size is noted otherwise.
 - 5. Threaded studs, headed studs, and deformed bar anchors shall be full-fusion welded conforming to ASW D1.1.
- G. Grinding: Grind smooth the following structural steel and connections;
 - 1. Exposed cut ends of structural and fabricated shapes.
 - 2. All welds exposed to view.
 - 3. Mitered and fit-up corners and intersections.
- H. Back-Up Bars: Required for all complete penetration welds.
- I. Bolt Holes: Edge, end distances and spacing shall conform to dimensions shown on the drawings, and as follows;
 - 1. Round: Size indicated and 1/16 inch maximum oversize, except 1 inch and larger bolts may have 1/8 inch maximum oversize.
 - 2. Slotted: At locations specifically noted on the drawings, provide size indicated and 1/16 inch by 1/4 inch oversize slotted in direction perpendicular to applied loads.
 - 3. Holes in base plates for anchor bolts may be 1/8 inch oversize.

2.04 FINISHES

- A. Steel exposed to inclement atmospheric conditions or weather (such as coastal moisture or seasonal rain)

shall be sufficiently primed or otherwise protected against corrosion. If condition of steel is suspect due to weathering/corrosion, Contractor shall bear cost of inspection to determine if excessive corrosion is present and if steel member(s) requires repair or replacement. Contractor shall bear cost of repair or replacement.

- B. Prepare and finish structural and miscellaneous steel component surfaces as follows, unless a higher standard-of-care is determined necessary per item A:
 - 1. Unpainted, interior, dry exposure surfaces need not be primed.
 - 2. Finished painted, interior, dry exposure surfaces:
 - a. Surface Preparation: SSPC-SP2 Hand-Tool and/or SP3 Power-Tool Cleaning. Apply Primer Type A. Field touchup with same primer.
 - b. Where jobsite exposure is expected to exceed 6 months, SSPC-SP6 / NACE No. 3 Commercial Blast-Cleaning is required. Apply Primer Type B or C. Field touchup with same primer.
 - 3. Finish painted surfaces with exterior exposure, interior exposure subject to wet conditions or fumes, or surfaces to receive high performance finish coatings (for example epoxy or urethane coatings).
 - a. Surface Preparation: SSPC-SP6 / NACE No. 3 Commercial Blast-Cleaning to create a dense, uniform angular surface profile of 2.0 mils minimum. For severe (immersion) exposure, SSPC-SP10 / NACE No. 2 Near-White Blast-Cleaning is required.
 - b. Apply Primer Type B. Field touchup with same primer.
 - 4. Exterior exposed (unpainted) surfaces and as otherwise indicated to receive galvanizing:
 - a. Galvanize per ASTM A123 Class 55 minimum. Passivation agents are not permitted on galvanized metal that is to be painted. Provide vent holes per ASTM A385 at closed sections (such as HSS). Submit proposed location of vent holes for review by Engineer.
 - b. Connection hardware shall be hot-dip galvanized per ASTM A153 or F2329. Mating bolts and nuts shall receive the same zinc-coating process.
 - c. Repair all uncoated, damaged, or altered galvanized surfaces per ASTM A780.
- C. Do not prime the following surfaces unless otherwise indicated:
 - 1. Connections to be field welded.
 - 2. Steel in contact with concrete.
- D. Do not cover up work with finish materials until inspection is complete and work is approved by the Testing Agency.

2.05 SOURCE QUALITY CONTROL

- A. An independent Testing Agency will perform source quality control tests and submit reports, as specified in pertinent sections of Division 01.
- B. Steel Materials Testing:
 - 1. No testing is required for materials identified in accordance with CBC 2202A.1 (heat number, grade stencil, etc.).
 - 2. Unidentified steel- General: Test all structural shapes. In addition, test to verify Fy and Fu values when engineering requirements exceed Fy = 25 ksi for design.
- C. Shop Welding Inspection:
 - 1. Testing Agency shall inspect and certify all structural welds.
 - 2. Welder Qualifications: Welding inspector shall verify that all the welders are properly qualified prior to steel fabrication and state the qualifications of each welder in the welding inspection report.
 - 3. Welding Inspection: Continuous inspection required unless otherwise noted below. Comply with requirements of AWS D1.1.
 - a. Welding Inspector shall check all welds, materials, equipment and procedures.
 - b. Welding Inspector shall provide reports certifying the welding is as required and has been done in conformity with the plans, specifications and codes.
 - c. Welding Inspector shall use radiographic, ultrasonic, magnetic particle, or any other necessary aid to visual inspection to assure adequacy of welds. Ultrasonic

Testing (UT) shall be required for all complete joint penetration (CJP) welds of material 5/16 inch thick or greater.

4. Periodic Inspection Acceptable:
 - a. Single pass fillet welds not exceeding 5/16 inch.

- D. Bolts, Nuts, and Washers: Provide samples to Testing Agency for required testing, at no additional cost.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that conditions are appropriate for erection of structural steel and that the work may properly proceed.

3.02 ERECTION

- A. Erect structural steel in compliance with AISC 303.
- B. Field Connections:
 1. Workmanship of field bolted and welded connections shall conform in all respects to methods and tolerances specified for fabrication.
 2. Field weld components indicated on shop drawings. Sequence field welds to minimize built-up stress and distortion of the structural frame. Verify sequence with Engineer. Coordinate field welding schedule with Testing Laboratory.
 3. Welded Studs: Install in accordance with manufacturer's instructions and structural welding code AWS D1.1.
- C. Templates: Provide bolt setting templates for all anchor bolts. Provide instructions for the setting of anchors and bearing plates, verify these items are set correctly as work progresses.
- D. Bolting:
 1. Inspect mating surfaces to ensure that bolt head and nut will have full bearing and that metal plies will mate flush between bolts.
 2. Install bolts in matching holes. Do not distort metal or enlarge holes by drifting during assembly. Remake mismatched components to achieve tolerances indicated.
 3. Holes mismatched in excess of 1/8 inch will be rejected.
 4. Holes mismatched less than 1/8 inch may be reamed to the next larger size bolt.
 5. Do not enlarge holes by flame cutting or air/arc ("plasma") cutting.
 6. Provide flat washer(s) at over-size holes.
 7. Provide washer at bolt head and nut where connected part is less than 1/4 inch thick.
 8. Provide ASTM F436 beveled washers when the slope of the surfaces of parts in contact with the bolt head or nut is greater than 1:20.
 9. Do not install bolts with damaged threads.
 10. Threads shall commence outside of the shear plane.
 11. Machine Bolts (MB): Install and tighten to a snug condition (ST) such that laminated surfaces bear fully on one another, using an impact wrench or "full effort" of an installer using a standard spud wrench.
- E. Supports, Shoring and Bracing: Allow for erection loads and provide sufficient temporary bracing to maintain structure in safe condition, plumb, and in true alignment until completion of erection and installation of permanent bracing. Conform to requirements of all applicable laws and governing safety regulations. Resist imposed loads, including those of stored materials and equipment.
 1. Provide all temporary supports, shoring and bracing necessary to achieve work of tolerances indicated.
 2. Provide all necessary temporary flooring, planking and scaffolding required for erection of steel, and support of erection machinery.

3. Construction Loading: Do not overload the structure or temporary supports with stored materials, equipment or other loads.
4. Maintain temporary bracing and shoring until work is complete, and longer as required to ensure stability and safety of structure.

F. Do not make final connections until structure is aligned to meet specified tolerances.

3.03 ERECTION TOLERANCES

- A.
- B. Maximum Offset From True Alignment: 1/4 inch.

3.04 FIELD QUALITY CONTROL

- A. The independent Testing Agency will perform field quality control tests, as specified in pertinent sections of Division 01.
- B. Field Welding Inspection: Conform to all requirements of section SOURCE QUALITY CONTROL.
 1. Inspect mating surfaces.
 2. Test all materials prior to use. Use only materials meeting specified requirements.

3.05 ADJUSTING

- A. Touch-up damaged finishes with compatible specified primer.
- B. Replace defective or damaged work with conforming work. Replace all defective work at Contractor's expense.
- C. Straighten materials by means that will not injure the materials.
- D. Replace defective or damaged work which cannot be corrected in the field with new work, or return defective items to the shop for repair.
- E. Architect/Engineer shall review all proposals for the repair or replacement of damaged, defective, or missing work.
- F. Pay expenses incurred by Owner for Architect/Engineer's costs for (re-)design and obtaining approvals of Authorities Having Jurisdiction (AHJ) necessitated by incomplete, inefficiently scheduled, improperly performed, defective or nonconforming work, as specified in pertinent sections of Division 01.
- G. Pay expenses due to re-testing and re-inspection necessitated by incomplete, inefficiently scheduled, improperly performed, defective or nonconforming work, as specified in pertinent sections of Division 01.

3.06 CLEANING AND PROTECTION

- A. Clean all surfaces upon completion of erection; leave free of grime and dirt. Remove unused materials, tools, equipment and debris from the premises and leave surfaces broomed clean.
- B. Protect work from damage by subsequent operations.

END OF SECTION

SECTION 05 4000

COLD-FORMED METAL FRAMING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. All design and other services, material, labor and equipment as necessary for the fabrication, erection and completion of all cold formed metal framing including all bracing and shoring required for erection, miscellaneous metal, and related work.
- B. Related Sections:
 - 1. Pertinent Sections of Division 01 Specifying Quality Control and Testing Agency Sections
 - 2. Pertinent Sections of Division 05 Specifying Structural Steel.

1.02 REFERENCE STANDARDS

- A. California Code of Regulations, Title 24, latest adopted edition (herein noted as CBC): Chapter 22A Steel.
- B. American Iron and Steel Institute (AISI) S100 “North American Specification for the Design of Cold-Formed Steel Structural Members”.
- C. AISI S200 “North American Standard for Cold-Formed Steel Framing – General Provisions”.
- D. AISI D100 “Cold-Formed Steel Design Manual.
- E. American Welding Society (AWS) D1.3 “Structural Welding Code – Sheet Steel”
- F. American Society for Testing and Materials (ASTM):
 - 1. ASTM A307 “Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60000 PSI Tensile Strength”.
 - 2. ASTM A606 “Standard Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance”.
 - 3. ASTM A653 “Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process”.
 - 4. ASTM A780 “Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings”.
 - 5. ASTM A1003 “Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members”.
 - 6. ASTM A1008 “Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable”.
 - 7. ASTM A1011 “Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength”.
 - 8. ASTM C645 “Standard Specification for Nonstructural Steel Framing Members”.
 - 9. ASTM C754 “Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products”.
 - 10. ASTM C955 “Standard Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases”.
 - 11. ASTM C1007 “Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories”.

- 12. ASTM C1513 “Standard Specification for Steel Tapping Screws for Cold-Formed Steel Framing Connections”.
- G. The Society for Protective Coatings (SSPC) SSPC-Paint20 “Zinc-Rich Coating (Inorganic or Organic)”.
- H. National Institute of Standards and Technology (NIST) / Engineered Wood Association (APA) “PS 1 - Voluntary Product Standard for Structural Plywood”.
- I. NIST / APA “PS 2 - Performance Standard for Wood-Based Structural-Use Panels”.

1.03 SUBMITTALS

- A. Manufacturer's Literature:
 - 1. Descriptive data illustrating cold-formed framing system components including framing members, fasteners, and accessories, including ICC-ES reports.
 - 2. Erection instructions containing sequence of operations.
- B. Samples: Provide adequate samples of unidentified material to the Owner's Testing Laboratory for testing purposes.

1.04 QUALITY ASSURANCE

- A. Erector Qualifications:
 - 1. Minimum of three years successful experience on comparable cold-formed metal framing projects.
 - 2. Welders qualified in accordance AWS D1.3.
- B. Cold form carbon and low alloy steel used for structural purposes shall be identified per CBC Section 2202A.1.
- C. Welding inspections shall conform to AWS D1.3 and CBC 1705A.2.
- D. Wood product quality standards:
 - 1. All wood products to comply with article REFERENCES.
 - 2. Factory-mark each piece of sheathing with type, grade, mill, and grading agency, except omit marking from surfaces to be exposed with transparent finish or without finish.
 - 3. Sheathing panels to be marked by APA (The Engineered Wood Association).

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent requirements of Division 01.
- B. Delivery: Time delivery and installation of carpentry products to avoid delaying other trades whose work is dependent on or affected by this section and to comply with moisture content, protection and storage requirements.
- C. Keep materials dry at all times. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and sheathing panels to prevent deformation and provide air circulation within stacks.
 - 1. Store materials for which a maximum moisture content is specified only in areas where relative humidity has been reduced to a level where specified moisture content can be maintained.
 - 2. Handle and store materials above ground to prevent damage, contamination, or accumulation of dirt or foreign materials.
 - 3. Provide special protection for horizontal sheathing panels. Deformation of panels due to moisture is not acceptable.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Steel Framing System:
 - 1. All stud and/or joist framing members shall be of the type & size as shown on the plans and reviewed shop drawings. Framing member section properties (thickness, dimensions, area, section modulus, and moment of inertia) shall match those per AISI D100 unless noted otherwise on drawings.
 - 2. All runner and end tracks, bridging, and non-load bearing studs shall be of the type & size shown on the plans.
 - 3. All studs, joists, and tracks 54 mils or greater in thickness shall be formed from steel that corresponds to the requirements of ASTM A1003 (Grade ST50H or ST50L) with a minimum yield of 50,000 psi.
 - 4. All studs, joists, track, bridging, U-channel, (hat) furring (F) channels, and accessories 43 mils or thinner in thickness shall be formed from steel that corresponds to the requirements of ASTM A1003 (Grade ST33H or ST33L) with a minimum yield of 33,000 psi.
 - 5. All stud and joist components shall be formed from steel having a minimum G-60 galvanized coating (equivalent coatings such as “G60e” are not acceptable), unless noted otherwise, or shall be primed with paint meeting the performance requirements SSPC-Paint20, where noted.
 - 6. Welding Electrodes: Shall conform to AWS D1.3. E60 or E70. Touch up all welds with zinc-rich paint in compliance with ASTM A780.
 - 7. Primer: SSPC-Paint20.
- B. Screws shall be per ASTM C1513.
- C. Machine bolts shall be per ASTM A307.
- D. Power Actuated Fasteners (PAF): Hilti X-U, ICC ESR-2269. For use only where specified by the drawings.
- E. Accessories: Cold-formed metal framing manufacturer's standard.
- F. Structural Sheathing Panels:
 - 1. Plywood: Structural sheathing shall conform to product standard PS-1 or PS-2. All panels shall have a minimum bond classification of “Exposure 1” and bear the trademark of the Engineered Wood Association (APA) or other qualified agency. Grades shall be “Rated Sheathing” or “Structural 1” as required on the drawings.
- G. Oriented Strand Board (OSB): All structural OSB shall be grade marked by a qualified agency for conformance with Product Standard PS-2 and shall be fabricated with exterior glue. Grades shall be as required on the drawings.

2.02 FABRICATION

- A. Form members to manufacturer's standard shapes meeting design criteria.
- B. Cut right angle connections of framing components to fit squarely against abutting members.
- C. Prime un-galvanized steel to 1.5 mil (0.038) minimum dry film thickness.

PART 3 EXECUTION

3.01 ERECTION

- A. Clean surfaces that will be in contact after assembly.
- B. Position members plumb, square and true to line.
- C. Seat studs squarely in track with stud web and flange abutting track web with maximum 1/8 inch gap.
- D. Connect members together by welding and/or fasteners in accordance with the drawings.
- E. Do not splice studs. Provide "headers" and "trim studs" at openings as required. Studs shall be securely attached to tracks at all exterior walls except as noted below.
- F. Provide for expansion and contraction between floors at solid wall sections of two stories or more by providing a slip joint between stud and track at one end. This connection shall be capable of transmitting lateral loads to the structure.
- G. Provide and install bridging, fire blocking, etc. per manufacturer's recommendations, the plans, and code requirements.
- H. Perform welding in accordance with AWS D1.3
- I. Remove erection bolts and screws used in welded construction.
- J. Do not use gas cutting for field correction of fabrication without concurrence of Architect/Engineer.
- K. Touch-up field connections and breaks in shop coating with same primer used for shop priming.

3.02 STRUCTURAL SHEATHING

- A. General:
 - 1. Sheathing screwing shall be as required on the drawings. Do not overdrive (Do not break skin of sheathing face sheet). Over driving will be cause for rejection.
- B. Roof and Floor Sheathing: lay with face grain perpendicular to roof rafters, roof trusses or floojoists. Stagger sheets. Block all unsupported sheet edges with 54 mils material unless noted otherwise.
- C. Wall Sheathing: Lay with face grain either parallel or perpendicular to studs. Exposed bottom edges shall be sealed as recommended by manufacturer. Block all unsupported sheet edges with 54 mils materials unless noted otherwise.

3.03 DEFECTIVE WORK AND MATERIALS

- A. Work found to be defective, missing or damaged shall be immediately replaced with proper work. Such replaced work and the inspection for same shall be at the expense of the Contractor.
- B. Straightening of any materials, if necessary, shall be done by a process and in a manner that will not injure the materials, and which is approved by the Architect. Sharp kinks or bends shall be cause for rejection. Heating will not be allowed.
- C. If defects or damaged work cannot be corrected in the field, the material shall be returned to the shop or new parts furnished, as the Architect directs; the Contractor shall replace all work at his own expense.

3.04 CLEANING

- A. After erection, all surfaces shall be cleaned and left free of all grime and dirt. Remove unused materials, tools, equipment and debris from the premises and leave broom clean.

END OF SECTION

**SECTION 05 5000
METAL FABRICATIONS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. All miscellaneous metal fabrications not classified as structural steel.
- B. Iron and steel fabrications for wood or metal framing, including bracing.
- C. Inserts and anchorages: Furnish only, inserts and anchoring devices for installation of miscellaneous metal work. Provide setting drawings, templates, instructions and directions for installation of anchorage devices. Coordinate delivery with other work.
- D. Miscellaneous nonferrous metal items not specified under other sections.
- E. Fabrication and installation of metal work, including shop and field welding, drilling, cutting, connecting and shop painting.
- F. Miscellaneous shapes, plates, angles, clip angles, supports, bolts, and specialty iron and steel items indicated and as necessary to complete the work, including, but not limited to, the following:
 - 1. Pipe sleeves.

1.02 RELATED REQUIREMENTS

- A. Pertinent Sections specifying Volatile Organic Compound (VOC) Content Restrictions.
- B. Division 06 Sections: Installation of anchorage and support items. Framing connectors for wood framing.
- C. Section 07 6200 - Sheet Metal Flashing and Trim
- D. Section 08 1113- Steel Doors and Frames.
- E. Refer to pertinent sections of Division 09 for interior and exterior painting
- F. Other sections requiring metal fabrications or referencing this section for fabrication and installation.
- G. Pertinent Division 22, 23 and 26 sections: Sleeves and inserts for mechanical piping and ducts, and electrical conduit, bracing and support of mechanical and electrical equipment.
- H. Pertinent sections of Division 33 specifying storm drain piping requiring connection to rain water leaders.

1.03 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix).
- B. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.

- C. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- E. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- F. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.
- G. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
- H. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- I. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- J. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
- K. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- L. ASTM B177/B177M - Standard Guide for Engineering Chromium Electroplating.
- M. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength.
- N. ASTM E 935 - Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings.
- O. AHDGA - American Hot Dip Galvanizing Association.
- P. NAAMM MBG 531 - Metal Bar Grating Manual; The National Association of Architectural Metal Manufacturers; 2000 (ANSI/NAAMM MBG 531).
- Q. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination.
- R. AWS D1.1/D1.1M - Structural Welding Code - Steel.
- S. AWS D1.2/D1.2M - Structural Welding Code - Aluminum.
- T. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer.
- U. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic).
- V. SSPC-SP 2 - Hand Tool Cleaning.

- W. SSPC (PM2) - Painting Manual, Vol. 2, Systems and Specifications; Steel Structures Painting Council; 1995.
- X. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- Y. California Code of Regulations, Title 24, Part 2, California Building Code (CBC), International Building Code with California amendments.
- Z. California Code of Regulations, Title 24, Part 11, California Green Building Standards Code, "CAL-Green".

1.04 SUBMITTALS

- A. See Section 01 3300 - Submittals, for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
 - 1. Include details of cuts, connections, camber, holes, and other pertinent data.
 - 2. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths, sizes and types.
- C. Product Data: For each type of product indicated, demonstrate compliance with specified attributes.
 - 1. Catalog cuts for all manufactured items demonstrating compliance with specified requirements.
 - 2. Structural steel primer paint.
- D. CAL-GREEN Submittals: Product Data – VOC Limits: For adhesives sealants, fillers, primers and coatings, documentation including printed statement of VOC contents, comply with limits specified in related section.
- E. Welding procedures: For welding structural steel as required in accordance with AWS D1.1, submit prequalified joints.
- F. Certification: Copy of approved fabricator's license.
- G. Manufacturer's data: Submit certified copies of the following prior to any fabrication. Include laboratory test reports and other data as required to show compliance with these specifications, including specified standards.
 - 1. Structural steel, including certified copies of mill reports covering the chemical and physical properties.
 - 2. Unfinished bolts and nuts.

1.05 SUBMITTALS FOR RECORD

- A. Section 01 3300 - Submittals: Procedures for submittals. Architect will not review these submittals.

- B. Welders' Certificates: Provide certification that welders to be employed in the work have satisfactorily passed AWS qualification tests within the previous 12 months, and are qualified in the State of California.

1.06 QUALITY ASSURANCE

- A. Design criteria: Design, fabricate and erect miscellaneous metal items complete, in accord with AISC's Design, Fabrication and Erection of Structural Steel for Buildings.
- B. Coordinate the Work under provisions of pertinent sections of Division 01.
- C. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and AWS D1.2/D1.2M and dated no more than 12 months before start of scheduled welding work.
- D. Welding Inspection: All structural welding shall be specially inspected according to CBC 1704A and DSA IR-17-3 except as otherwise provided below.
 - 1. Special inspection shall not be required if welding is done in an approved fabricator's shop licensed in accordance with CBC 1704A.

1.07 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01 6000.
- B. Deliver anchor bolts, anchorage devices, sleeves and inserts, which are to be incorporated into other work in ample time to avoid delay.
- C. Store materials to permit easy access for inspection and identification. Store steel materials off the ground, using pallets, platforms or other supports. Protect steel members, package materials and identifications from deterioration.
- D. Store material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- E. Prevent contact with materials which may cause discoloration or staining. Clean materials which are discolored or stained.
- F. Replacements: In the event of damage, immediately make repairs and replacements necessary to the approval of the Architect and Division of the State Architect without change in contract amount or time.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. VOC Limits for adhesives, sealants, fillers, primers and coatings . Comply with limits specified in related section.

2.02 MATERIALS - GENERAL

- A. General: Furnish new tested stock complying with reference specifications.

- B. Exterior Applications: Provide Type 316 stainless steel for all exterior fabrications and fasteners and locations in contact with pressure-treated wood materials.
- C. Interior Applications: Provide plain steel for interior fabrications and fasteners except where specifically noted to be stainless steel or galvanized. Provide Type 304 stainless steel for fastening of aluminum and stainless steel materials. Provide hot-dipped galvanized fasteners and material for fastening or in contact with pressure treated wood materials in interior applications.

2.03 STEEL MATERIALS

- A. Steel Sections: ASTM A36/A36M.
- B. Steel Tubing: Hot formed, welded or seamless, ASTM A 501, or cold-formed, ASTM A500, Grade B cold-formed.
- C. Plates: ASTM A283/A283M.
- D. Pipe: ASTM A53/A53M, Grade B Schedule 40, black and hot-dip galvanized finish, as indicated.
- E. Slotted Channel Framing: Cold-formed metal box channels (struts) complying with MFMA-4.
 - 1. Size of Channels: As indicated on Drawings.
 - 2. Material: Galvanized steel, ASTM A 653/A 653M, structural steel, Grade 33 (Grade 230); with G90 (Z275) coating; 0.108-inch (2.8-mm) nominal thickness.
 - 3. Material: Cold-rolled steel, ASTM A 1008/A 1008M, structural steel, Grade 33 (Grade 230); 0.0966-inch (2.5-mm) minimum thickness; hot-dip galvanized after fabrication.
 - 4. Slotted Channel Fittings: ASTM A1011/A1011M. Hot dipped galvanized for exterior exposure.
- F. Bars and bar-size shapes: ASTM A 663, Grade 65, or ASTM A 36.
- G. Sheets: ASTM A 653 with zinc-coating in accord with ASTM A 525, G-90.
- H. Carbon steel sheets and strips:
 - 1. Hot-rolled: ASTM A 568 and ASTM A 569, pickled and oiled.
 - 2. Cold-rolled: ASTM A 1008.
 - 3. Galvanized sheets: ASTM A 525, or A 526 with G-90 zinc coating
- I. Steel plate, checkered pattern: Steel with checkered (diamond) pattern, galvanized, ASTM A 525, coating designation G90.
- J. Hot-rolled carbon steel bars and bar-size shapes: ASTM A 575, Grade as selected by fabricator.
- K. Fasteners - General: Select fasteners for type, grade, class and style required for installation, compatible with materials in contact.
 - 1. Bolts, Nuts, and Washers: ASTM A307, Grade A, plain.
 - a. Standard bolts and nuts: Regular square or hexagon head type, ASTM A 307, Grade A.

- b. Lag bolts: hexagon head type, galvanized.
 - c. Machine screws: Cadmium-plated steel, ASTM F 468 and FS FF-S-92.
 - d. Plain washers: ANSI B18.22.1 and FS FF-W-92.
 - e. Anchors: Manufactured by Ramset Fastening System Division, Olin Corp., Rawlplug Co., Diamond Division, General Cable, Hilti or ITT Phillips Drill Division. Provide type best suited for intended application and indicate on shop drawings.
 - f. Lock washers: FS FF-W-84, helical spring type carbon steel.
 - g. Anchor Bolts: ASTM A307.
- 2. Expansion Bolts: Hilti "Kwik Bolt 3" Expansion Anchor Bolts or equal, carbon steel.
 - 3. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors.
 - a. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, unless otherwise indicated.

2.04 STAINLESS STEEL MATERIALS

- A. Stainless Steel Sheet, Strip, and Plate: ASTM A240/A240M or ASTM A666, Type 316L.
- B. Stainless Steel Bars and Shapes: ASTM A276/A276M, Type 316L.
- C. Fasteners - General: Provide Type 316 stainless steel. Select fasteners for type, grade, class and style required for installation, compatible with materials in contact.
 - 1. Provide Type 316 stainless steel at exterior applications and locations in contact with pressure-treated wood materials.
 - 2. Provide stainless steel fasteners for fastening aluminum or stainless steel in all locations.
 - 3. Stainless Steel Bolts and Nuts: Regular hexagon-head annealed stainless steel bolts, ASTM F593 (ASTM F738M); with hex nuts, ASTM F594 (ASTM F836M); and, where indicated, flat washers; Alloy Group 2 (A4).
 - 4. Expansion Bolts: Hilti "Kwik Bolt 3" Expansion Anchor Bolts or equal, stainless steel, ASTM F593 (ASTM F738M) Alloy Group 2 (A4).
 - 5. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors.
 - a. Material for All Locations and Where Stainless Steel Is Indicated: Alloy Group 2 (A4) stainless steel bolts, ASTM F593 (ASTM F738M), and nuts, ASTM F594 (ASTM F836M).
 - 6. Eyebolts: ASTM A193 Grade B8M.
 - 7. Machine Screws: ASTM F593 18-8 Stainless Steel.
 - 8. Lag Screws: ASME B18.2.1, ASTM F593 18-8 Stainless Steel.
 - 9. Plain Washers: Round, ASME B18.21.1, ASTM F593 18-8 Stainless Steel.

10. Lock Washers: Helical, spring type, ASME B18.21.1, ASTM F593 18-8 Stainless Steel.

2.05 FABRICATION

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible, to ensure proper fitting of the work. Allow for trimming and fitting where field conditions preclude accurate measurements or where final dimensions cannot be established prior to fabrication.
- B. Fit and shop assemble items in largest practical sections, for delivery to site.
 1. Minimize field splicing and site assembly. Disassemble only to the extent necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
 2. Complete assembly, including welding, before start of finishing operations. Provide finish surfaces of members exposed in the final structure free of markings, burrs, and other defects.
 3. Use materials and items necessary to complete the work, using the best materials and methods ordinarily used for this type of work whether explicitly specified, indicated and detailed or not.
- C. Fabricate items with joints tightly fitted and secured.
- D. Machine-roll components or elements required to be curved or radiused. Do not field bend or "walk-down". Provide curves true to indicated dimensions, minimizing joints; segmented fabrication not allowed unless specifically noted.
- E. Continuously seal joined members by continuous welds.
 1. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
 2. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
 3. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- F. Use only materials smooth and free of blemishes including pitting, seam marks, roller marks, trade names and roughness.
- G. Fabricate steel members in accordance with drawings and as recommended by A.I.S.C. Verify all dimensions with field conditions prior to fabrication.
 1. Clean, prepare and shop-prime steel members. Do not prime surfaces to be field welded or in direct contact with concrete.
 2. Galvanizing: ASTM A153, ASTM A123; all steel exposed to weather, except locations and items specified to be stainless steel.
 3. Cutting and drilling: Provide holes for fabrication and for attachment of work specified elsewhere. Countersink holes for bolts and screws.
- H. Welding: Comply with the AWS Structural Welding Code, and with the following:

1. Welds shall be free from excessive oxides, nonmetallic inclusions, and gas pockets.
2. Welds shall be uniform in section, smooth in weld metal, feather edged, without overlaps.
3. Surfaces to be welded shall be free from loose scale, rust, paint, or other foreign matter.
4. Tack welds located in way of design welds shall be melted out when encountered in final welding, or shall be thoroughly fused in with final weld.
5. Use proper care and procedures to minimize locked-in stress and distortion.
6. Welder qualification requirements, welding procedure and welding electrodes shall conform to CBC 2204A and most recent editions of AWS D1.1, D1.3; CBC IR-17-3.

2.06 STEEL PIPE RAIN WATER LEADERS (RWL)

- A. Steel pipe or tube rain water leaders: Fabricate to dimensions and details shown, with welded joints ground smooth and flush, hot-dipped galvanized.
 1. Structural Performance: Rain water leaders shall withstand the following structural loads:
 - a. Concentrated Load: 200 lbs., applied non-concurrently, in any direction.
 - b. Uniform Load: 50 lb/ft. applied simultaneously in both vertical and horizontal direction.
 - c. Concentrated loads and uniform loads need not be assumed to act concurrently.
 2. Shop fabricate to greatest extent possible.
 3. Interconnect rainwater leader members by butt-welding or by welding with internal connectors, unless otherwise indicated.
 4. At intersections and changes of direction, notch ends of intersection members to fit contour of pipe and weld all around. Seal weld all joints water-tight.
 5. Form changes in direction of water flow by mitered connections, maintaining cylindrical cross-section of pipe throughout bend without buckling, twisting, cracking or otherwise deforming exposed surface of pipe.
 6. Provide support brackets of sizes and types indicated and with configurations required to suit substrates and framing spacing.

2.07 FINISHES - STEEL

- A. Hot-dip galvanize steel items fully or partially exposed to exterior conditions or to wet environments such as locker rooms, food service, custodial or toilet rooms. Prime paint steel items in all other locations.
 1. Exceptions: Galvanize items to be embedded in concrete, items to be embedded in masonry, and items specified for ____ finish.
 2. Exceptions: Galvanize items to be embedded in concrete or masonry.

3. Exceptions: Do not prime surfaces in direct contact with concrete, where field welding is required, and items to be covered with sprayed fireproofing.
- B. Prepare surfaces to be primed in accordance with SSPC-SP2 SSPC SP-3, "Power Tool Cleaning", minimum. Remove oil, grease and similar contaminants in accordance with SSPC SP-1 "Solvent Cleaning".
 1. Review coating systems specified in other Sections. Provide level of substrate surface finish required or recommended by coating manufacturer for each specified system.
- C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- D. Prime Painting: One coat, primer in accordance with the coating manufacturer's printed instructions. Select products compatible with coating systems specified in other Sections.
- E. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.
- F. Chrome Plating: ASTM B177/B177M, nickel-chromium alloy, thickness of _____, satin finish.
- G. Superior Performance Organic Coating System: AAMA 2605 multiple coat, thermally cured polyvinylidene fluoride system; color as selected from manufacturer's standard colors.
 1. Manufacturers:
 2. Valspar; Fluropon: www.valsparcoilextrusion.com/#sle.
 3. _____.
 4. Substitutions: See Section 01 6000 - Product Requirements.

2.08 FINISHES - STAINLESS STEEL

- A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- B. Directional Satin Finish: ASTM A480/A480M, No. 4.

2.09 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch.
- C. Maximum Misalignment of Adjacent Members: 1/16 inch.
- D. Maximum Bow: 1/8 inch in 48 inches.
- E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work. Correct conditions detrimental to the proper and timely performance of this work before proceeding with installation. Commencement of work indicates acceptance of substrates.

3.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.03 INSTALLATION - GENERAL

- A. Install items plumb and level, measured from established lines and levels, accurately fitted, free from distortion or defects.
- B. Provide temporary bracing or anchors in formwork for items which are to be built into concrete or similar construction.
- C. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous metal items to in-place construction; including threaded fasteners for concrete inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors as required.
- E. Cutting and fitting:
 - 1. Perform cutting, drilling and fitting required for installation of miscellaneous metal items. Fit exposed connections accurately together to form tight hairline joints.
 - 2. Weld connections which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations.
 - 3. Do not weld, cut or abrade the surfaces of exterior units which have been hot dip galvanized after fabrication, and are intended for bolted or screwed field connections.
- F. Field weld components as indicated on drawings or as required to assemble shop-fabricated work on site. If field-welding is not specifically indicated on drawings, option is the Contractor's for efficient assembly.
- G. Perform field welding in accordance with AWS D1.1/D1.1M.
- H. Obtain approval prior to site cutting or making adjustments not scheduled.
- I. Immediately after erection, clean and prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete with the same materials used for shop finishing.

3.04 INSTALLATION - SPECIFIC

- A. Rainwater Leader Installation: Plumb units in each direction.

1. Accurately locate rainwater leaders in proximity to underground storm drain connections. Coordinate with work of other sections for accurate placement and alignment of the work.
2. Secure Rainwater Leaders to walls using wall brackets. Secure brackets and return fittings as follows:
 - a. Wood framing: Stainless steel lag screws.
 - b. Steel Framing: Stainless steel threaded self- tapping screws.
 - c. Masonry or Concrete: Stainless steel threaded tap-in anchor bolts.
 - d. Structural Steel column or member: Weld.
3. Locate supporting brackets at approximately equal intervals, not less than 5'-4" on center, not less than 18 inches from ends, with a minimum of three per supports per unit, and additional brackets within 18 inches of change in direction or substrate mounting material.
4. Connect rain water leaders to storm drains with water-tight connection.

3.05 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.
- C. Maximum Out-of-Position: 1/4 inch.

3.06 PROTECTION

- A. Protect finished work from damage until acceptance by Owner.
- B. Repair and replacement: In the event of damage, immediately make repairs and replacements necessary to satisfaction of Architect without change in contract sum or time.

3.07 CLEAN-UP

- A. When work of this section has been completed, and at such other times as may be directed, remove all trash, debris, surplus materials, tools and equipment from site.
- B. Comply with pertinent requirements of Division 01 sections specifying Contract Closeout.

END OF SECTION

SECTION 06 1000

ROUGH CARPENTRY

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: All labor, materials and equipment and all operations required to complete all rough carpentry and structural framing as indicated on the drawings; to produce shapes and configurations as shown, as required; and as specified herein, including:
 - 1. Structural floor, wall, and roof framing.
 - 2. Floor, wall, and roof sheathing.
 - 3. Rough hardware, framing connectors and fasteners.
 - 4. Treatment of wood.
 - 5. Miscellaneous wood nailers and furring strips, including roof applications, other wood framing, furring, shims or blocking as required to complete the work.
- B. Related Sections:
 - 1. Pertinent sections of Division 01 specifying Quality Control and Testing Agency services.
 - 2. Pertinent sections of Division 01 specifying Structural Product Requirements: Structural Product Options, Substitution procedures and limitations, transportation, handling and storage.
 - 3. Pertinent sections of Division 03 specifying wood formwork construction and/or setting anchors in concrete.
 - 4. Pertinent section of Division 06 specifying wood construction and materials.
 - 5. Pertinent sections of other divisions specifying steel or concrete construction.

1.02 REFERENCES

- A. California Code of Regulations, Title 24, latest adopted edition (herein noted as CBC): Chapter 23 Wood.
- B. American National Standards Institute (ANSI) / American Wood Council (AWC) “NDS - National Design Specification for Wood Construction”.
- C. National Institute of Standards and Technology (NIST) / Engineered Wood Association (APA) “PS 1 - Voluntary Product Standard for Structural Plywood”.
- D. NIST / APA “PS 2 - Performance Standard for Wood-Based Structural-Use Panels”.
- E. NIST “PS 20 - American Softwood Lumber Standard”.
- F. Redwood Inspection Bureau (RIS) “Standard Specifications for Grades of California Redwood Lumber”.
- G. West Coast Lumber Inspection Bureau (WCLIB) “Standard Grading Rules for West Coast Lumber No. 17”.
- H. Western Wood Products Association (WWPA) “Western Lumber Grading Rules”.
- I. American Wood Preservers Association (AWPA) “Book of Standards”.

1.03 SUBMITTALS

- A. Submit in accordance with pertinent sections of Division 01 specifying submittal procedures. Submit for review prior to fabrication. Submittals that do not meet these requirements will be returned for correction without review.
 - 1. Substitutions for products specified require conformance to substitution requirements in Division 01.
 - 2. Review of materials and hardware for substitution to products specified is at the additional expense of the Contractor.
- B. Limitation of Review: Structural Engineer's review will be for general conformance with design intent as indicated in the Contract Documents and does not relieve Contractor of full responsibility for conformance with the Contract Documents. The General Contractor shall review and approve shop drawings prior to submittal to the Architect/Engineer.
- C. Product Data:
 - 1. Submit manufacturer's product data, specifications, and installation instructions for & location of framing connectors, wood preservative materials, application instructions, and fasteners. Include complete, accurate equivalence data when submitting alternate products to those specified. Provide samples of these items upon request.
 - 2. Submit product data and current ICC-ES report for machine-driven nails, fasteners, and equipment, including dimensions of all fasteners, including head, shank diameter and length.
- D. Manufacturer's Certificate: Submit all certifications of physical and chemical properties of materials as specified below in Article titled QUALITY ASSURANCE.
 - 1. Certify that wood products supplied for rough carpentry meet or exceed specified requirements, including specified moisture content.

1.04 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies, refer to pertinent sections of Division 01 and CBC Chapter 17A.
- B. All tests shall be performed by a recognized testing agency as specified in pertinent sections of Division 01.
- C. Inspection of fabricators is required per CBC 1704A.2 unless fabricator is registered and approved by the building official. Wood product quality standards:
 - 1. All wood products to comply with article REFERENCES.
 - 2. Factory-mark each piece of lumber and sheathing with type, grade, mill, and grading agency, except omit marking from surfaces to be exposed with transparent finish or without finish.
 - 3. Sheathing panels to be marked by APA (The Engineered Wood Association).
- D. End-Jointed lumber shall not be used.
- E. Hardware and engineered wood products shall have current ICC ES Evaluation/research reports that are equivalent to products specified.
- F. Employ competent workers experienced in work of the types specified and required.

1.05 MOCK-UP

- A. Construct mock-ups of machine-driven nailed sheathing panels using submitted products and demonstrating conditions indicated. Locate where directed.
- B. Mock-up shall be accepted and approved by the Inspector of Record (IOR) before commencement of machine-driven nailing activity.

- C. Accepted mock-up shall remain exposed for reference for the duration of machine-driven nailing activity.
- D. Remove all mock-ups at the completion of the work.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Comply with pertinent requirements of Division 01.
- B. Delivery: Time delivery and installation of carpentry products to avoid delaying other trades whose work is dependent on or affected by this section and to comply with moisture content, protection and storage requirements.
- C. Keep materials dry at all times. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and sheathing panels to prevent deformation and provide air circulation within stacks.
 - 1. Store materials for which a maximum moisture content is specified only in areas where relative humidity has been reduced to a level where specified moisture content can be maintained.
 - 2. Handle and store materials above ground to prevent damage, contamination, or accumulation of dirt or foreign materials.
 - 3. Provide special protection for horizontal sheathing panels. Deformation of panels due to moisture is not acceptable.

1.07 PROJECT/SITE CONDITIONS

- A. Verify all conditions at project site affecting the work; work to field dimensions as required. Coordinate carpentry installation with size, location, and installation of service utilities.
- B. Sequence rough carpentry installation activities to allow sufficient time for:
 - 1. Review of all submittals.
 - 2. Fabrication of mock-ups and required durations as specified.
 - 3. Indicate submittal review, procurement, mock-up, and testing activities in the project schedule prior to the start of installation. Installation durations shall be based on hand-nailed installation methods specified.
 - 4. Attainment of specified maximum lumber moisture content.

PART 2 PRODUCTS

2.01 DIMENSIONED LUMBER

- A. General
 - 1. Size per industry standards for nominal sizes shown; S4S (sanded four sides).
 - 2. Warped/twisted and excessively checked members shall not be used regardless of grade marks.
 - 3. At the Contractor's option, engineered lumber of equivalent size and material properties may be substituted for solid sawn lumber where material is difficult to source due to length, availability, etc. Submit proposed substitution to Engineer for review prior to purchasing materials.
- B. Moisture content of framing:
 - 1. All lumber to be maximum 19% at time of fastener installation. All lumber to be maximum 19% at time of close-in, unless noted otherwise.
 - 2. The Owner's Testing Laboratory will test for moisture content prior to commencement of close-in.
 - 3. The Contractor shall recognize that excessive shrinkage of lumber results from excess moisture content at the time of installation. The Contractor will compensate for use of such lumber by

- waiting for acceptable moisture content before close in and/or by replacing/repairing lumber that has sagged, twisted, or warped prior to close in.
4. Deviation from this specification would require structural redesign of connections and fasteners.
- C. Sills/ledgers on concrete: No. 2 pressure treated Douglas Fir and as called for on the drawings.
- D. Interior structural framing shall be Douglas Fir (D.F.) with grades as noted below, unless otherwise specified on the drawings. All grades are per WCLIB standard grading rules.
1. All permanently exposed (interior or protected from weather) framing shall be select structural grade with no box heart.
 2. Except per 1 above, unless noted otherwise, minimum grades are:
 - a. Floor/roof joists/rafters (2x) and 2x8 & larger studs & plates: D.F. No. 1
 - b. 2x4 and 2x6 studs and plates: D.F. No. 1
 - c. 4x and larger: D.F. No. 1
 - d. Blocking: D.F. No. 2
 - e. 6x8 and larger posts and beams may be SGL/CGL per below unless noted otherwise on the drawings.
- E. Framing not otherwise shown or specified: Douglas Fir construction grade per WCLIB paragraphs applicable to uses and sizes required.

2.02 STRUCTURAL SHEATHING PANELS

- A. Plywood: Structural sheathing shall conform to product standard PS-1 or PS-2. All panels shall have a minimum bond classification of “Exposure 1” and bear the trademark of the Engineered Wood Association (APA) or other qualified agency. Grades shall be “Rated Sheathing” or “Structural 1” as required on the drawings.
- B. Oriented Strand Board (OSB): All structural OSB shall be grade marked by a qualified agency for conformance with Product Standard PS-2 and shall be fabricated with exterior glue. Grades shall be as required on the drawings.

2.03 TREATED WOOD:

- A. Treated Lumber and Plywood: Comply with requirements of AWPA Standard U1. See Standard U1 for “Use Category” designations. Do not provide higher Use Category lumber than that specified. Maximum moisture content shall be the same as required for “dimensioned lumber” as specified above.
- B. Preservative Treated Lumber
1. General
 - a. Preservatives shall be waterborne. Preservative retention rate shall be as required per AWPA Standards U1 & T1. Lumber shall be Douglas Fir No. 2 (or better). Cut faces of treated wood shall be brush treated (two complete applications) prior to installation.
 - b. Lumber less than 8 inches above grade and lumber less than 6 inches above exterior hard-surface flatwork shall be treated.
 - c. Each piece of wood shall be stamped by the wood preservative applicator to identify its treatment and preservative retention.
 2. Lumber at interior, non-weather exposed locations installed adjacent to concrete or masonry shall be Use Category UC2. Examples include sill plates & ledgers and lumber in contact with roofing, flashing, or water proofing. Borate treated lumber meeting AWPA UC2 is acceptable in this application.
 3. Lumber at exterior locations, not in contact with soil/ground, shall be Use Category UC3B. Examples include Douglas Fir decking and deck framing.

4. Lumber in contact with soil/ground shall be Use Category UC4A. Examples include timber retaining walls.
5. Poles, posts, and sheathing panels shall be treated as recommended by AWP Standard U1 per use and exposure.
6. Maximum Volatile Organic Compound (VOC) content of field-applied preservative shall meet local air quality standards and the California Green Building Code. Provide either of the following:
 - a. Copper Azole (CA-B) per ICC-ES AC326.
 - b. Alkaline/Copper/Quaternary (ACQ).

2.04 FASTENERS AND ACCESSORIES

- A. General requirements for fasteners:
 1. Fasteners shall be of adequate size, spacing, and number to resist design loads under intended use, and types shall be appropriate for the materials or conditions for which used.
 2. Provide washers, pre-drilling, etc. as required for proper installation and to prevent damage to framing.
 3. Fasteners shall be hot-dip galvanized (ASTM A153), mechanically galvanized (ASTM B695 class 55 minimum), stainless steel (type 303, 304, 305, or 316), silicon bronze, or copper by approved methods for the following applications:
 - a. Exterior, exposed use.
 - b. In contact with preservative or fire-retardant treated wood.
 - c. Nails in contact with preservative treated wood containing ammonia shall be stainless steel.
 4. Fasteners in moist corrosive atmosphere to be of stainless steel (type 303, 304, 305, or 316).
 5. Where the retention level of ACQ or MCQ preservative is greater than 0.40 pcf, CBA-A preservative is greater than 0.41 pcf, or CA-B preservative is greater than 0.21 pcf, provide stainless steel fasteners (type 303, 304, 305, or 316).
 6. All fasteners specified by manufacturer shall be installed in framing hardware, unless noted otherwise.
 7. At borate treated lumber a clear zinc coating per ASTM F1941 is acceptable.
- B. Nails and nailing not otherwise shown or specified:
 1. Comply with requirements of governing building code.
 2. For securing materials to hardened concrete or masonry provide hardened steel masonry nails or Simpson Strong-Tie "Titen" screws.
 3. For framing and general woodwork: Common bright wire nails (not box nails) with centered full-round heads per ASTM F1667 including Supplement S1. 16d cement coated sinker nails may be used in lieu of common nails for framing, where noted on the drawings. Unless otherwise noted on drawings, nail sizes shall be as follows:
 - a. 8d Common: 0.131"ø x 2-1/2" long with 0.281"ø head.
 - b. 10d Common: 0.148"ø x 3" long with 0.312"ø head.
 - c. 16d Common: 0.162"ø x 3-1/2" long with 0.344"ø head.
 4. Nails for sheathing panels shall be of common wire with full round heads and shall be of sufficient length to fully develop the nails.
 5. Machine-driven nails of all types must comply with the requirements of this section. All proposed nails shall match diameter and penetration of specified nails.
 6. Staples shall conform to length and gauges specified and shall be installed to match specified patterns and spacing.
 7. Power Actuated Fasteners (PAF): Use only as approved by the Architect/Engineer; operators shall be qualified.
- C. Bolts: Malleable iron washers or steel plate washers, unless otherwise shown, shall be provided under all bolt heads and nuts.

1. Machine Bolts: ASTM A307 and ANSI/ASME B18.2.1, standard semi-finished machine bolts as shown or required. Nuts shall be standard size unless noted otherwise and shall be per ASTM A563.
 2. Anchor bolts or threaded rod anchors shall conform to ASTM F1554, ASTM A307, or ASTM A36. Anchor bolts shall be headed or end in two nuts tightened against one another, unless noted otherwise. Provide embedded plate washer as indicated on drawings. No upset threads allowed. No L or J bolts allowed.
- D. Lag screws: Standard hex lag screws per ANSI/ASME B18.2.1.
- E. Wood screws: Standard wood screws per ANSI/ASME B18.6.1.
- F. Framing hardware: Fabricated sheet metal timber framing connectors shall be manufactured from painted or galvanized G90 steel by Simpson Strong-Tie (connectors specified on drawings are per Simpson Strong Tie, or approved equivalent. Connectors shall be at least 16 gauge material, (1/8 inch plate materials where welded), unless otherwise noted, punched for nailing. All heavy hardware to be fabricated from A36 steel per Division 05, Metals. All hardware intended for exterior exposed use shall be galvanized per G185 ASTM A653 or stainless steel.
1. For contact with preservative or fire-retardant treated wood, provide minimum G185 galvanizing per ASTM A653.
 2. Nails and nailing shall conform to the manufacturer's instructions with a nail provided for each punched hole. Nails to be used with framing accessories are subject to the requirements specified in this Section for fasteners and anchors.
- G. Subfloor Glue: Water proof, water base, air cure type, cartridge dispensed conforming to APA Standard AFG-01 or ASTM D3498. Maximum Volatile Organic Compound (VOC) shall meet local air quality standards and the California Green Building Code.

2.05 SOURCE QUALITY CONTROL

- A. The Testing Agency, as specified in the Article QUALITY ASSURANCE, will perform testing for moisture content of all lumber at time of fastener installation.
- B. The Testing Agency will submit reports as specified in Division 01.

PART 3 EXECUTION

3.01 REQUIREMENTS FOR STRUCTURAL FRAMING

- A. General
1. Refer to drawings for layouts, notes and details, provide framing as required; comply with governing building code requirements.
 2. Provide framing to achieve true alignments as surfaces receiving finish materials.
 3. It shall be the responsibility of the Contractor to provide and install all wood blocking, furring strips, or grounds detailed or required to provide anchorage for all finishes, accessories, fixtures, etc. as required to complete all work. All blocking and/or backing shall be securely bolted or otherwise anchored in place.
 4. Contractor shall be responsible for layout of anchor bolts, and other hardware embedded in concrete when placed by other trades.
 5. Provide and install all structural framing, blocking, fasteners, brackets, clips, etc. as required to complete work specified in the Construction Documents.
- B. Framing
1. Sill Plates and Ledgers:

- a. Sill plates and ledgers on concrete shall be anchored with bolts, unless noted otherwise, shall have full bearing on concrete, and shall be placed for sheathing panel nailing as indicated. All bolt nuts shall be provided with a cut plate steel washer for bearing on wood.
 - b. Provide a minimum of two sill anchor bolts per sill piece with a bolt no less than 4 ½" and no more than 12" from the end of the sill. Bolts to be 5/8" diameter x 12" (18" at curb) long at 48" on centers, unless otherwise shown or noted. Provide additional anchor bolts each side of a notch or hole, as per a typical plate splice, where notch or hole is in excess of 1/3 the plate width. At shear walls, provide a plate washer 3" x 3" x 0.229" minimum between the sill and nut at anchor bolts. Plate washer to extend within ½ inch of the structural wall sheathing. Offset and/or stagger anchor bolts, or provide larger plate washer as required.
 - c. Anchor bolt holes in sill plates or ledgers shall be 1/16" maximum larger than anchor bolt.
2. Stud Walls and Framing:
 - a. Cut studs and posts with square ends, unless otherwise shown or noted. All posts and beams shall be "cut to bear" unless otherwise detailed.
 - b. All studs in walls shall be placed with the shortest dimension parallel to the run of the wall. Bearing studs shall extend full height to be the supporting framing as shown; non-bearing studs shall extend to the supporting framing.
 - c. Provide double studs on each side of all openings, unless shown or noted otherwise.
 - d. All openings in stud walls and partitions shall be framed with headers across the top, as shown, with a minimum size (6" nominal depth x stud width) resting on short cripple studs, and as shown on the drawings.
 - e. All stud partitions and walls shall have horizontal solid blocking not less than 2x and of the same width as the stud, fitted and nailed into the studs at mid-height of stud, for studs over 8 feet in height, except as otherwise shown or specified. This blocking shall be so spaced that there shall be no concealed air spaces greater than eight feet in any dimension.
 - f. Stud partitions containing plumbing, heating or other pipes shall be so framed as to give proper clearance for piping. Plumbing, heating and vent pipes exceeding 1-1/2" in inside diameter shall not be placed in partitions used as bearing or shear walls unless completely furred clear of the wall. No notching shall be allowed. Pipes shall be placed in the center of the plate using a neat bored hole and the plates shall be strapped on each side with 3" x 36" x 14 gauge steel punched for 10d nails 3" on center, staggered, or as shown on the drawings.
3. Top Plates
 - a. Top plates shall be double, set single. Corners where stud wall or partitions meet shall be framed with studs on all surfaces and blocking to form a "rigid" corner with nailing for all corners. Double top plates shall be lapped at corners. Lap splices and nailing per the drawings.
4. Floor, Roof and Ceiling Framing
 - a. Joists and beams shall be accurately aligned and the position and spacing of all joists and beams shall be as shown and be coordinated with other framing and to other trades prior to actual construction.
 - b. Place all joists and beams with crown up. Cantilevered joists and beams shall be placed with the crown down.
 - c. Cutting of wood girders, beams or joists for electrical and mechanical lines shall be limited to cuts and bored holes not deeper than 1/5 of the beam depth from the top and located not farther from the support than three times the beam depth and not less than the beam depth. Cuts in excess of this, or single bored holes with a diameter of more than 1" are not permitted without special provisions for framing the beams. Location of all cuts in framing shall receive the prior review of the Architect/Engineer.
 - d. Provide vent holes in rafters and/or blocking as shown and/or directed by the Architect.

3.02 STRUCTURAL SHEATHING

A. General

1. Sheathing nailing shall be as required on the drawings. Do not overdrive (Do not break skin of sheathing face sheet). Over driving will be cause for rejection.
 2. Form sheathing may be re-used for concealed sheathing provided the lumber at the time of re-use is approved by the Architect, meets with the framing grade requirements specified herein, is in good condition, and is thoroughly cleaned with all nails removed.
 3. Pneumatic nailing devices shall be adjustable so that nail heads do not penetrate skin of sheathing. Contractor shall submit equipment and nails for review prior to use. Refer to PART 2 for other nailing requirements.
- B. Roof and Floor Sheathing: lay with face grain perpendicular to roof rafters, roof trusses or floor joists. Stagger sheets. Block all unsupported sheet edges with 2x material unless noted otherwise.
- C. Wall Sheathing: Lay with face grain either parallel or perpendicular to studs. Exposed bottom edges shall be sealed as recommended by manufacturer. Block all unsupported sheet edges with 2x materials unless noted otherwise.

3.03 ROUGH HARDWARE

- A. General: Nails, spikes, screws, fabricated sheet metal anchors, ties, hangers and any other materials shown or required for the attachment of wood to concrete and wood to steel and wood to wood shall be furnished and installed as part of this work.
- B. Framing Nailing: All framing nailing shall conform to minimum requirements of the Building Code, and with details shown on the drawing.
- C. Bolts, Lag Screws and Washers:
1. Bolts in wood shall be machine bolts unless otherwise noted and shall be of such length that the bearing length of the threads does not exceed $\frac{1}{4}$ of the full bearing length in the member holding the threads. Bolt holes in wood shall be $\frac{1}{32}$ " oversized. Bolt holes for sill plates may be $\frac{1}{16}$ " maximum oversize. Holes in steel shall be $\frac{1}{16}$ " oversize. See Section 3.1 for anchor bolts at sill plates and ledgers.
 2. Provide square plate or malleable iron washer and nut at head where bearing is against wood; cut washer under nut where it is against steel. Washer will not be required under head of carriage bolts. Provide malleable iron washers where exposed.
 3. All nuts shall be tightened when placed and retightened at completion of the job or immediately before closing with final construction.
 4. Lag screws shall be screwed (not driven) into place. Drill pilot hole to 70% of shank diameter. Drill clearance hole to full shank diameter and depth of unthreaded screw length.
- D. Wood Screws: Minimum penetration is 10 diameters unless noted otherwise. Where fastening hardwood timber species or where wood tends to split, provide pilot hole 70% of screw shank diameter.
- E. Proprietary Fasteners and Hardware: Install per manufacturer's published installation instructions (MPII) and code approval report (e.g. ICC ESR, IAPMO ER, etc). Provide MAX quantity, size, and length of fastener at hardware (i.e. joist hangers, framing, clips, etc) unless otherwise noted per plan.

3.04 INSTALLATION OF ACCESSORIES AND MISCELLANEOUS WOOD

- A. Coordinate installation of wood decking, metal-web wood joists, glued-laminated wood construction, shop-fabricated wood trusses, and wood I- joists.
- B. Curb roof openings except where prefabricated curbs are provided. Form corners by alternating lapping side members. Fasten curbs corner-to-corner and to rafters with framing connectors configured for this application.

- C. Blocking:
 - 1. Solid block joists and rafters over all supports with blocking of the same size and material as the joist or rafter.
- D. Furring:
 - 1. Nominal 1 inch x 3 inch minimum, continuous and spaced at 16 inches on center, maximum.
 - 2. Install plumb, rigid, and level. Shim where necessary to provide a true, even plane suitable to receive the finish required.
 - 3. Attach to concrete and masonry as shown in the contract drawings.
- E. Install miscellaneous metal angles, bolts, and other items; secure into formwork where embedded in concrete.
- F. Install accessory items not otherwise set under other sections; after completion of painting and other finishing work; in locations shown or directed by the Architect. Set items plumb, level, and secure using appropriate fastening as applicable.

3.05 FIELD APPLIED WOOD TREATMENT

- A. Field treat all end cuts and holes in preservative treated materials per PART 2.
- B. Apply two brush coats; or full-immersion dip not less than 15 minutes; or as required to thoroughly saturate all surfaces after cutting.
- C. Air dry 2-hours minimum before installation.

3.06 TOLERANCES

- A. Framing Members: 1/4 inch from true position, maximum.
- B. Surface Flatness of Floor: 1/8 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.
- C. Variation from Plane (Other than Floors): 1/8 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum. Provide framed substrates meeting requirements for application of finishes specified in other sections.
- D. Exposed surfaces shall be free from dents and tool marks, unsanded rough or torn faces and corners, and other defects.

3.07 FIELD QUALITY CONTROL

- A. The Testing Agency, as specified in the Article QUALITY ASSURANCE, will perform the following tests and submit reports as specified in Division 01:
 - 1. Moisture content of all lumber at time of close-in.
 - 2. Periodic special inspection of nailing, bolting, and other fastening within the seismic-force-resisting system including shear walls, wood diaphragms, etc. per CBC Section 1705A.13.2.
 - 3. Special inspection of high load diaphragms per CBC Section 1705A.5.1 where designated on documents.

3.08 ADJUSTING

- A. Replace all defective work at Contractor's expense.
- B. Replace defective or damaged work with conforming work.

- C. Correct defects using means that will not injure the materials.
- D. Replace defective or damaged work which cannot be corrected in the field with new work, or return defective items to the shop for repair.
- E. Repair or replace framing lumber sagged, twisted or warped due to shrinkage from excessive moisture content at time of installation, or from other causes.
- F. Adjust to meet specified tolerances.
- G. Architect/Engineer shall review all proposals for the repair or replacement of damaged, defective, or missing work.
- H. Pay expenses incurred by Owner for Architect/Engineer's costs for (re-)design and obtaining approvals of Authorities Having Jurisdiction (AHJ) necessitated by incomplete, inefficiently scheduled, improperly performed, defective or nonconforming work.
- I. Pay expenses due to re-testing and re-inspection necessitated by incomplete, inefficiently scheduled, improperly performed, defective or nonconforming work.

3.09 CLEANING AND PROTECTION

- A. Clean all surfaces upon completion of erection, leave free of grime and dirt. Remove unused materials, tools, equipment, and debris from the premises and leave surfaces broomed clean.
- B. Waste Disposal: Comply with the requirements of pertinent sections of Division 01 specifying cleaning and disposal.
 - 1. Comply with applicable regulations.
 - 2. Do not burn scrap on project site.
 - 3. Do not burn scraps that have been pressure treated.
 - 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
- C. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
- D. Prevent sawdust and wood shavings from entering the storm drainage system.
- E. Protect work from damage by subsequent operations.

END OF SECTION

**SECTION 08 1113
HOLLOW METAL DOORS AND FRAMES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated hollow metal doors and frames.
- B. Thermally insulated hollow metal doors with frames.

1.02 RELATED REQUIREMENTS

- A. Pertinent Sections specifying Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 01 8113 - Sustainable Design Requirements.
- C. Section 08 7100 - Door Hardware.
- D. Section 08 8000: Glass for doors and borrowed lites.

1.03 ABBREVIATIONS AND ACRONYMS

- A. ANSI: American National Standards Institute.
- B. HMMA: Hollow Metal Manufacturers Association.
- C. NAAMM: National Association of Architectural Metal Manufacturers.
- D. NFPA: National Fire Protection Association.
- E. SDI: Steel Door Institute.
- F. UL: Underwriters Laboratories.

1.04 DEFINITIONS

- A. Exterior doors: Doors exposed in whole or in part to the weather.

1.05 REFERENCE STANDARDS

- A. AAMA 502 - Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
- B. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights.
- C. ADA Standards - 2010 ADA Standards for Accessible Design.
- D. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors.
- E. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100).
- F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

- G. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable.
- H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
- I. ASTM E283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- J. ASTM E1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference.
- K. ASTM E783 - Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors.
- L. BHMA A156.115 - Hardware Preparation in Steel Doors and Frames.
- M. ICC A117.1 - Accessible and Usable Buildings and Facilities.
- N. NAAMM HHMA 820 - Guidelines for Glazing of Hollow Metal Transoms, Sidelights and Windows.
- O. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames.
- P. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames.
- Q. NAAMM HMMA 840 - Guide Specifications For Receipt, Storage and Installation of Hollow Metal Doors and Frames.
- R. NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames.
- S. SDI 117 - Manufacturing Tolerances for Standard Steel Doors and Frames.
- T. California Code of Regulations, Title 24, Part 2, California Building Code (CBC), International Building Code with California amendments.
- U. California Code of Regulations, Title 24, Part 11, California Green Building Standards Code, "CAL-Green".
- V. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

1.06 SUBMITTALS

- A. See Section 01 3300 - Submittals, for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.

- C. CAL-GREEN Submittals: Product Data – VOC Limits: For adhesives sealants, fillers, primers and coatings, documentation including printed statement of VOC contents, comply with limits specified in related section.
- D. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.
- E. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project. Include 1 copy of NAAMM HMMA-820.
- F. Certificates: Provide manufacturer's certification of the following:
 - 1. Products comply with referenced standards.
 - 2. Each and every frame and hollow metal window, sidelite provided are UL listed and labeled for the fire rating indicated at the sizes shown.
- G. Manufacturer's Qualification Statement.

1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Provide hollow metal doors and frames from SDI Certified manufacturer: www.steeldoor.org/sdicertified.php/#sle.
- B. Maintain at project site copies of reference standards relating to installation of products specified.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Hollow Metal Doors and Frames:
 - 1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com.
 - 2. Republic Doors, an Allegion brand: www.republicdoor.com/#sle.
 - 3. Steelcraft, an Allegion brand: www.allegion.com/us.
 - 4. Substitutions:

2.02 PERFORMANCE REQUIREMENTS

- A. VOC Limits for adhesives, sealants, fillers, primers and coatings . Comply with limits specified in related section.

- B. Provide products and assemblies complying with recommendations of NAAMM Tech Notes HMMA-820 TN03-07 and tested to the following performance:
 - 1. Air Leakage Laboratory Test: Maximum of 0.06 cu ft/min sq ft of wall area, when tested in accordance with ASTM E283 at 1.57 psf pressure differential across assembly.
 - 2. Water Penetration Resistance: No uncontrolled water as described in paragraph "Weather Resistance" above, when tested in accordance with ASTM E331 at pressure differential of 1.57 lbf/sq ft.
- C. Requirements for Hollow Metal Doors and Frames:
 - 1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
 - 2. Accessibility: Comply with ICC A117.1, **2025 CBC Chapter 11B** and ADA Standards.
 - 3. Exterior Door Top Closures: Flush end closure channel, with top and door faces aligned.
 - 4. Door Edge Profile: Hinged edge square, and lock edge beveled.
 - 5. Typical Door Face Sheets: Flush. Refer to Door Schedule for additional information.
 - 6. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Flush.
 - 7. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- D. Hollow Metal Panels: Same construction, performance, and finish as doors.
- E. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

- A. Door Finish: Factory primed and field finished.
- B. Exterior Doors: Thermally insulated.
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 3 - Extra Heavy-duty.
 - b. Physical Performance Level A, 1,000,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model Types as indicated on Drawings.

- d. Door Face Metal Thickness: 16 gage, 0.053 inch, minimum.
 - 2. Door Core Material: Vertical steel stiffeners with fiberglass batts.
 - 3. Door Thermal Resistance: R-Value of 4.
 - 4. Door Thickness: 1-3/4 inch, nominal.
- C. Interior Doors, Non-Fire Rated:
- 1. Door Thickness: 1-3/4 inch, nominal.

2.04 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Exterior Door Frames: Full profile/continuously welded type.
 - 1. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with A40/ZF120 coating.
 - 2. Frame Metal Thickness: 12 gage, 0.093 inch, minimum.
 - 3. Weatherstripping: Separate, see Section 08 7100.
- D. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
 - 1. Frame Metal Thickness: 14 gage, 0.067 inch, minimum.

2.05 FRAME FABRICATION

- A. Cut-out, reinforce, punch and tap for mortise hardware. Where frames are grouted fabricate mortises in frames with mortar-tight back cover. Punch frames and provide silencers except where scheduled to have door seals.
- B. Reinforce for surface hardware. Reinforce in accordance with ANSI A115 and SDI-107 except as specified for material gauge.
 - 1. Hinge: No. 7 gauge; 1-1/4-inch by 10-inch, minimum.
 - 2. Strikes: No. 16 gauge formed combination reinforcement and dust cover.
 - 3. Flush bolts, closers, and other surface mounted hardware: No. 12 gauge.

2.06 ACCESSORIES

- A. Glazing: , factory installed.
- B. Removable Stops: Formed sheet steel, shape as indicated on drawings, mitered or butted corners; prepared for countersink style tamper proof screws.

- C. Mechanical Fasteners for Concealed Metal-to-Metal Connections: Self-drilling, self-tapping, steel with electroplated zinc finish.
- D. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.
- E. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 PREPARATION

- A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.03 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Fill all spaces between frame anchors and structure with approved shim material.
- C. Coordinate frame anchor placement with wall construction.
- D. Install door hardware as specified in Section 08 7100.
- E. Install exterior frames and glazing to comply with glazing installation requirements of NAAMM HMMA-820 and Section 08 8000.

3.04 TOLERANCES

- A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.
- B. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.05 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for independent field testing and inspection requirements, and requirements for monitoring quality of specified product installations.
- B. Provide field testing of installed hollow metal frames and windows by independent laboratory in accordance with AAMA 502 and AAMA/WDMA/CSA 101/I.S.2/A440 during construction process and before installation of interior finishes.

1. Perform tests on three individual frames or windows in designated locations as directed by Architect.
 2. Conduct tests on individual frames or windows prior to 5 percent, 50 percent, and 90 percent completion of this work.
 3. Field test for water penetration in accordance with ASTM E1105 using Procedure B - cyclic static air pressure difference; test pressure shall not be less than 1.57 psf.
 4. Field test for air leakage in accordance with ASTM E783 with uniform static air pressure difference of 1.57 psf.
- C. Repair or replace fenestration components that have failed designated field testing, and retest to verify performance complies with specified requirements.

3.06 ADJUSTING

- A. Adjust for smooth and balanced door movement.
- B. Clean and restore soiled surfaces. Remove scraps and debris, and leave site and a clean condition.
- C. Protect completed work from damage. Replace damaged work.

3.07 SCHEDULE

- A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

SECTION 10 0610

EXTERIOR SIGNAGE

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Work Included: Installation of exterior traffic signage and related work as shown on the drawings and/or specified herein.
- B. Related Sections include:
 - 1. Section 10 1400 “Signage” for interior signage and exterior building signage
- C. References:
 - 1. State of California Maintenance Manual, latest editions.
 - 2. State of California Traffic Manual, latest edition.
 - 3. Regulations, standards, and tests of the State of California Materials and Research Division.
 - 4. State of California Standard Plans and Specifications.
 - 5. Americans with Disabilities Act.
 - 6. California Building Code, 2025 Edition.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer’s product data describing materials and signs.
- B. Shop Drawings: Shop drawings with letter style and general layout for each sign type, with sizes, edge and corner treatment, and mounting methods shown.
- C. Selection Samples: For each finish specified, two complete sets of color chips representing manufacturer’s full range of available colors, patterns and finishes.
- D. Verification Samples: For each finish product specified, one full-size sign representing actual product, color, patterns, and finishes. Include method if raised symbols and copy.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturer’s recommendations for delivery, storage and handling.
- B. Materials shall be delivered to the location in unopened, labeled factory containers. Upon delivery, materials shall be inspected for damage. Deficient materials shall not be used.

1.5 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.6 PERFORMANCE REQUIREMENTS

- A. All work shall be done to the satisfaction of the Owner or Owner's representative.
- B. Manufacturer's certificates showing conformance with this specification shall be delivered to Owner with each shipment of materials and equipment delivered to the job site.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers: As selected by the Architect.

2.2 MATERIALS

- A. Traffic control sign panels shall be of the type, size, shape, and pattern designated or called for on the plans and detail drawings. Sign faces shall be of reflectorized porcelain enamel unless otherwise specified on the plans or detail drawings.
- B. Posts for traffic control signs, unless designated to be mounted on traffic signal or electrolier standards, shall be two (2) inch I.D. steel pipe conforming to the requirements of Section 56-2.02A of the State Standard Specifications.
- C. Mounting hardware for traffic control signs shall conform to the applicable requirements and specifications contained in the State of California Department of Transportation "Standard Plans" publication, latest edition.
- D. Concrete bases for traffic control sign posts shall be Class "B" Portland cement concrete of the shape and dimensions shown or called for on the plans and detail drawings. Replace Portland cement in concrete with at least 30% of flyash or slag.

PART 3 EXECUTION

- 3.1 Traffic control signs shall be installed in conformance with the applicable requirements of the State of California Maintenance Manual.
- 3.2 After installation, damage to traffic sign faces shall be touched up as required to the satisfaction of the Engineer.

END OF SECTION 10 0610

SECTION 10 1400
SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Room and door signs with raised tactile letters and braille.
- B. Interior directional and informational signs with raised tactile letters and braille.
- C. Plaque.
- D. Vinyl Graphics.

1.02 RELATED REQUIREMENTS

- A. Pertinent Sections specifying Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 01 8113 - Sustainable Design Requirements.

1.03 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design.
- B. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
- C. NFPA 170 - Standard for Fire Safety and Emergency Symbols; 2021
- D. California Code of Regulations, Title 24, Part 2, California Building Code (CBC), International Building Code with California amendments.
- E. California Code of Regulations, Title 24, Part 11, California Green Building Standards Code, "CAL-Green".
- F. Standards for jurisdiction where project is located.

1.04 SUBMITTALS

- A. See Section 01 3300 - Submittals for submittal procedures.
- B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.
- C. CAL-GREEN Submittals: Product Data – VOC Limits: For adhesives sealants, fillers, primers and coatings, documentation including printed statement of VOC contents, comply with limits specified in related section.
- D. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
 - 1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.

2. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
3. Submit for approval by Owner through Architect prior to fabrication.
- E. Shop Drawings: Indicate sign styles, lettering font, foreground and background colors, locations, overall dimensions of each sign.
- F. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
- G. Manufacturer's Installation Instructions: Include installation templates and attachment devices.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum Five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Package signs as required to prevent damage before installation.
- B. Package room and door signs in sequential order of installation, labeled by floor or building.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

- A. VOC Limits for adhesives, sealants, fillers, primers and coatings . Comply with limits specified in related section.
- B. Conform to applicable code for requirements..
 1. C.C.R., Title 24, Part 2. California Building Code, Sections 1009.8, 1009.9, 1023.8, 1023.9, 1023.10 and 11B-703 for requirements governing signage design, location and attributes.
 2. Braille Symbols: California Contracted Grade 2 Braille symbols shall be used per CBC 11B-703.3. Provide only domed Contracted Grade 2 Braille symbols with dimensions in accordance with Table 11B-703.3.1.
 3. Signs shall be field-inspected per CBC 11B-703.1.1.2.
- C. All signs and identification devices shall be inspected and require approval by enforcing agency after installation to ensure proper size and spacing of Braille dots, and proportion and type of raised characters are in compliance. Approval required prior to issuance of a final certificate of occupancy.

2.02 MANUFACTURERS

- A. Plaque Signs:
 1. ASI Sign Systems, Inc.; www.asisignage.com.
 2. Compliance Signs, www.compliancesigns.com.

3. Mohawk Sign Systems, www.mohawksign.com .
4. Rowmark, LLC.;Product DurMark; www.rowmark.com
5. Acrylite; www.acrylite.co. (Acrylic Signs only)
6. Substitutions: See Section 01 6000 - Product Requirements.

B. Vinyl Graphics:

1. 3M / Commercial Products Division; Product 3M Premium Grade Vinyl: 3M Center, Building 220-6W-06, Post Office Box 33220, St. Paul, Minnesota 55133-3220: Telephone 800-374-6772.
2. Substitutions: See Section 01 6000 - Product Requirements.

2.03 SIGNAGE APPLICATIONS

& 2025 CBC Chapter 11B

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
 1. Sign Type: Flat signs with engraved panel media as specified.
 2. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
 3. Character Height: 1 inch.
 4. Sign Height: 3 inches, unless otherwise indicated.
- C. Interior Directional and Informational Signs:
 1. Sign Type: Same as room and door signs.
 2. Assistive Listening Sign: Pictogram and copy shown on Drawings.
 3. Other sign types indicated on the Drawings.
 4. Wording of signs is scheduled on drawings.
- D. Plaque: See Allowance for details.

2.04 PLAQUE SIGNS

- A. **Acrylic Signs:** Signs made from a transparent, durable, and lightweight plastic-like material that is similar to glass. Signs shall comply with Americans with Disabilities Act (ADA) , California Building Code (CBC) and requirements indicated for quantities, sizes, layouts, materials, finishes, color, etc. as specified in the Graphics Schedule, Drawings, and Specifications.
 1. Exterior durability rating: 5-10 years minimum.
 2. Colors: Custom, as indicated by Architect.

3. Raised Characters:
 - a. Comply with applicable provisions of ANSI/ICC A117.1, including Braille.
 - b. Character Color: As selected by Architect.
 - c. Character Font: As Indicated on Drawings.
 - d. Character Stroke Width: As required by referenced codes, 1/8 inch.
 - e. Character Height: As indicated. If not shown, provide 1 inch.
 - f. Character Edges: Square.
 - g. Character Case: Upper case only.

2.05 VINYL GRAPHICS

- A. Adhesive Vinyl Graphics of International Symbol of Accessibility (ISA) for installation on glass or similar substrates.
- B. Base Material: Premium Grade with an outdoor durability rating of five years.
 1. Color: Provide as shown on Drawings. If no colors are indicated, provide International Blue with white pictograms..

2.06 PLAQUES

2.07 ACCESSORIES

- A. Interior Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.
- B. Exterior Screws: Stainless steel.
- C. Mounting Hardware: Vandal-proof screws, stainless steel, size recommended by manufacturer to suit applications and resist applied loads.
- D. Adhesive: 3M Corporation, "VHB", applied in 5 mil thickness covering entire back of sign plaque without void or bubble.
- E. Silicon Adhesive: Silglaze II #2801 GE Clear - Silicone Sealant / Adhesive.
- F. Accessories and materials required for complete installation as indicated.

PART 3 EXECUTION

3.01 COORDINATION

- A. For signs supported by or anchored to permanent construction such as building such as building fascias, advise installers about specific requirements for placement of anchorage devices and similar items to be used for attaching signs.

3.02 EXAMINATION

- A. Confirm visibility of site signage and graphics in indicated locations. Do not install signs in locations where they will not be visible or where they will obstruct visibility of other related building elements, such as exit signage or life safety equipment provided under other contracts or sections. Request direction from Architect in the event of conflict with signage and building elements.
- B. Verify that substrate surfaces are ready to receive work.
- C. Clean substrates to receive adhered vinyl graphics or tape adhesive using means recommended by adhesive manufacturer that will not damage substrates. Remove contamination and materials that might impede film adhesion.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install signs after surfaces are finished, in locations indicated.
- C. Install neatly, with horizontal edges level.
- D. Locate signs and mount at heights indicated on drawings and in accordance with ADA Standards and **ICC A117.1** & **2025 CBC Chapter 11B and ICC A117.1**.
- E. Install signage and graphics plumb, level and proportionally spaced or kerned as required for uniform appearance; centered on, or aligned with related building elements, measured from established lines and levels, accurately fitted, free from distortion or defects.
- F. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing items to in-place construction; including threaded fasteners for concrete inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors as required.
- G. Install vinyl graphics on clean substrates in accordance with vinyl manufacturer instructions, flat, smooth, free of defects, bubbles dust, blemishes and air pockets.
- H. Plaque Mounting at all other interior locations: Provide double stick tape and silicone.
- I. Plaque Mounting at all other exterior locations: Provide double stick tape and anchorage devices and fasteners as necessary for securing items to in-place construction; including threaded fasteners for concrete inserts, toggle bolts, through-bolts, lag bolts, wood screws, wedge anchors and other connectors as required.

3.04 ADJUSTING

- A. Correct all damaged work by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
- B. Protect from damage until Substantial Completion; repair or replace damaged items.
- C. **Prior to issuance of a final certificate of occupancy, all signs and identification devices shall be field inspected after installation and approved by the enforcing agency to insure proper size and spacing of braille dots, and proportion and type of raised character's are in conformance.**

END OF SECTION

SECTION 21 0000
FIRE PROTECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Furnish and install complete wet-pipe fire sprinkler system as specified in Contract Documents. The system shall be installed in conformance with the 2025 Edition of NFPA 13 - Standard for Installation of Sprinkler Systems, as amended in California Building Code, chapter 35. All materials utilized shall be UL Listed and FM approved. All materials installed shall adhere to the manufacturer's installation guidelines.
- B. Scope includes all labor, equipment, materials, tools, transportation, excavation and backfill, supervision, and services required to furnish and install a complete and properly operating wet-pipe fire protection system. A wet-pipe fire protection system shall be installed in all areas of the buildings.
- C. Provide all necessary escutcheons, drains, test valves and accessories, hose connections for flow test, spare parts, tools, and signs that are required for the work of this Section.
- D. The Contract Drawings are diagrammatic only. The pipe lengths shown are approximate center to center lengths between fittings. The Contractor shall determine the actual measurements and make any and such length and offset adjustments as may be necessary to complete the installation at no change in the contract price. The Drawings are not intended to relieve the Contractor of responsibility for avoiding conflicts or obstructions or for installing the number of sprinklers and supply piping as required to provide complete protection of the designated areas in accordance with the requirements of the referenced standards and these Specifications. Written approval shall be obtained from the Architect prior to making major deviations from the arrangement and layout shown on the Drawings.
- E. The Contractor shall be responsible for obtaining and payment for all permits, licenses, and inspection certificates required in accordance with the provisions of the Contract Documents.
- F. Seismic Performance: Sprinkler piping shall withstand the effects of earthquake motions determined according to NFPA 13 and ASCE 7.

1.02 REFERENCES

- A. American Society for Testing and Materials
 - 1. ASTM A 53, "Standard Specification for Pipe, Steel and Hot-Dipped, Zinc-Coated, Welded and Seamless"
 - 2. ASTM A135, "Standard Specification for Electro-Resistance Steel Pipe"
 - 3. ASTM A795, "Standard Specification for Black & Hot Dipped Zinc Coated Welded & Seamless Steel Pipe for Fire Protection".
 - 4. ASTM A234, Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
- B. American National Standards Institute / American Society of Mechanical Engineers
 - 1. ANSI / ASME B 16.1, "Cast Iron Pipe Flanges and Pipe Flanged Fittings"
 - 2. ANSI / ASME B 16.4, "Cast Iron Threaded Fittings, Class 125 and Class 250"
- C. American National Standards Institute / National Fire Protection Association
 - 1. ANSI / NFPA 13-2025, "Installation of Sprinkler Systems" as amended in chapter 35, 2025 CBC.

2. ANSI / NFPA 25-2013, California Edition – “Standard for Inspection, Testing, and Maintenance of Water Based Fire Protection Systems”

1.03 RELATED WORK SPECIFIED IN OTHER SECTIONS

- A. Division 10 for fire extinguishers and cabinets requirements.
- B. Division 33 for domestic water/fire water supply systems requirements.
- C. Division 09 for finish painting requirements.
- D. Division 28 for automatic fire alarm system devices.

1.04 CERTIFICATION

- A. All fire sprinkler system pipefitters responsible for installing, altering, or repairing water-based fire protection systems shall require certification by the State Fire Marshal's office. For more information, refer to the State Fire Marshal's Information Bulletin 17-002: NEW Automatic Fire Extinguishing Systems Certification (Water-Based Fire Protection)

1.05 WET-PIPE SPRINKLER SYSTEM DESIGN

- A. The wet-pipe sprinkler system design for classrooms, lobbies, offices, restrooms, etc. shall be for a light hazard occupancy classification. Science classrooms, stages, kitchens, storage, and machine rooms shall be for ordinary hazard, group 2 occupancy. Occupancy classification shall be verified with the State Fire Marshal.
- B. Sprinkler spacing shall not exceed the limits allowed in NFPA 13.

1.06 SUBMITTALS

- A. All submittals shall be submitted under the provisions of Division 01 and as follows:
 1. Product Data
 - a. Submit manufacturer's product data for all fire sprinkler system components, in compliance with specifications. Data sheets shall include capacities, RPM, BHP, pressure drop, design and operating pressures, temperatures, and similar data.
 - b. Sprinklers shall be referred to on drawings, submittals, and other documentation, by the sprinkler identification or Model number as specifically published in the appropriate agency listing or approval. Trade names or other abbreviated designations shall not be allowed.
 2. Shop Drawings.
 - a. Prepare shop drawings of fire sprinkler systems and submit to Architect for approval prior to fabrication or installation of any work. Check shop drawings before forwarding to Architect and ascertain that submittals meet all requirements of the Drawings and Specifications and conform to space conditions.
 - b. Obtain all necessary information regarding layout of piping, conduit, ductwork, lights and air outlets, etc., and place piping and sprinkler heads to avoid interferences. Head layout shall be symmetrical.
 - c. The shop drawings shall have a title block similar to the Contract Drawings and shall identify Architect's Drawing number or any reference drawings. All drawings shall be fully dimensioned including both plan and elevation dimensions.
 - d. Use of contract documents for shop drawings is not acceptable.
 3. Operation And Maintenance Data

- a. Provide master index showing items included.
 - b. Provide name, address, and phone number of Architect, Architect's Fire Sprinkler Consultant, General Contractor, and Fire Protection subcontractor.
 - c. Provide operating instructions to include general description of fire protection system and step-by-step procedure to follow in putting system into operation.
 - d. Maintenance instructions shall include a list of system components used indicating name and model of each item and manufacturer's maintenance instructions for each component installed in Project. Instructions shall include installation instructions, parts numbers and lists, operation instructions of equipment, and maintenance and lubrication instructions.
 - e. Include copies of approved shop drawings and copies of required warranties.
 - f. Include copies of NFPA 25, "Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 2013 California Edition.
4. Record Drawings
- a. Provide record drawings in hard copy and pdf format. Drawings shall include the project-specific title block and notations reflecting the "as built" conditions of any additions to or variations from the Construction Documents.
- B. The Contractor shall furnish a verified list of similar projects installed during past 5 years.

1.07 QUALITY CONTROL

- A. Qualifications:
1. A State of California Licensed C-16 Contractor shall install all fire sprinkler system components, including underground lines and overhead lines. The Contractor shall have at least 5 years of experience in similar size and complexity projects.
- B. Requirements of Regulatory Agencies
1. Unless noted otherwise, system shall conform to:
 - a. ANSI / NFPA 13, 2025 - "Light & Ordinary Hazard Occupancies"
 - b. ANSI / NFPA 24, 2025 - "Private Fire Service Mains and Their Appurtenances"
 - c. Requirements of local water department and local Authority Having Jurisdiction over fire protection.
 - d. Applicable rules, regulations, laws, and ordinances.
 2. Comply with backflow prevention requirements.
- C. Conform all work and materials to requirements of the local and state codes, fire marshal, the Owner's insurance underwriter, and any other Authority Having Jurisdiction, and all federal, state, and other applicable laws and regulations.
- D. The work shall be of good quality, free of faults and defects, and in conformance with the Contract Documents.

PART 2 PRODUCTS

2.01 GENERAL

- A. Only specified materials shall be utilized in the work of this Section unless substitutions have been approved by the State Fire Marshal and the Architect, and in accordance with Division 01 requirements.
- B. All grooved couplings, fittings, valves, and specialties shall be the products of a single manufacturer. Grooving tools shall be of the same manufacturer as the grooved components.

- C. All castings used for couplings housings, fittings, or valve and specialty bodies shall be date stamped for quality assurance and traceability.
- D. Where two or more units of the same class of equipment are furnished, use products of the same manufacturer. Component parts of the entire system need not be products of the same manufacturer.
- E. Equipment scheduled by performance or model number is considered the basis of design. If other specified manufacturer's equipment is provided in lieu of basis of design equipment, the Contractor is responsible for changes and costs that may be necessary to accommodate this equipment, including different sizes and locations for connections, different electrical characteristics, different dimensions, different access requirements, or any other differences that impact the project.

2.02 COMPONENTS

- A. Steel Pipe
 - 1. Above Grade:
 - a. Schedule 10/Schedule 40 sprinkler pipe, with internally lined antibacterial/antimicrobial coating, FM approved, UL Listed, complying with ASTM A135 for Type E, Grade A (Schedule 10); ASTM A795 for Type E, Grade A (Schedule 40, 1-2 NPS); ASTM A53 for Type F, Grade A (Schedule 40, 1-4 NPS) or Type E, Grade B (2-8 NPS), and NFPA 13 standards. Wheatland Tube or equal.
 - b. 2 inches and smaller: Welded, threaded, flanged, soldered, or roll grooved coupling system. Schedule 40 Type F pipe shall not be used for gasketed mechanical fittings for pipe sizes 2 inches and smaller.
 - c. 2-½ inches and larger: Welded, flanged, or roll grooved coupling system.
 - 2. Below Grade:
 - a. Cast iron, hub or mechanical joint. Install thrust blocks at all fittings.
 - b. AWWA Ductile Iron- minimum Class 53, grooved in accordance with AWWA C606. Rigid joints shall be utilized where flexibility is neither required nor desired. Pipe ends shall be factory grooved. Couplings & Fittings shall be cast ductile iron [UL, FM], conforming to A-536, Grade 65-45-12.
 - 3. Piping and fittings used for the installation of underground water mains shall be listed for such service.
 - 4. Every piece of pipe over 2 feet long shall be identified with manufacturer's name, model designation, or schedule.
- B. Fittings
 - 1. Malleable or ductile iron unions
 - 2. Threaded: Cast iron, class 125, meeting dimension requirements of ANSI/ASME B 16.4, and manufactured in accordance with ANSI/ASME B 14.4. Anvil, SPF, or equal.
 - 3. Flanged: Cast iron meeting requirements of ANSI/ASME B16.1. Anvil, Victaulic, or equal.
 - 4. Roll grooved pipe coupling system.
 - a. Two ductile iron housing segments meeting the requirements of ASTM A536, pressure responsive elastomer gasket, and ASTM A449 compliant bolts and nuts. Victaulic "Firelock" system or approved equal.
 - 5. Welded: Carbon steel meeting requirements of ASTM A 234.
 - 6. Steel welding fittings: ASTM A 234/A 234M and ASME B16.9
- C. Flexible Sprinkler Hose Fittings: Victaulic VicFlex series with captured coupling or equal.
- D. Risers (in-building)

1. Ames Fire & Waterworks, series IBR or equal, type 304 stainless steel, 6'x6' standard length; UL/FM approved, meets NFPA 24; AWWA C900 inlet/DIP; AWWA C606 outlet. Includes test cap and coupler.
 2. For risers outside the building, provide freeze protection. A single layer of Owens Corning FOAMGLAS cellular glass insulation, or equal, and joints sealed with PITTSEAL sealant appropriate for installation. Finish installation with aluminum jacket.
- E. Valves
1. Butterfly Valves
 - a. UL Listed/FM approved to 300 psi (2065 kPa).
 - b. Grooved end, ductile iron with stainless steel stem, weatherproof actuator, handwheel, with internal open supervisory tamper switches; Tyco BFV-300, Victaulic Series 705, Tyco BVF, or equal
 2. Globe Valves
 - a. UL Listed/FM approved
 - b. WWP Bronze, threaded ends, screw over bonnet; NIBCO KT-65-UL or equal
 3. Gate Valves
 - a. UL Listed/FM approved
 - b. Outside Screw and Yoke Type (OS&Y) 250 psi (1725-kPa), grooved ends, Victaulic Series 771; Class 150 psi, flanged ends, Nibco F-637-31, Mueller A-2073-6, or approved equal
 4. Ball Valves
 - a. UL Listed/FM approved
 - b. 1 inch – 2 inches full port, 2 ½ inches standard port, 300 psi/20.7 Bar non-shock cold water, bronze, tamper-proof screw
 - c. Threaded ends: NIBCO KT-505-W-8, Milwaukee BBSC, or equal
 - d. Grooved ends: Victaulic Series 728, NIBCO KG-505-W-8, Victaulic Series 728, or equal.
 5. Check Valves
 - a. UL Listed/FM approved to 250 psi (1725-kPa).
 - b. Spring-assisted for vertical or horizontal installation.
 - c. 2 inches – 12 inches, ductile iron conforming to ASTM A536, grade 65-45-12, EDPM seal, aluminum bronze disc with elastomer seal, stainless steel shaft, and carbon steel zinc plated plugs. Victaulic Firelock® series 717, Tyco Model CV-1F, or equal
- F. Automatic Sprinklers:
1. General Notes/Comments
 - a. Sprinklers shall be UL listed and or FM approved, rated to 175 psi working pressure, shall have die-cast brass frame, and can be connected to the piping system with NPT, BSPT or IGS grooved connections. Basis of Design: Victaulic Series Firelock™ Sprinklers.
 - b. Corrosive Environments: Body shall be coated with a UL and FM approved anti-corrosion coating. Victaulic VC-250
 - c. Head guards shall be UL listed and FM approved for use with the sprinkler in which it is attached.
 - d. Wrenches shall be provided by the sprinkler manufacturer that directly engage the hex-shaped wrench boss integrally cast in the sprinkler body.
 2. Types | Hazards | Classifications
 - a. Light hazard applications to have quick response upright, pendent, sidewall, and concealed type sprinklers as required by NFPA 13. Basis of Design: Victaulic Series FL-QR
 3. Sprinklers

- a. Standard coverage, quick response horizontal sidewall and recessed horizontal sidewall, minimum operating pressure: UL/FM: 7 psi/48 kPa/.5 bar; K5.6. Victaulic Firelock™ Series FL-QR/SW, ½" NPT, or equal
 - b. Extended coverage, quick response, horizontal sidewall and recessed horizontal sidewall, minimum operating pressure: UL/FM: 7 psi/48 kPa/.5 bar; K5.6.. Basis of Design: Victaulic Series FL-ECLH/SW.
 - c. Sprinklers to be installed per the guidelines of NFPA and manufactures requirements.
- G. Sprinkler Box:
 - 1. Victaulic 'SA' Series Sprinkler Cabinet, Tyco TFP 7856, or equal
- H. Pressure Gauges:
 - 1. Mechanical water pressure gauges:
 - a. UL Listed/FM approved
 - b. 0 to 300 psi, plastic case and window, bronze bourdon tube, brass socket, Viking VWATERSF, Reliable, Trerice, or equal.
- I. Post Indicator - See Civil Drawings
- J. Fire Department Connection - See Civil Drawings.
 - 1. At the low point near each fire department connection, install a 90-degree elbow with drain connection to allow for localized system drainage. Basis of Design: Victaulic #10-DR.
- K. Hangers and Supports
 - 1. System piping shall be substantially supported to the building structure. The installation of hangers and supports shall adhere to NFPA 13 requirements. Materials used in the installation or construction of hangers and supports shall be Listed and Approved for such application. Hangers or supports not specifically Listed for service shall be designed by and bear the seal of a Professional Engineer. All hangers and supports shall be manufactured by Tolco/B-Line or equal.
- L. Test and Drain Valves
 - 1. UL Listed/FM approved, single handle, tamper resistant, with UL/FM pressure relief valve; AGF Manufacturing model 1011A Test anDrain® valve or equal.
- M. Waterflow Detectors
 - 1. System Sensor "WFD_N" series vane-type waterflow detectors, or equal, NEMA 4-rated enclosure, UL Listed, tamper-resistant cover screws, two sets of SPDT switches, wire ready terminals, mechanical time delay, sealed retard mechanism, visual and audible switch activation. 450 PSI static pressure rating.
- N. Air Vents
 - 1. Potter PAV automatic float type air vent, or equal, brass construction, 1 inch NPT inlet / outlet to drain, service pressure up to 175 psig.

2.03 SIGNAGE

- A. Valve Identification
 - 1. All control, drain, vent, and test connection valves shall be provided with permanently marked weather-proof metal or rigid plastic identification signs. The identification sign shall be secured with corrosion-resistant wire, chain, or other approved means. The control valve sign shall identify the portion of building being served.

- a. Control valves shall have identification signs indicating valve function and system being controlled at each valve. Signs shall be white, rectangular, with letters reading "CONTROL VALVE".
 - b. An aluminum sign reading "MAIN DRAIN" in red letters shall identify the main drain valve assembly.
 - c. Test connections valves shall be identified with a rectangular sign with red text reading "INSPECTORS TEST"
- B. General Information Sign
1. All sprinkler systems require a general information sign. The sign shall be permanently marked, weatherproof metal or rigid plastic, and be secured with corrosion resistant wire, chain, etc. The sign shall detail the system design basis and information relevant to the inspection, testing, and maintenance requirements required by NFPA 25. The sign must be present at the system control riser and auxiliary system control valve.
- C. Hydraulic Design Information Sign
1. A permanently marked weatherproof metal or rigid plastic sign secured with corrosion resistant wire or chain shall identify a hydraulically designed sprinkler system. The sign shall include location of the design area; discharge densities; required flow and pressure of the system at the base of the riser; occupancy classification; sprinkler demand with hose stream allowance included; name of installing contractor; type and number of sprinklers installed with orifice size, temperature rating, orientation, K-factor, SIN when applicable, and response type; minimum discharge flow rate and pressure required from hydraulically most demanding sprinkler; required pressure settings for pressure reducing valves; the protection area per sprinkler; and the NFPA 13 edition used when designed and installed.
- D. All sprinklers shall be permanently marked with 1 or 2 uppercase letters to identify manufacturer, followed by 3 or 4 numbers to identify K-factor, pressure rating & thermal sensitivity.

2.04 PIPE LABELS

- A. Brady, Seton, Graphic Products, or approved equal pipe labels. Preprinted, color-coded, with lettering indicating service, and showing flow direction.
- B. Self-Adhesive Pipe Labels: Printed plastic with contact-type, permanent adhesive backing.
- C. Pipe Label Contents: Include identification of piping service using same designations or abbreviations as used on Drawings, pipe size, and an arrow indicating flow direction.
- D. Flow-Direction Arrows: Integral with piping system service lettering to accommodate both directions, or as a separate unit on each pipe label to indicate flow direction.
- E. Label Sizes (per ANSI A13.1 / ASME A13.1-2020 Standards):
1. For pipes or covering with outside diameter $\frac{3}{4}$ to $1\frac{1}{4}$ ", minimum length of the label: 8"; minimum height of letters: $\frac{1}{2}$ ".
 2. For pipes or covering with outside diameter $1\frac{1}{2}$ to 2", minimum length of the label: 8"; minimum height of letters: $\frac{3}{4}$ ".
 3. For pipes or covering with outside diameter $2\frac{1}{2}$ to 6", minimum length of the label: 12"; minimum height of letters: $1\frac{1}{4}$ ".
- F. Pipe Label Color Schedule: (per ANSI A13.1 / ASME A13.1-2020)
1. Potable, Cooling, Boiler Feed, and other Water Piping:
 - a. Background Color: Green.
 - b. Letter Color: White.

2. Fire Quenching Fluids:
 - a. Background Color: Red.
 - b. Letter Color: White.
- G. Valves
 1. For identification and the Owner's maintenance records, all valves shall be numbered and identified with clearly stamped 1¼" diameter brass tags, in accordance with drawings and service performed.
 2. Control valves shall be also marked whether normally open (N.O.) or normally closed (N.S.).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Before bidding, verify and become familiar with existing conditions by visiting the site, and include factors that may affect the execution of this work. Include related costs in the initial bid proposal. Coordinate exact requirements governed by actual job conditions. Check information and report any discrepancies before fabricating work. Report changes in time to avoid unnecessary work. Coordinate shutdown and start-up of existing, temporary, and new systems, and utilities. Notify the Owner, City, and utility company.
- B. Drawings
 1. Fire Protection Drawings show general arrangement of piping. Follow as closely as actual building construction and work of other trades will permit.
 2. Consider Architectural and Structural Drawings part of this work insofar as these drawings furnish information relating to design and construction of building. Plumbing drainage piping and ductwork shall have the right of way over fire protection piping except for fire protection drainage piping wherever conflicts exist. Fire protection piping shall be offset or rerouted as directed at no additional cost to the Owner. These Drawings take precedence over Fire Protection Drawings.
 3. Because of the small scale of Drawings, it is not possible to indicate all offsets, fittings, and accessories that may be required. Investigate structural and finish conditions affecting this work and arrange work accordingly, providing such fittings, valves, and accessories required to meet conditions.

3.02 INSTALLATION

- A. Before bidding, be familiar with rulings of governing authorities and comply with such requirements.
- B. Follow manufacturer's directions where they cover points not specifically indicated. If they conflict with the Drawings and Specifications, obtain clarification before starting the work.
- C. Provide all necessary escutcheons, drains, test valves and accessories, hose connections for flow test, spare parts, tools and signs that are required for the work of this Section.
- D. Piping
 1. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated, as far as practical.
 - a. Deviations from approved working plans for piping require written approval from authorities having jurisdiction. File written approval with Architect before deviating from approved working plans.
 2. Piping Standard: Comply with requirements for installation of sprinkler piping in NFPA 13.

3. Install unions adjacent to each valve in pipes NPS 2 and smaller.
 4. Protect unattended openings in piping from dirt and vandalism during construction.
 5. Ensure that joints do not occur in piping installed in pipe sleeves.
 6. Install piping system so it will not be exposed to temperatures of 40°F or lower.
 7. Install sprinkler lines above ceiling and within walls so that no piping is visible within the building. Where possible, pipes shall be concealed and run parallel to buildings lines.
- E. Make provisions for the necessary openings in the building to allow for the admittance of equipment. Cutting, patching, and repairing for the proper installation and completion of the work specified in this Division, including plastering, masonry, concrete, carpentry, and painting work, shall be performed by skilled craftsmen of each respective trade, in conformance with the appropriate Division of work. Make additional openings that are required in building construction by drilling or cutting. Use of a jackhammer is specifically prohibited. Beams or columns shall not be pierced without permission of the Architect and only as directed.
- F. Fill holes that are cut oversize so that a tight fit is obtained around the sleeves passing through.
- G. The entire system and apparatus shall operate at full capacity without objectionable noise or vibration.
- H. Underground mains and lead-in connections to system risers shall be completely flushed before connection is made to overhead sprinkler piping. Where underground piping is flushed and not immediately connected to the overhead piping, the riser shall be capped or otherwise protected to prevent debris, dirt, or animals from entering into the underground piping (Witnessed by the Project Inspector).
- I. Grooved joints shall be installed in accordance with the manufacturer's latest published instructions. The gasket style and elastomeric material (grade) shall be verified as suitable for the intended service. Gaskets shall be molded and produced by the grooved coupling manufacturer. Grooved ends shall be clean and free from indentations, projections, and roll marks in the area from pipe end to groove. Grooved coupling manufacturer's factory trained field representative shall provide on-site training for contractor's field personnel in the proper use of grooving tools, application of groove, and installation of grooved piping products. Factory trained representative shall periodically visit the jobsite to ensure best practices in grooved product installation are being followed. Contractor shall remove and replace any improperly installed products.
- J. The end sprinkler on each line shall be restrained against excessive vertical and lateral movement.
- K. The Inspector's Test Valve location shall be installed within the most hydraulically remote system area. The pipe sized shall be no less than 1 inch, with a smooth bore, corrosion-resistant orifice, providing the equivalent flow of the smallest orifice of the sprinkler types installed within the system. The discharge shall be to the exterior of the building.
- L. The sprinkler flow switch shall be tested to confirm that when the Inspector's Test Valve is activated, an alarm will sound no more than 90 seconds after initial flow (Witnessed by the Project Inspector).
- M. Connect system to flange provided under Division 33.
- N. Install system to drain. Drain trapped piping in accordance with NFPA 13.
1. Install main drain from riser.
 2. Install auxiliary drains in low points of piping system and inspector's test valve drain to mechanical pad located outside building unless otherwise directed by Architect.

- O. Do not use dropped, damaged, or used sprinkler heads.
- P. Install sprinkler lines above ceiling and within walls so that no piping is visible within the building. Where possible, pipes shall be concealed and run parallel to buildings lines. Sprinkler heads shall be located in the center of ceiling tile.
- Q. Install tamper switches and pressure flow detectors where indicated by Architect.
- R. Brace and support system to meet seismic zone requirements for building site. Sprinkler piping shall withstand the effects of earthquake motions determined according to NFPA 13 and ASCE 7.
- S. All concealed spaces shall be protected by sprinklers except areas not required by NFPA 13.
- T. All exterior walkways between and adjacent to the buildings shall be sprinkled.
- U. Install materials and equipment to allow convenient servicing (e.g., no piping in front of manholes, heaters, controls, electrical equipment, pumps, etc.).
- V. Where pipes, etc., pass through roofs or outside wall above grade, provide flashings with weather-tight installation. Where not otherwise specified or shown, flashings shall be 24-gauge minimum thickness galvanized steel, with 8" minimum flange all around and 8" minimum height.
- W. Pipe penetrations at finished surfaces shall be covered with chrome plated escutcheon plates with set screws.
- X. Exposed sprinkler pipe in stairways shall be bent to suit overhead contours (no offset fittings shall be used for this purpose).
- Y. Connections from branches or mains to sprinkler heads shall be off of the top of branch or main pipe with return bend or piping for adjustment of location.

3.03 FIELD QUALITY CONTROL

- A. Testing and acceptance of fire sprinklers shall be done in accordance with NFPA Standards, California Fire Code, DSA, and state Fire Marshal requirements. The Contractor shall generate all tests required by local, state, and federal laws, codes, ordinances, and regulations having jurisdiction over this work.
- B. Contractors shall not allow or cause any work of this Section to be covered or enclosed until it has been inspected, tested, and approved by the Architect and the Authorities Having Jurisdiction over the Work. Certificates of approval shall be furnished to the Owner. Should any of this work be enclosed or covered up before such inspection, testing, and approval, this Contractor shall uncover the work, have the necessary inspections, tests, and approvals made and, at no expense to the Owner, make all repairs necessary to restore both his work and that of other contractors which may have been damaged to be in conformity with the Contract Documents.
- C. Should leaks develop while testing, repairs shall be made, and tests shall be repeated until a satisfactory test result is obtained.
- D. Site Tests
 - 1. Test system according to 'Contractor's Material and Testing Certificate for Above Ground Piping' per NFPA 13.
 - 2. All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi, or 50 psi in excess of the system working pressure,

- whichever is greater, and shall maintain that pressure without loss for 2 hours (Witnessed by Project Inspector).
3. Tests shall be witnessed by Architect or Owner's Representative and representative of local jurisdiction over fire prevention.
 4. Test blanks shall have red painted lugs protruding beyond flange to clearly indicate their presence and be numbered to assure their removal when testing is completed.
- E. At time of final inspection of the fire sprinkler system, the Contractor shall provide to the school district:
1. All literature and instructions provided by the manufacturer describing proper operation and maintenance of any equipment and devices installed.
 2. A copy of NFPA 25 with California amendments, 2013 edition
 3. A copy of CCR Title 19, Chapter 5 "Fire Extinguishing Systems"
- F. The Sprinkler Contractor shall complete and sign Contractor's Material Certificate for the Aboveground Piping. This form shall be given to the Project Inspector who will forward it to DSA for filing in project records.

3.04 WARRANTY

- A. Provide a written guarantee covering the work of this Division for one year from the date of acceptance by the Owner. Provide manufacturer's written warranties for material and equipment furnished under this Division.

3.05 OWNER'S INSTRUCTIONS

- A. Instruct building maintenance personnel in operation and maintenance of system, utilizing Operation and Maintenance manual when so doing. The minimum instruction period shall be 4 hours.
- B. Instruction periods shall occur after Substantial Completion inspection, when the system is properly working, and before final payment is made.

3.06 MAINTENANCE

- A. Furnish valve wrenches and operating and maintenance instructions to Owner upon completion of work.
- B. Provide spare sprinkler head cabinet, sprinkler wrench, and no fewer than 6 spare sprinkler heads matching the types and temperature rating in each protected area for systems less than 300 sprinklers (12 spare sprinkler heads for systems 300 to 1,000 sprinklers).
- C. Furnish valve wrenches and operating and maintenance instructions to Owner upon completion of work.

3.07 MICROBIOLOGICALLY INFLUENCED CORROSION (M.I.C.)

- A. All water used to charge or test the fire sprinkler system shall be treated to prevent M.I.C. in accordance with NFPA-13.
- B. Alternately, piping coated with "MIC Shield" (Wheatland Tube or equal) may be used in lieu of treatment, if acceptable to the local and state Fire Marshal.

END OF SECTION

SECTION 22 1100

SITE WATER DISTRIBUTION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes site distribution piping outside buildings for water service, and the following components:
 - 1. Valves.
 - 2. Concrete thrust blocks.
 - 3. Cathodic Protection.
- B. Related Sections include:
 - 1. Section 31 2333 "Trenching and Backfill" for trenching and backfilling for underground water lines, and detectable warning tapes.
 - 2. Division 15 Section for water lines within and below buildings.
 - 3. Section 13 4713 "Cathodic Protection Systems."

1.3 DEFINITIONS

- A. Water Main: Utility's water piping.
- B. Water Service: Site domestic water piping.
- C. Point of Delivery: Piping outlet from water meter.
- D. DN: Dimension Nominal.
- E. NPS: Nominal Pipe Size.
- F. PVC: Polyvinyl chloride plastic

1.4 SUBMITTALS

- A. Product Data: For each type of product, including the following:
 - 1. Piping and related specialties.
 - 2. Valves and accessories.
 - 3. Valve boxes.
 - 4. Cathodic Protection Design.
- B. Shop Drawings: For the following:
 - 1. Precast concrete utility boxes, including frames and covers.

2. Protective enclosures for backflow preventer.
 3. Cathodic Protection Design.
- C. Coordination Drawings: For piping and specialties including relationship to other services in same area. Show piping and specialty sizes and valves, meter and specialty locations, and elevations.
- D. Field Quality-Control Test Reports: From Contractor.
- E. Operation and Maintenance Data: For specialties to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 1 Sections for closeout procedures and operation and maintenance data, include the following:
 1. Valves.
 2. Backflow preventers
 3. Protective enclosures.
 4. Cathodic Protection.
- F. Record drawings of installed water service lines and appurtenances in accordance with Division 1 Section for project closeout requirements.
 1. Locate and dimension work with reference to permanent landmarks. Indicate materials and sizes of all components.

1.5 QUALITY ASSURANCE

- A. Product Options: Drawings indicate size, profiles, and dimensional requirements of piping and specialties and are based on the specific system indicated. Refer to Division 1 Section for product requirements.
- B. Regulatory Requirements:
 1. Comply with requirements of the City of Brentwood. Include tapping of water mains and backflow prevention.
 2. Comply with standards of the City of Brentwood for potable-water-service piping, including materials, installation, testing, and disinfection.
- C. Piping materials shall bear label, stamp, or other markings of specified testing agency.
- D. NSF Compliance:
 1. Comply with NSF 14 for plastic potable-water-service piping.
 2. Comply with NSF 61 for materials for water-service piping and specialties for domestic water.
- E. Cathodic Protection System Design:
 1. Cathodic protection system design will be performed and stamped by a qualified Corrosion Engineer. This person shall be responsible for the design, supervision, inspection and testing of the cathodic protection system.
 2. Qualifications of the Corrosion Engineer shall be submitted to the owner for approval prior to commencement of work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Preparation for Transport: Prepare valves according to the following:
 - 1. Ensure that valves are dry and internally protected against rust and corrosion.
 - 2. Protect valves against damage to threaded ends and flange faces.
 - 3. Set valves in best position for handling. Set valves closed to prevent rattling.
- B. During Storage: Use precautions for valves, according to the following:
 - 1. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
 - 2. Protect from weather. Store indoors and maintain temperature higher than ambient dew-point temperature. Support off ground or pavement in watertight enclosures when outdoor storage is necessary.
- C. Handling: Use sling to handle valves if size requires handling by crane or lift. Rig valves to avoid damage to exposed parts. Do not use handwheels or stems as lifting or rigging points.
- D. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.
- E. Protect stored piping from moisture and dirt. Elevate above grade. Do not exceed structural capacity of floor when storing inside.
- F. Protect flanges, fittings, and specialties from moisture and dirt.
- G. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.

1.7 PROJECT CONDITIONS

- A. Do not interrupt existing utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Architect not less than five working days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Architect's written permission.
- B. Information shown regarding locations of existing utilities is based upon available records and data, but shall be regarded as approximate, only. Make minor deviations necessary to conform to actual locations and conditions without extra cost. Verify location and elevation of utilities prior to commencement of excavation.
 - 1. Exercise extreme care in excavating near existing utilities. Locations of existing utilities are approximate. It is the contractor's responsibility to verify the location and depth with the appropriate agencies prior to construction. Contractor is responsible for damage to existing utilities.

1.8 COORDINATION

- A. Coordinate connection to water main with City of Brentwood.

- B. Coordinate installation of required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.
- C. Coordinate placement of valve boxes with layout of paving joints and patterns. Refer to Drawings for layout.
- D. Coordinate crossings with other underground utilities.
- E. Coordinate with locations of building connections.

PART 2 PRODUCTS

2.1 PIPING MATERIAL

- A. Refer to Part 3 “Piping Applications” Article for applications of pipe, fitting, and joining materials.

2.2 PVC PIPE AND FITTINGS

- A. Polyvinyl Chloride Pipe (PVC) shall be furnished in the classes, sizes and grades designated on the plans. All Class 150 pipe shall meet the requirements of DR 18 and Class 200 pipe shall meet the requirements of DR 14 with cast iron O.D.
 - 1. Pipe Sizes 4-in. to 8-in. Diameter:
 - a. Polyvinyl Chloride (PVC) per requirements of ANSI/AWWA C900.
 - b. Pipe shall be Class 150 for main and fire hydrant lines and class 200 for fire service lines.
 - 2. Pipe Sizes 4-in. Diameter and Smaller:
 - a. Polyvinyl Chloride (PVC) per requirements of NSF/ANSI Standards 14 and 61.
- B. Joints and Fittings: All pipes shall be suitable for use as a pressure conduit.
 - 1. Provisions shall be made for expansion and contraction at each joint with an “O” ring elastomeric gasket seal meeting requirements of ASTM D1869 and F477.
 - 2. Solvent welded joints are prohibited.
 - 3. Bell sections shall be designed to be at least as strong as the pipe wall.
 - 4. All fittings for PVC pipe shall be cast iron only.
 - 5. All mechanical joints on fire service lines and fire sprinkler laterals shall be coated and wrapped.

2.3 JOINING MATERIALS

- A. AWWA Transition Couplings:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Cascade Waterworks Manufacturing Company.
 - b. Dresser Industries, Inc.; DMD Division.
 - c. JCM Industries.
 - d. Viking Johnson.
 - e. Manufacturer of equal products in accordance with Division 1 requirements for product substitutions.

- B. Pipe Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.
 - 1. AWWA C110, rubber, flat face, 1/8-inch thick, unless otherwise indicated; and full-face or ring type, unless otherwise indicated.
- C. Flange Bolts and Nuts: ASME B18.2.1, carbon steel, unless otherwise indicated.
- D. Plastic Pipe Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer, unless otherwise indicated.

2.4 GATE VALVES

- A. Gate Valves:
 - 1. Gates Valves for 4-in through 8-in diameter pipe.
 - a. Use resilient seated gate valves per AWWA C509.
 - b. Valve ends shall be mechanical joint or flanged per AWWA C500 unless otherwise specified.
 - c. Valves for use with flanged pipe shall be cast with Class 125 flanges, dimensions and drilling shall be per ASA B16.1. Flange bolt holes shall be spot faced if flange fillets interfere with bolt heads and nuts.
 - d. The inlet flange for tapping gate valves shall be provided with Class 125 flange for attaching to tapping sleeve. The flange shall have a machined projection compatible with a machined recess in the tapping sleeve. The outlet of the valve shall be provided with a flange for tapping machine mounting. Tapping sleeve shall be mechanical joint and flange unless deviation is permitted by the engineer.
 - e. All stem seals for gate valves shall be "O" rings only.
 - f. Wrench nuts shall be made of top grade cast iron, fitting the top of the valve stem and secured by nut or key. Wrench nuts shall be 1-15/16-in. square at the top and 2-in. square at the bottom.
 - g. Valves requiring operating wrench exceeding 60 inches in length shall have extensions and guides installed in valve boxes.
 - h. The open direction shall be left (counterclockwise) and the closed direction right (clockwise).
 - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Crane Co.; Crane Valve Group; Stockham Division.
 - b. NIBCO INC.
 - c. Manufacturer of equal products in accordance with Division 1 requirements for product substitutions.
 - 3. Non-rising Stem Gate Valves:
 - a. Description: Class 125, Type 1, bronze with solid wedge, threaded ends, and malleable-iron handwheel.
 - (1) Standard: MSS SP-80.

2.5 VALVE ACCESSORIES AND SPECIALTIES

- A. Valve Boxes
 - 1. All valve boxes shall conform to City of Brentwood Detail No. W-13.
 - 2. Lids shall have machined seating surfaces.

3. Valve box risers shall be manufactured for the valve box supplied. Riser to be one continuous piece and centered on valve. Should be riser or 8-in. ø, Class 100 PVC.
- B. Bolts, Nuts & Washers.
 1. Bolts and nuts for flanges and fittings shall be Stainless Steel (SS) 304 or 316 per ASTM A320, alloy steel and stainless steel bolting materials for low temperature service.
 2. Washers shall be Stainless Steel 304 or 316 to match their adjoining bolts and nuts.
- C. Gaskets
 1. Gaskets for flanged joints shall be 1/16-in. thick cloth inserted rubber per applicable parts of ANSI B16.12, AWWA C115 and AWWA C207.
 2. Gasket material shall be free from corrosive alkali or acid ingredients and suitable for use in potable water lines.
 3. Gaskets shall be one piece, full face, with holes to accommodate bolts.
 4. Gaskets for push-on joints shall be oil resistant per AWWA C111. Lubricant for push-on joints piping shall be pipe manufacturer's standard.
- D. Thrust Blocks
 1. All thrust blocks for water lines shall conform to City of Brentwood Detail No. W-15.
 2. Thrust blocks shall be included at all water mains and fire services where changes in direction occur.

2.6 MISCELLANEOUS MATERIALS

- A. Portland Cement Concrete: Minimum compressive strength of 3000 psi, minimum of four sacks of cement per cubic yard of concrete, one-Inch maximum aggregate size, three-inch maximum slump, two to four percent entrained air.
 1. Cement: ASTM C 150, Type I.
 2. Fine Aggregate: ASTM C 33, sand.
 3. Coarse Aggregate: ASTM C33, crushed gravel.
 4. Water: Potable.

2.7 CATHODIC PROTECTION

- A. See Section 13 4713 "Cathodic Protection Systems."
- B. Materials and workmanship shall be in accordance with all applicable state and local codes. Corrosion protection shall be installed in accordance with manufacturer's instructions.
- C. All ferrous metal fittings shall be coated and wrapped for cathodic protection in accordance with Corrosion Engineer recommendations and Owner requirements.

PART 3 EXECUTION

3.1 EXCAVATION AND BACKFILL

Refer to Section 31 2000 "Earthwork" for excavation, trenching and backfilling.

3.2 PIPING APPLICATIONS

- A. General: Use pipe, fittings, and joining methods for piping systems according to the following applications.
- B. Transition couplings and special fittings with pressure ratings at least equal to piping pressure rating may be used in applications below, unless otherwise indicated.
- C. Do not use flanges, unions, or keyed couplings for underground piping.
- D. Flanges, unions, keyed couplings, and special fittings may be used, instead of joints indicated, on piping in utility boxes and vaults.
- E. Underground Water Service Piping: Use the following piping materials for each size range:
 - 1. NPS 3/4 to NPS 1-1/2 (DN 20 to DN 40): PVC (IPS); PVC socket fittings and solvent-cemented joints.
 - 2. NPS 2 to NPS 3 (DN 50 to DN 80): PVC (IPS); PVC gasketed fittings.
 - 3. NPS 4 and Larger: PVC, AWWA Class 150 pipe; PVC, AWWA Class 150 molded fittings; and gasketed joints.
- F. Aboveground Water Service Piping: Ductile iron pipe with grooved ends; ductile iron, grooved end fittings; ductile iron keyed couplings; and grooved joints.

3.3 VALVE APPLICATIONS

- A. General Application: Use threaded or flanged end valves for underground installation, as suitable for piping in which valve is installed. Install AWWA, cast-iron, non-rising stem, resilient-seated gate valves with valve box.

3.4 PIPING INSTALLATION

- A. Drawing plans, schematics, and diagrams indicate general location and arrangement of water-service piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- B. Water-Main Connection: Arrange with City of Brentwood for all connections to the water main.
- C. Install ductile iron, water-service piping according to AWWA C600 and AWWA C105.
- D. Install PVC pipe according to AWWA M23 and ASTM F 645.
- E. Select system components with pressure rating equal to or greater than system operating pressure.
- F. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- G. Install piping to permit valve servicing.
- H. Install water service piping free of sags and bends.
- I. Install fittings and thrust blocks for changes in direction and branch connections.

- J. Install sleeves for pipes passing through concrete and masonry walls and foundations.
- K. Unless indicated otherwise, bury piping with depth of cover over top at least 36 inches.
 - 1. In Loose Gravelly Soil and Rock: With at least 12 inches additional cover.
- L. Install piping by tunneling, jacking, or combination of both, under streets and other obstructions that cannot be disturbed.
- M. Restrained Joints: Install concrete thrust blocks per NFPA 24 at all horizontal and vertical changes in direction.
 - 1. Install concrete thrust blocks at all pipe tees, wyes, bends, crosses, elbows, and risers (valves).
 - 2. Thrust blocks to bear against undisturbed soil, and sized as indicated.
 - 3. Place thrust blocks so that pipe joints are accessible for inspection and repair.
- N. Install water-supply piping with shutoff valve in water supply to each building. Use gate valve and valve box.

3.5 JOINT CONSTRUCTION

- A. Make pipe joints according to the following:
 - 1. Ductile-Iron Piping, Gasketed Joints for Water-Service Piping: ANSI A21.11 (AWWA C111).
 - 2. PVC Piping Gasketed Joints: Use joining materials according to AWWA C900. Construct joints with elastomeric seals and lubricant according to ASTM D 1869 and F477 and pipe manufacturer's written instructions.
 - (a) PVC Piping Solvent-Cement Joints: Solvent Joints are prohibited.
 - 3. Dissimilar Materials Piping Joints: Use adapters compatible with both piping materials, with OD, and with system working pressure.

3.6 VALVE INSTALLATION

- A. All valves within public right-of-way shall conform to City of Brentwood Detail No. W-13 as shown on the plans.
- B. AWWA Gate Valves: Comply with AWWA C509. Install each underground valve with stem pointing up and with valve box.
- C. Center valve box on valve, setting plumb and level.
 - 1. Install valve box extensions as required to extend down to level of piping.
 - 2. Compact soil backfill around valve box to a distance of 4 feet on all sides.

3.7 CONNECTIONS

- A. Connect water service piping at water supply source and extend to point of connection to building water piping systems at 5 feet outside face of building wall in locations and pipe sizes indicated.

1. Terminate water service piping at 5 feet to building wall until building water piping systems are installed. Terminate piping with caps, plugs, or flanges as required for piping material. Make connections to building water piping systems when those systems are installed.
 2. Refer to Division 15 Section for potable-water piping below and within buildings.
- B. Connections to Valves and Equipment: Except as otherwise indicated, make piping connections as follows:
1. Install unions adjacent to each valve and at final connection to each piece of equipment having threaded pipe connection.
 2. Install flanges adjacent to each valve and at final connection to each piece of equipment having flanged pipe connection.

3.8 IDENTIFICATION

- A. All non-metallic water mains shall have a No. 10 gauge solid, coated, copper wire laid along the pipe, accessible in each valve box or other access opening to the system. Wire splices shall be field soldered.

3.9 PROTECTIVE ENCLOSURE INSTALLATION

- A. Install concrete slab base level and with top approximately two inches above grade.
- B. Install protective enclosure over valves and equipment.
- C. Anchor protective enclosure to concrete base.

3.10 CATHODIC PROTECTION

- A. See Section 13 4713 “Cathodic Protection Systems”.
- B. All buried ductile iron pipes, steel or ductile iron connection fittings, and metal valves shall be corrosion protected in accordance with the recommendations provided by the Corrosion Engineer.
- C. Corrosion protection shall be installed in accordance with manufacturer’s instructions.

3.11 FIELD QUALITY CONTROL

- A. Water Main Disinfection: Refer to City of Brentwood Standard Specification Section 130-1.03B1 “Testing” and Section 130-1.03C “Disinfecting Water Mains” for cleaning procedures and requirements.
- B. Prepare reports of testing activities.

3.12 CLEANING

- A. Water Main Disinfection: Refer to City of Brentwood Standard Specification Section 130-1.03C “Disinfecting Water Mains: for cleaning procedures and requirements.
- B. Prepare reports of testing activities.

END OF SECTION 22 1100

SECTION 26 0500
BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Work included in this Section: All materials, labor, equipment, services, and incidentals necessary to install the Electrical Work as shown on the drawings and as specified hereinafter, including, but not limited to the following:
 - 1. New electrical feeder provisions for new Portable building.
 - 2. Low voltage system conduits and cabling for final connection to new Portable building.
 - 3. Grounding and connections to portable classroom power panel.
 - 4. Exterior lighting fixtures and controls.
 - 5. Telecommunications system extensions from the existing system.
 - 6. Fire Alarm system extensions and devices / wiring.
 - 7. All required incidental work, such as penetrations, electrical testing, and temporary power.
 - 8. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.
 - 9. It is the intent of the drawings and specifications that systems be complete and, except as otherwise noted, be ready for operation.

1.02 RELATED WORK

- A. Division 1 - General Requirements

1.03 INCORPORATED DOCUMENTS

- A. Requirements of the General Conditions, Supplementary Conditions, and Division 1 Sections apply to all work in this Section, unless modified herein.
- B. Published specifications, standard tests or recommended methods of trade, industry or government organizations apply to work of this Section where cited by abbreviations noted below, unless modified herein.
 - 1. 2025 California Code of Regulations.
 - 2. 2025 California Building Standards Administrative Code, Part 1, Title 24, C.C.R.
 - 3. 2025 California Building Code (CBC), Part 2, Title 24, C.C.R.
 - 4. 2025 California Electrical Code (CEC), Part 3, Title 24, C.C.R.
 - 5. California Energy Code, Part 6, Title 24, C.C.R.

6. 2025 California Fire Code (CFC), Part 9, Title 24, C.C.R.
7. 2025 California Green Building Standards (CALGreen) Code, Part 11.
8. Underwriters' Laboratories, Inc. (UL).

C. All State and Municipal Codes and Ordinances.

1.04 CONDITIONS AT SITE:

- A. Visit to site is required of all bidders prior to submission of bid. All will be held to have familiarized themselves with all discernible conditions and no extra payment will be allowed for work required because of these conditions, whether specifically mentioned or not.
- B. Lines of other services that are damaged as a result of this work shall promptly be repaired at no expense to the Owner to the complete satisfaction of the Owner.

1.05 QUALITY ASSURANCE

- A. Conformance:
 1. All work shall conform to the applicable requirements of Article 1.03 above.
 2. The Contractor shall notify the Architect, prior to submission of bid, about any part of the design, which fails to comply with abovementioned requirements.
 3. If after contract is awarded, minor changes and additions are required by aforementioned authorities, even though such work is not shown on drawings or covered in the specifications, they shall be included at Contractor's expense.
- B. Coordination:
 1. The Contractor shall become familiar with the conditions at the job site, and with the drawings and specifications and plan the installation of the electrical work to conform with the existing conditions and that shown and specified so as to provide the best possible assembly of the combined work of all trades.
 2. The Contractor shall work out in advance all "tight" conditions, involving all trades and if found necessary, supplementary drawings shall be prepared by this Contractor, for the Architect's approval, before work proceeds in these areas. No additional costs will be considered for work, which must be relocated due to conflicts with the work of other trades.
 3. The Contractor shall coordinate and verify all backbox, device, lighting fixture, or equipment mounting requirements with the devices or equipment to be installed, prior to rough in.

1.06 SUBMITTALS

- A. Product Data:
 1. Comply with the provisions of Section 01 33 00 - Submittals.
 2. Within 15 days after award of the Contract, submit:

- a. Complete electrical and signal systems material list of all items proposed to be furnished and installed under this Division. Provide manufacturers data sheets for all devices, raceways, fixtures, equipment, and related products to be used for the Division 26, 27, and 28 work.
 - b. Manufacturers' specifications and other data required demonstrating compliance with the specified requirements.
 - c. Manufacturers' recommended installation procedures which, when approved by the Architect, shall become the basis for inspecting and accepting or rejecting actual installation procedures used on the work.
3. Shop Drawings: Furnish shop drawings and/or equipment cuts for the following:
 - a. Exterior light fixtures and drivers.
 - b. Main Distribution Panel circuit breaker.
 - c. Fire alarm system
 - d. Telecommunications system
4. Test Reports:
 - a. Factory Tests: As specified for specific equipment.
 - b. Field Tests: Performance tests as specified for specific equipment.
 - c. Megger Tests: As specified under TESTING.
 - d. When series rated circuit breakers are used, provide a letter from the manufacturer of the equipment confirming that U.L. series rating exists for all protective devices. State the available fault current from the Utility Company and indicate that the overcurrent devices exceed the available fault current at the respective point of protection.
5. Maintenance and Operating Manuals:
 - a. Systems Description: Description of operating procedures.
 - b. Controls: Diagrams and description of operation of each system.
 - c. Equipment: Manufacturer's brochures, ratings, certified shop drawings, maintenance data, and parts lists with part numbers. Mark each sheet with equipment identification number and actual installed condition.
 - d. Materials and Accessories: Manufacturer's brochures, parts lists with part numbers, and maintenance data where applicable. Mark each sheet with identification number of system and location of installation.
 - e. The Maintenance and Operation Manual shall be presented in a three ring binder that has tabbed sections as stated below. Provide all information in each section as stated below.
 - 1) 26 5601:

- (a) Insert the approved submittals for the site light fixtures.
 - (b) Highlight the lamp type that was installed for each light fixture.
 - (c) Provide the names, address and telephone numbers of the manufacturer and the closest manufacturer's representative for each light fixture.
- 2) 27 0000:
 - (a) Insert the approved submittals for the telephone/data system.
 - (b) Provide the names, address and telephone number of the manufacturer and the closest manufacturer's representative of the equipment.
 - (c) Include the manufacturer's recommended maintenance of the equipment.
- 3) 28 3101:
 - (a) Complete the "Record Of Completion" entirely.
 - (b) In the "Download File" indicate the exact equipment that the Monitor Modules are monitoring. i.e. fire sprinkler flow switches, tamper switches, etc..
 - (c) Simplify the Download File so that it coincides with the submitted and approved fire alarm single line diagram.
 - (d) Provide the names, address and telephone number of the manufacturer and the closest manufacturer's representative of the equipment.
 - (e) Include the manufacturer's recommended maintenance of the equipment.
 - (f) Insert an abbreviated data sheet that states how to test, reset and silence the fire alarm system.
 - (g) Insert the name and telephone number of the Central Station that receives the alarms, and the proper sequence to follow during an alarm.
- 4) 26 08 00:
 - (a) Insert all new feeder and new data system wiring testing results.

6. Record Documents: "As-builts": As specified under Paragraph 3.02 of this Section.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all trades.
- B. Delivery and Storage: Deliver all materials to the job site in their original containers with all labels intact and legible at time of use. Store in strict accordance with approved manufacturers' recommendations.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

- D. This Contractor shall personally, or through an authorized representative, check all materials upon receipt at jobsite for conformance with approved shop drawings and/or plans and specifications.

1.08 SCHEDULING/SEQUENCING

- A. Place orders for all equipment in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet the construction schedule, together with any special handling charges, shall be borne by this Contractor.
- B. The Contractor shall coordinate production and delivery schedule for all Owner-supplied equipment with the equipment suppliers to ensure that all Owner-supplied equipment is delivered to site in coordination with the construction schedule and in such a manner as to cause no delays in completion of the Contract as scheduled.

1.09 REQUIREMENTS

- A. The contract drawings indicate the extent and general arrangements of the conduit wiring systems, etc. If any departures from the contract drawings are deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted as soon as practicable, and within thirty-five (35) days after award of the electrical contract.
- B. Unless material list and data is received as a complete and all inclusive submittal within the stipulated time all items shall be provided as specified, with no deviations permitted.
- C. Any and all additional costs incurred by the substitution of electrical material or equipment, or installation thereof, whether architectural, structural, plumbing, mechanical or electrical, shall be borne by the Contractor under this Section.
- D. Burden of proof of equality of any substitution for a specified product is the responsibility of this Contractor.
- E. Where required by Architect to ascertain equality of substitute product, Contractor may be requested to provide the specified item and the submitted substitution for comparison, at no additional cost to the Owner.

1.10 DESCRIPTION OF WORK

- A. This project involves installation of a portable classroom at an existing site. As such, the project scope for this contractor will include all associated electrical and signal system upgrades and demolition / removal / relocation work. The intent is that all systems will be complete and functional at the completion of this contract and that all old systems, equipment, feeders, circuits, wiring, and related devices (no longer used) be completely and neatly removed.
- B. As with every renovation project, the electrical work will include (and require) exploration and other field work on a daily basis to complete the new designed equipment and connections within the constraints of the existing site conditions.
- C. The contractor shall include as part of the base bid, sufficient labor hours to provide such exploration and field work throughout the duration of the project. Change orders for misc. coordination of existing conditions will not be approved unless specific and latent conditions are uncovered that warrant such

additional compensation or require additional work not shown on the plans or implied by the designed conditions.

- D. New raceways and wiring to new and renovated equipment are to be installed unless otherwise noted. Where raceways are installed in accessible concealed locations (i.e. unfinished spaces or electrical / mechanical / attic spaces), EMT with wire shall be used. Where new wiring is required to be routed through existing walls and ceilings that can not easily be accessible for new conduit, MC cable or flex conduit and wiring may be installed, fished through and secured in each space as required by code. Non-metallic sheathed cable shall not be utilized on this project.
- E. All new raceways shall be installed concealed and all new equipment installed flush, unless otherwise noted on the plans or in these specifications.
- F. Contractor shall be responsible to confirm that all new equipment is compatible with the existing campus systems.

1.11 GUARANTEE

- A. This Contractor shall guarantee that all work executed under this Section will be free from defects of materials and workmanship for a period of one (1) year or as per the General Conditions of this project, whichever is longer. Dates shall be from the date of final acceptance of the building. The contractor shall further guarantee that he will, at his own expense, repair and replace all such defective work, and all other work damaged thereby, which becomes defective during the term of the guarantee. Such repair or replacement shall be guaranteed for one (1) year from the date of repair or replacement.

1.12 PERMITS AND INSPECTIONS

- A. This Contractor shall arrange for all required inspections required.
- B. Do not allow or cause any of the work to be covered or enclosed until it has been tested and/or inspected.

1.13 IDENTIFICATION

- A. Switchboards, feeder circuit breakers in switchboards, panels, disconnect switches, cabinets, and other apparatus used for the operation of, or control of circuits, appliances or equipment, shall be properly identified by means of engraved laminated plastic descriptive nameplates mounted on apparatus using stainless steel screws. Nameplates shall have white letters with black background and be submitted to the Architect for approval. Cardholders in any form are not acceptable.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Refer to applicable Division 26, 27, and 28 Sections for complete products specifications.

2.02 MATERIALS

- A. Materials of the same type or classification, used for the same purpose, shall be the product of the same manufacturer.

2.03 ACCEPTABLE MANUFACTURERS

- A. Materials shall be of make mentioned elsewhere in this specification. All materials shall be the best of their several kinds, perfectly new and approved by the Underwriters' Laboratories.
- B. Where material, equipment, apparatus or other products are specified by manufacturer, brand name, type or catalog number, such designation is to establish standards of desired quality, style and utility and shall be the basis of the bid. Materials so specified shall be furnished under the contract unless changed by written approval of the Architect. Where two or more designations are listed, choice shall be optional with this Contractor, but this Contractor must submit his choice for final approval.

2.04 POSTED OPERATING INSTRUCTIONS

- A. Furnish approved operating instructions for systems and equipment where indicated in the technical sections for use by operation and maintenance personnel. The operating instructions shall include wiring diagrams, control diagrams, and control sequence for each principal system and equipment. Print or engrave operating instructions and frame under glass or in approved laminated plastic. Post instructions as directed. Attach or post operating instructions adjacent to each principal system and equipment including startup, proper adjustment, operating, lubrication, shutdown, safety precautions, procedure in the event of equipment failure, and other items of instruction as recommended by the manufacturer of each system or equipment. Provide weather-resistant materials or weatherproof enclosures for operating instruction exposed to the weather. Operating instruction shall not fade when exposed to sunlight and shall be secured to prevent easy removal or peeling.

2.05 CATALOGED PRODUCTS/SERVICE AVAILABILITY

- A. Materials and equipment shall be current products by manufacturers regularly engaged in the production of such products. Products shall have been in satisfactory commercial or industrial use for 2 years prior to bid opening. The 2-year period shall include applications of equipment and materials under similar circumstances and of similar size. The 2-year period shall be satisfactorily completed by a product for sale on the commercial market through advertisements, manufacturers' catalogs, or brochures. Products having less than a 2-year field service record will be acceptable if a certified record of satisfactory field operation for not less than 6,000 hours, exclusive of the manufacturers' factory or laboratory tests, is furnished. The equipment items shall be supported by service organizations which are reasonable convenient to the equipment installation in order to render satisfactory service to the equipment on a regular and emergency basis during the warranty period of the contract.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which the work of this Section will be installed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Drawings:

1. The general arrangement and location of wiring and equipment is shown on the electrical drawings and shall be installed in accordance therewith, except for minor changes required by conflict with the work of other trades.
 2. The Contractor shall coordinate and verify all backbox, device, or equipment mounting requirements with the devices or equipment to be installed, prior to rough in.
 3. All dimensions, together with locations of doors, partitions, etc. are to be taken from the Architectural Drawings, verified at site by this Contractor.
 4. Maintain "as-built" records at all times, showing the exact location of concealed conduits and feeders installed under this contract, and actual numbering of each circuit. Upon completion of work and before acceptance can be considered, this Contractor must forward to Architect marked-up PDF files, corrected to show the electrical work as actually installed.
- B. Measurements: Before ordering any material or closing in any work, verify all measurements on the job. Any differences found between dimensions on the drawings and actual measurements shall be brought to the Architect's attention for consideration before proceeding.

3.03 FIELD QUALITY CONTROL

- A. All workmanship shall be first class and carried out in a manner satisfactory to and approved by the Architect.
- B. This Contractor shall personally, or through an authorized and competent representative, constantly supervise the work and so far as possible keep the same foreman and workmen on the job throughout.

3.04 INSTALLATION/APPLICATION/ERECTION

- A. All electrical raceways and devices shall be installed concealed (for raceways) and/or flush mounted (for devices), unless otherwise noted. Provide cut-in boxes and "fish" flexible MC or flex conduit and wire through existing walls to remain, unless shown otherwise on plans. Cut and patch to facilitate such installation to match adjacent and original finish.
- B. All cutting, repairing and structural reinforcing for the installation of this work shall be done by the General Contractor in conformance with the Architect's requirements.

3.05 TEMPORARY LIGHTING AND POWER

- A. Provide and install temporary lighting and power systems for the duration of construction, of adequate size to accommodate the required lighting and power loads. Coordinate with other trades to insure adequate sizing.
- B. Provide distribution equipment as required to support all construction activities.

3.06 ADJUSTING AND CLEANING

- A. All electrical equipment, including existing equipment not "finish painted" under other sections, shall be touched up where finished surface is marred or damaged.
- B. All equipment, lighting fixtures, etc., shall be left in clean condition, with all shipping and otherwise unnecessary labels removed there from.

3.07 SCHEDULES

- A. Coordination: Coordinate installation of electrical items with the schedule for other work to prevent unnecessary delays in the total Work.

3.08 WARNING SIGN MOUNTING

- A. Provide the number of signs required to be readable from each accessible side, but space the signs a maximum of 30 feet apart.

3.09 PAINTING OF EQUIPMENT

- A. Factory Applied: Electrical equipment shall have factory-applied painting systems which shall, as a minimum, meet the requirements of NEMA ICS 6 corrosion-resistance test, except equipment specified to meet requirements of ANSI C37.20 shall have a finish as specified in ANSI C37.20.
- B. Field Applied: Paint electrical equipment as required to match finish or meet safety criteria. Painting shall be as specified in the respective equipment section.

3.10 TESTS

- A. Testing and inspection: See Section 26 08 00 - Testing.

END OF SECTION

SECTION 26 0800
TESTING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Work Included in This Section: All materials, labor, equipment, services, and incidentals necessary to perform the testing and inspection of the electrical work, including but not limited to the general systems noted below:
 - 1. Grounding System.
 - 2. Lighting System.
 - 3. Distribution System.
 - 4. Fire Alarm System.
 - 5. Telecom System
- B. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.
- C. All work shall comply with Sections 26 05 00 and 26 27 00.
- D. In addition to the general system tests and inspections indicated above, the Contractor shall perform the following specific tests and inspections with certified and calibrated testing equipment:
 - 1. System Grounding
 - 2. Switchgear
 - 3. Feeders
- E. The purpose of these tests is to assure that all tested electrical equipment is operational and within industry and manufacturer's tolerances and is installed in accordance with design specifications.

1.02 APPLICABLE CODES, STANDARDS, AND REFERENCES

- A. All inspections and tests shall be in accordance with the International Electrical Testing Association - Acceptance Testing Specifications ATS-2021 (referred to herein as NETA ATS-2017).

1.03 QUALIFICATIONS

- A. Qualifications of the Contractor shall be as listed in NETA ATS-2021.

PART 2 - PRODUCTS

2.01 THIS ARTICLE DOES NOT APPLY TO TESTING.

PART 3 - EXECUTION

3.01 GENERAL

- A. Final test and inspection to be conducted in presence of Architect and Owner: Test shall be conducted at the expense of, and managed by, the Contractor at a mutually agreed time. Submit written test report.
- B. All portions of the electrical installation shall be inspected and tested to ensure safety to building occupants, operating personnel, conformity to code authorities and Contract Documents, and for proper system operation.

3.02 INSPECTIONS AND TESTS

- A. Tests: Field tests shall be performed and reports submitted, as per Section 26 05 00, Part 1.
 - 1. Final Inspection Certificates: Prior to final payment approval, deliver to the Owner, with a copy to the Architect, signed certificates of final inspection by the appropriate local authority having jurisdiction.
- B. Grounding System:
 - 1. All ground connections shall be checked and the entire system shall be checked for continuity. The resistance of the ground system shall be measured using a 3 point fall-of-potential method. The maximum ground resistance shall be three ohms. If the measured ground resistance exceeds three ohms, an additional ground rod shall be installed, per NEC.
 - 2. Ground tests shall meet the requirements of the National Electric Code.
- C. Lighting Systems:
 - 1. The new exterior lighting systems shall be checked for proper local controls and operation of entire installation, including the operation of the low voltage lighting control system.
- D. Power Distribution System:
 - 1. Test new panel boards / feeders for grounds and shorts with mains disconnected from feeders, branch circuits connected and circuit breakers closed, all fixtures in place and permanently connected and grounding jumper to neutral lifted and with all wall switches closed.
 - 2. Check verification of color coding, tagging, numbering, and splice make-up.
 - 3. Verify that all conductors associated with each circuit are in same conduit.
 - 4. Perform megger tests of all new distribution system feeders prior to energizing. All Cables failing megger tests or with evidence of damage shall be removed and replaced in their entirety (no splices), at no cost to the Owner. Damaged cables may not be field repaired without specific approval of the Architect.

- E. Fire Alarm System: Verify that all equipment, components, and devices function as specified. Refer to Section 28 3101 for additional testing requirements.
- F. Telephone and Data Wiring Systems: Verify that all equipment, components, and devices function as specified. Refer to Section 27 0000 for additional testing requirements.

END OF SECTION

SECTION 26 2700
BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Work included in this Section: All materials, labor, equipment, services, and incidentals necessary to install the electrical work as shown on the drawings and as specified hereinafter, including but not limited to the work listed below:
 - 1. Raceways, feeders, branch circuit wiring, wiring devices, safety switches and connections to all equipment requiring electric service.
- B. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.
- C. All work shall comply with Section 26 05 00.

1.02 SUBMITTALS

- A. Comply with the provisions of Section 26 05 00.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Refer to Section 26 05 00, Basic Electrical Requirements, Part 2 - Products.
- B. List of Equipment Manufacturers:
 - 1. Conduit and Conduit Fittings
 - a. Allied Tube and Conduit, Wester Tube and Conduit, LTV Steel Tubular, National Electric Products, AFC, Republic Steel Corporation, Rome Cable Corporation, United States Steel Corporation, Killark Electric Manufacturing Company, Racor, VAW Aluminum Company, Bridgeport, Steel City, Thomas & Betts, Carlon, O.Z. Gedney, Appleton, Regal.
 - 2. Wire and Cable (600V)
 - a. American Wire Company, General Wire and Cable Corporation, Okonite Company, Rome Cable Corporation, Cerrowire, American Insulated Wire, AFC Cable Systems, Essex, Simplex Wire and Cable Company, Southwire.
 - 3. Solderless Lugs and Grounding Connections
 - a. Burndy Engineering Company Inc, O.Z. Gedney Company Inc, Penn Union Electric Corporation, Thomas and Betts Company Inc.
 - 4. Pull Boxes, Gutters, Special Cabinets
 - a. Square D Company, Columbia Electric Manufacturing Company, General Electric Company, Westinghouse Electric Corporation, Circle Awalt.

5. Outlet Boxes

- a. Appleton Electric Company, Killark Electric Manufacturing Company, Lew Electric Fittings Company, National Electric Products Corporation, Raco, Steel City Electric Company, Carlon, Bowers.

2.02 MATERIALS

A. Grounding:

1. Provide and install grounding system as noted on the Drawings.
2. Grounding electrode conductor: bare stranded copper type.
3. Install ground wires in rigid conduit.
4. All grounding electrode conductor connections "thermite" or "cad-weld" welded.
5. Use approved pressure type solderless connector or use fusion welding for all connections to and bonding of grounding electrode system. All connections shall be visible, readily accessible for testing purposes.
6. Furnish and install solid copper 5/8" x 10'-0" ground rod(s).
7. Terminate grounding conduits at equipment with ground bushing, with ground wire connected through bushing.
8. Ground all isolated sections of metallic raceways.
9. Provide #12 minimum stranded (green) THHN conductor sized per NEC, or as noted, connected continuously throughout branch circuit for all circuits, bonded to panel ground bus, and to all electrical devices and equipment enclosures.
10. Grounding electrode installed as follows:
 - a. Use approved pressure type solderless connector or use fusion welding for all connections to grounding electrode. Connection visible, readily accessible for testing purposes. Grounding electrode conductor between the grounding electrode and service equipment.
 - b. Connect grounding electrode system to metallic water service entry metallic cold water pipe (if available) with nonferrous clamp and bare copper cable (sized as required) in conduit. Connection shall be accessible for inspection.
 - c. Connect grounding electrode system to building steel as noted on Drawings. Use exothermic weld, connection shall be accessible for inspection.
 - d. After installation, test system using the three-point fall of potential method only. Record results and submit to Architect for approval. If resistance to ground exceeds three (3) ohms, install an additional ground rod at minimum 20 feet from existing rod(s).

- B. Raceways: Only the raceways specified below shall be utilized on this project. Substitutions shall be pre-approved in writing. All bare conduit ends (stub-ups or stub-outs) shall be provided with bushed ends or manufactured insulated throat connectors:

1. For power and signal raceways and branch circuit conduits in soil or concrete slabs, "Schedule 40" PVC with Schedule 80 PVC conduit elbows and stub-ups may be used with code size (minimum No. 12) ground wire. A "stub-up" is considered to terminate 6" above the finished surface.
 - a. Schedule 80 PVC conduit shall be used in all concrete footings or foundations and to 18" of either side of footings or foundation walls.
 - b. Where schedule 80 PVC is coupled to schedule 40 or other raceways with differing interior dimensions, each end shall be reamed with a reaming tool to reduce the edge profile for protection of the passing conductors during the pull.
2. Electrical metallic tubing may be used in interior and exterior spaces, made up with steel watertight or steel set screw type fittings and couplings. Cast fittings are unacceptable.
3. Surface mounted rectangular steel raceways and boxes; use for all surface mounted installations, unless otherwise noted (all catalog numbers listed are Wiremold - equals allowed) – color Ivory, unless otherwise noted;
 - a. #V500 for branch power runs on ceilings and walls (used with V500 series straps, elbows, connectors and V5000 series low profile boxes and covers).
 - b. #2000 or 2400 low profile for larger power run requirements on ceiling or walls (used with V2000 series straps, elbows, connectors and low profile boxes and covers).
 - c. #2400D for dual service power and tel/data run requirements (used with divided V2400 boxes and covers).
4. Use flexible conduit for all motor, transformer connections, minimum 3/4"; "Seal tight" type used outdoors and in all wet locations, provide with code size (minimum No. 12) bare ground wire in all flexible conduit.
5. All conduit cuts (factory or field cut) shall be perfectly square to the length of the conduit and cut ends shall be reamed with a reaming tool to provide a smooth edge to the passing conductors and to remove all burs and scrapes. Use of a hand file is not acceptable.
6. All electrical raceways shall be installed concealed, unless otherwise noted. Cut and patch to facilitate such installation to match adjacent and original finish. All exposed conduits, where required, shall be installed parallel to building members.
7. Where existing conditions preclude the installation of EMT in existing walls to remain, provide and install cut-in type boxes and "fish" flexible MC or flex conduit and wire through existing walls to remain, unless shown otherwise on plans.
8. Fasten conduits securely to boxes with locknuts and bushings to provide good electrical continuity.
9. Provide chrome escutcheon plates at all exposed wall, ceiling and floor conduit penetrations.
10. Support individual suspended conduits with heavy malleable strap or rod hangers; supports for 1/2 inch or 3/4 inch conduit placed on maximum 7-foot centers; maximum 10-foot centers on conduits 1 inch or larger.
11. Support multiple conduit runs from Kindorf B907 channels with C-105 and C-106 straps.

12. Conduit bends - long radius.
 13. Flash conduits through roof, using approved roof jack; coordinate with General Contractor.
 14. To facilitate pulling of feeder conductors, install junction boxes as shown or required.
 15. All empty conduits on the project shall be provided with a nylon pull rope to allow pulling of future conductors intended for the specific raceway. Provide plastic wire-tie style nameplate tags on each end of pull rope with printed identification of conduit use and the location of the opposite end of the rope.
 16. Minimum cover of conduits in ground outside of building - 24 inches, unless otherwise noted. Meet PG&E requirements for primary and secondary conduits, minimum 30" cover for primary.
- C. Outlet Boxes and Junction Boxes. Verify all backbox requirements with devices to be installed prior to rough-in.
1. One piece steel knockout type drawn boxes, unless otherwise noted, sized as required for conditions at each outlet or as noted.
 2. Flush-mounted boxes equipped with galvanized steel raised covers for device mounting flush with finished surface. Provide extension rings as required on all acoustical or additional wall treatment areas to bring top of cover flush with finished surface (coordinate with architectural drawings). Devices shall be capable of being tightly mounted to boxes without distorting or bending device or mounting hardware.
 3. Boxes for fixture outlets: 4-inch octagon or larger as required, or as noted.
 4. Switch and receptacle outlets - not smaller than 4-inch-square in furred walls, with raised cover for single device; ganged where required.
 5. Outlet and switch boxes for wet locations, cast aluminum FS or FD type with cast aluminum gasketed spring lid cover. Weatherproof "Bell" type boxes are not acceptable.
 6. All connectors from conduit to junction or outlet boxes shall have insulated throats. Connectors shall be manufactured with insulated throats as integral part. Insertable insulated throats are unacceptable.
 7. Outlet boxes for telecom, 4" square or larger as required or noted, multi-ganged for telephone, data, and other services where indicated on the drawings.
 8. Conduit Bodies: Malleable iron type, with lubricated spring steel clips over edge of conduit body, O-Z/Gedney type EW, or equal.
 9. Pull boxes: All site pull boxes shall be flush in-ground concrete, with engraved concrete or steel lids identifying service use (i.e. electrical, signal, fire alarm, etc.). Christy or equal with all required extensions to provide box and conduit depths shown or required.
 - a. Provide steel H20 rated covers and installation of box rated for H20 in all traffic areas.

- b. Provide bolted covers and slab bottoms (with grouted perimeter) for all electrical distribution and signal system pull boxes used for site distribution. Branch circuit power or signal pullboxes may be collars and tops only (no slab bottom required).
 - c. Provide pullboxes per utility company specifications for all electrical primary and secondary services and for cable TV and telephone service runs. Verify exact size and type prior to order with each utility company.
- D. Wire and Cable (line voltage and signal systems):
- 1. 600-volt class where used for or run with line voltage power wiring, insulation color coded, minimum No. 12 awg for power branch circuits, No. 14 for power control circuits, and wiring size and type as directed by signal system manufacturer for each signal system.
 - 2. All conductors shall be copper.
 - 3. Size and insulation type:
 - a. Standard locations: #12 to #1 AWG: THWN for wet locations and THHN for dry locations. #1/0 through #4/0 AWG: XHHW (55 Mils). 250MCM and larger: XHHW (65 Mils). All wire sizes used shall be based on a 75 degree insulation rating, unless specifically used with 90 degree rated breakers and devices.
 - b. All wiring (power and signal) installed underground between buildings, or in wet or damp locations, shall be outside listed and rated for wet locations.
 - c. High temperature and non-standard locations: Provide wire type and insulation category suitable for area of use as defined in NEC table 310-13.
 - 4. Conductors No. 8 and larger and as otherwise noted on drawings shall be stranded. Conductors No. 10 and smaller shall be solid.
 - 5. Provide signal system wiring for each system to meet the system manufacturers requirements and recommendations for each device or equipment type. Signal wiring systems shall be provided with shielding and/or insulation type and cable quantities as directed by the manufacturer, and meet all NEC requirements for locations used.
 - 6. Install all wiring branch circuits and feeders (low voltage and line voltage) in conduit unless noted otherwise in the drawings. Contractor shall mandrel all feeders and pass a "sock" (or utilize other suitable means) through each raceway prior to pull to remove all water and construction debris. All raceways shall be completely clear of any obstructions or debris and all cut ends shall be reamed, prior to pull. Utilize pulling compound on all runs to insure minimum friction and pulling tension.
 - 7. Megger test all feeders prior to energizing. See section 26 08 00 for additional information.
 - 8. Approximately balance branch circuits about the neutral conductors in panels.
 - 9. Connections to devices from "thru-feed" branch circuit conductors to be made with pigtails, with no interruption of the branch circuit conductors.
 - 10. Neutral conductor identified by white outer braid, with different tracers of "EZ" numbering tags used where more than one neutral conductor is contained in a single raceway.

11. Neatly arrange and "marlin" wires in panels and distribution panelboards with "T and B Ty-rap" or approved equal plastic type strapping.
 12. All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color-coded as follows:
 - a. Voltage Phasing A B C N
 - b. 120/208 3PH4W Black Red Blue White
 - c. 208 3PH3W Black Red Blue --
 13. The equipment grounding conductor shall be insulated copper; where it is insulated, the insulation shall be colored green.
 14. Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags indicating the connected circuit numbers.
 15. Install feeder cables in one continuous section unless splices are approved by Architect. Exercise care in pulling to avoid damage or disarrangement of conductors, using approved grips. No cable shall be bent to smaller radius than the spool on which it was delivered from the manufacturer. Color code feeder cables at terminals. Provide identifying linen tags in each pullbox.
- E. Plates: Leviton, or equal, except as noted:
1. The color of all faceplates shall match the color of the devices installed under/in the faceplate, except as specifically noted otherwise.
 2. For flush outlet boxes, for switches, and receptacles: nylon, color to be selected by architect, unless otherwise noted.
 3. Plates for surface-mounted outlets: galvanized steel unless otherwise noted.
 4. Weatherproof duplex receptacle plates for exterior locations with ground fault interrupter receptacles in type FS or FD boxes – Appleton #FSK-1VDR or compatible equal. Verify cover compatibility with box type and device installed.
 5. Weatherproof "in-use" cover, vertical or horizontal mount, for exterior with GFCI receptacles. Die-cast metal alloy, Taymack MX series or equal with openings to match installed devices.
 6. Plates for flush telephone / data boxes: white nylon or as otherwise directed - provide and install at each telephone /data outlet plate to match duplex power outlet plate, for jack installation by others. Where the power and telephone / data outlet boxes are shared the plate shall be continuous in multi-gang locations. See drawings.
- F. Lugs and Connectors: Thomas and Betts "lock-tite", for No. 4 and larger wire; 3M "Scotchlock" fixed spring screw-on type wire connectors with insulator for No. 6 and smaller wire.
1. All splices shall be made up with screw-on type connectors - no plug-in or push-in style connectors acceptable. Wires shall be solidly twisted together with electricians pliers before screw-on connector is installed to ensure a proper connection in the event of wire nut failure. No exceptions.

2. Connectors listed or labeled for “no wire twisting required” are not an acceptable substitute for actual wire twisting.
 3. Utilize porcelain type connectors in all high temperature environments (above 105 degrees Celsius).
- G. Splice Insulation: "Scotch" electrical tape with vinyl plastic backing or rubber tape with protective friction tape for interior work.
1. Splices in electrical cables of 600 volt insulation class in underground system duct shall be made only in accessible locations such as pullboxes, light pole handholes, etc., using a compression connector on the conductor and by insulating and waterproofing (for exterior and underground locations) by one of the following methods:
 - a. Cast type splice insulation shall be provided by means of a molded casting process employing a thermosetting epoxy resin insulating material which shall be applied by a gravity poured method or by a pressure injected method. The component materials of the resin insulation shall be in a packaged form ready for convenient mixing after removing from the package. Do not allow the cables to be removed until after the splicing material has completely set.
 - b. Gravity poured method shall employ materials and equipment contained in an approved commercial splicing kit which includes a mold suitable for the cables to be applied. When the mold is in place around the joined conductors, the resin mix shall be prepared and poured into the mold. Do not allow cables to be moved until after the splicing materials have completely set.
- H. Identification: Refer to Section 26 05 00.

PART 3 - EXECUTION

3.01 REFER TO BASIC ELECTRICAL REQUIREMENTS - SECTION 26 05 00 FOR WORK UNDER THIS SECTION.

3.02 TESTS

- A. Testing and Inspection: See Section 26 08 00 - Testing.

END OF SECTION

**SECTION 26 5601
SITE LIGHTING**

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Luminaires
- B. Lamps
- C. Ballasts
- D. Poles
- E. Pole bases
- F. Controls and wiring

1.02 SYSTEM DESCRIPTION

- A. Furnish all labor, materials, apparatus, tools, equipment transportation, temporary construction and special or occasional services as indicated on the Drawings or described in these Specifications and as required to make a complete working Lighting System.
- B. Illumination levels shall be in accordance with recommendations by the Illuminating Engineering Society (IES).

1.03 INCORPORATED DOCUMENTS

- A. Section 26 05 00 applies to all work in this Section.

1.04 SUBMITTALS

- A. Catalog Information:
 - 1. Luminaire (each type) with photometric pattern.
 - 2. Contactors.
 - 3. Ballast (each type)
 - 4. Poles.
 - 5. Brackets.
- B. Shop Drawings.
- C. Manufacturer's Recommendations: Provide two copies before material is used.
 - 1. PVC conduit joints and junctions.
 - 2. Solvent welding directions.
 - 3. Pole bases.

- D. Laboratory Test: Determine soil density relationships for compaction of backfill material in accordance with ASTM D1557, Method D.

PART 2 - PRODUCTS

2.01 MATERIAL AND EQUIPMENT

- A. Provide new materials and equipment unless otherwise specifically indicated or specified. Materials shall be listed by Underwriter's laboratories, Inc. (U.L.) and bear evidence of such approval where applicable.
- B. Luminaires: Site luminaires shall be weatherproof with integral socket for ballast. Lamps shall be metal halide unless otherwise noted. Reflectors and refractors shall provide the light configuration indicated and conforming to I.E.S. RP-10-65.
- C. Luminaires and poles shall be finished in epoxy enamel designed to withstand the effects of salt spray. Lens shall be securely attached to the lens frame for security during maintenance and relamping.
- D. Lighting Contactors: NEMA ICS 2. Electrically operated, magnetically held unit in NEMA enclosure, rated poles and ratings as indicated on Drawings. Units shall have silver alloy double breaker contacts and coil clearing contacts and shall require no arcing contacts. On-off selector switch.
- E. Ballasts: High intensity discharge ballasts shall be the following types required for the proposed fixture lamping. Peak Load (PL) ballasts for Metal Halide (MH) lamps. Ballasts to be independently mounted outdoors shall be waterproof. Ballasts shall conform to U.L. 1029.
- F. Poles, Brackets, Pole Bases and Attachments: Shall be rated for service with wind velocities of 100 mph considering the force exerted by the wind on the maximum exposure of the fixture luminaire selected.
- G. Poles shall be anchor base type round, height and style as indicated, complete with handhole and gasketed cover, anchor bolts with leveling and locking screws and basecovers, and grounding connection, finished to match luminaire.
- H. Concrete pole bases shall be cast-in-place reinforced concrete as indicated with anchor bolts and conduit entries as per manufacturer. Concrete shall be rated 3,000 PSI at 28 day test.
- I. Concrete:
 - 1. Concrete for electrical requirements shall be at least 3,000 psi concrete with 1-inch maximum aggregate conforming to the requirements of Division 03 for Cast-In-Place concrete.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Refer to Section 26 27 00, Part 2.02, for wiring and splicing requirements.
- B. Underground cable installation shall conform to National Electrical Code except as otherwise specified or indicated.
- C. Contractor Damage: The Contractor shall promptly cause repairs to be made to any indicated utility lines or systems damaged by his operation.

- D. Under roads and paved areas, ducts shall be EPC-80-PVC polyvinyl chloride conduit.
- E. Cables shall be in one piece without splices between connections except where the distance exceeds the lengths in which the cable is furnished.
- F. Bends in cables shall have an inner radius of not less than 12 times the cable diameter.
- G. Horizontal slack of approximately 3 feet shall be left in the ground on each end of cable runs, on each side of connection and at all points where connections are to be made above ground level.
- H. Earthwork: Earthwork for electrical requirements shall conform to the requirements of Division 31.
- I. Coordinate work with other trades. Pre-ship anchor bolts and templates for use in preparing bases for installation. After leveling luminaires, pack grout between mounting plate and concrete footing. Provide weep holes to prevent accumulation of moisture inside pole base.

3.02 TESTS

- A. Test under provisions of Section 01 40 00 and 26 05 00.
- B. The Owner shall be notified at least three working days in advance of the Contractor's proposed date of the tests to permit scheduling, and to permit witnessing of the tests. The Contractor shall furnish the Owner with three copies of the results of the tests.
- C. Circuits: The Contractor shall test each circuit, all controllers, and components of the system for proper operation. The Contractor shall furnish the Owner with three copies of the test results.
- D. Compaction Tests: Backfill shall be tested for compaction in accordance with ASTM D1556.
- E. Operating Test: Contractor shall operate the system in the presence of the Owner proving the proper operation.

END OF SECTION

SECTION 27 0000
TELECOMMUNICATIONS SYSTEM

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This project includes the provisions for and installation of a complete telecommunications system pathways and wiring infrastructure system for the new Portable Classroom building, including all terminations, testing, and all related passive components required for operation.

1.02 WORK INCLUDED

- A. Work included in this Section: All materials, labor, equipment, services, and incidentals necessary to install the work as shown on the drawings and as specified hereinafter, including, but not limited to the work listed below.
- B. Provide and install a complete and functional data communication system, including voice services via VoIP capability, and all necessary passive components, to allow full operation of the wiring infrastructure system upon completion.
- C. The installation shall include all optical fiber, twisted pair copper, inner-duct, conduit, fiber interconnect / patching equipment, copper interconnect / patching equipment, fiber connectors, copper connectors, splices, fiber patch cords / jumpers, copper patch cords / jumpers, wiring blocks, data outlets, and any other equipment specified herein.
- D. The installation shall not include any active network components such as routers, switches, hubs, fiber optic transceivers, wireless communications system transceivers, antennae, base stations and concentrators or servers, which shall be supplied by the owner.
- E. Upon completion of the installation, this contractor shall test all fiber and copper pathways and record the test results as specified herein. Test results must be delivered to the owner upon completion of project
- F. The scope of work under this Section shall include any other work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.
- G. Provide CBC 2025 compliant seismic installation. See Section 26 05 00 for all certification and submittal requirements.

1.03 RELATED WORK

- A. Division 1 - General Requirements.
- B. Section 26 05 00 - Basic Electrical Requirements
- C. Section 26 27 00 - Basic Electrical Materials & Methods
- D. Equipment and work provided by the owner's network integrator, including owner provided network servers, switches, hubs, optical fiber transceivers, routers, wireless communication system equipment, etc.

1.04 INCORPORATED DOCUMENTS

- A. Requirements of the General Conditions, supplementary conditions, and Division 1 Sections apply to the work of this section, unless modified herein.
- B. Published specifications, standard tests or recommended methods of trade, industry or government organizations shall apply to work of this section where cited by abbreviations noted below, unless modified herein.
 - 1. National Electrical Code, latest edition, (NEC), Article 800
 - 2. ANSI/TIA-492.AAAC-B - Detail Specification for 850-nm Laser-Optimized, 50-um Core Diameter/125-um Cladding Diameter Class 1a Graded-Index Multimode Optical Fibers
 - 3. ANSI/TIA-492.AAAD - Detail Specification for 850-nm Laser- Optimized, 50-um Core Diameter/125-um Cladding Diameter Class 1a Graded-Index Multimode Optical Fibers Suitable for Manufacturing OM4 Cabled Optical Fiber
 - 4. ANSI/TIA-492.CAAB - Detail Specification for Class IVa Dispersion-Unshifted Single-Mode Optical Fibers with Low Water Peak; Current Edition
 - 5. ANSI/TIA-568.0-D - Generic Communications Cabling for Customer Premises
 - 6. Underwriters' Laboratories, Inc. (UL), UL 1459, UL 1863.
 - 7. ANSI/TIA-568.1-D "Commercial Building Communications Cabling Standard"
 - 8. ANSI/TIA-568.3-D "Optical Fiber Cabling and Components Standard"
 - 9. ANSI/TIA-569-D "Telecommunications Pathways and Spaces"
 - 10. ANSI/TIA-568-C.2-1. "Balanced Twisted-Pair Telecommunications Cabling and Components Standard"
 - 11. ANSI/TIA-606-B.1 - Administration Standard for the Commercial Telecommunications Infrastructure
 - 12. ANSI/TIA-607-C - Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises
 - 13. ANSI/TIA-862-B - Structured Cabling Infrastructure Standard for Intelligent Building Systems
 - 14. ANSI/TIA-942-A - Telecommunications Infrastructure Standard for Data Centers
 - 15. BICSI - TDMM, Building Industries Consulting Services International, Telecommunications Distribution Methods Manual (TDMM)
 - 16. IEEE 802.3 "Carrier Sense Multiple Access With Collision Detection".
 - 17. IEEE 802.11b "Wireless Network standard"
 - 18. Owner's telecommunications Standards and Requirements.

1.05 CONTRACTOR QUALIFICATIONS

- A. Contractor must possess a valid state Contractor's License and must have successfully performed at least three projects of similar scope, within two years of the date of this bid. Proof of performance shall be in the form of reference sheets, which shall include a brief description of the project, the beginning and ending contract price, the project foreman or superintendent's name, and the name, address, and telephone number of a project contact.
- B. Contractor must be able to prove to the satisfaction of Owner that it has significant experience in the installation of optical fiber cable systems. Installation must include installation of optical fiber cable, fiber termination, knowledge of interconnect equipment, and a thorough knowledge of testing procedures. Contractor must provide a minimum of three references supporting its claim of experience for similar projects within the two years prior to this bid. Documentation must be included with the bid documents submitted.
- C. Contractor must have been in business and in the business of installing telecommunications systems, continuously, for a period of at least three years, prior to the date of this bid.

1.06 SUBMITTALS

- A. General: Comply with the requirements of Section 26 05 00 - Submittals.
- B. Submit complete list of all items of materials to be furnished, and installed to the owner for compliance review prior to purchasing the materials. Submittals shall include:
 - 1. Complete bill of materials and equipment, including a complete listing of the characteristics of the equipment as specified.
 - 2. Rack and communications cabinet layouts and dimensions.
 - 3. Samples of proposed cable markers and labeling, and patch panel labeling and color-coding.
 - 4. Manufacturer's warranty application for the indicated project.
 - 5. Schedule of work completion coordinated with the General Contractor.
- C. Submit Contractor's qualifications as outlined in Section 1.5 above.
- D. Submit "as-built" record drawings at the completion of the installation and testing.
- E. The Contractor shall submit all testing documentation prior to acceptance of the work by the Owner.
- F. Contractor shall submit to the Owner, in writing, 48 hours advance notice when testing of optical fiber cable will begin.

1.07 GENERAL REQUIREMENTS

- A. The telecom communications system shall consist of two components:
 - 1. An optical fiber backbone.
 - 2. Twisted pair copper voice and data cabling.

- B. Due to distance from the MDF, the new building shall be connected via a single multi-strand single mode optical fiber cable to the building MDF. A new Intermediate Distribution Frames (IDF) shall be located as indicated on the Drawings for termination/patching of horizontal copper station cabling. Each optical fiber cable shall originate at the building MDF and shall be terminated at the IDF.
- C. From the IDF, one or more twisted-pair copper cables shall be routed to each data outlet location, and to each wireless antenna location, as indicated on the drawings.
 - 1. The wiring system shall be provided and installed per TIA / EIA-568 wiring topology and shall be Category 6A rated.
 - 2. Unshielded twisted pair (UTP) cable, installed for high-speed data application, shall not exceed 295 feet in length between terminations.
- D. Terminations:
 - 1. All fiber strands shall be terminated with connectors and land on fiber interconnect equipment.
 - 2. All data cables and wireless communications cables shall be terminated on modular patch panels.
 - 3. All voice cables shall be terminated on modular patch panels, or on wiring blocks where indicated on the drawings.
 - 4. All active equipment will be provided and installed by the owner.
- E. The MDF and IDF will also house active data distribution equipment provided by the owner, possibly including but not limited to local area network hubs and switches, optical fiber transceivers, wireless communication systems base stations and concentrations routers, and servers. This Contractor shall coordinate with Owner's network integrator to ensure that data rack and cabinet layouts fully accommodate all owner-provided equipment.

1.08 FUNCTION AND OPERATION

- A. The function of the data communications cable system is to transmit data signals from a central location to multiple individual data outlet locations. Upon completion of the work outlined in this specification, the entire cable system, including cable, and communications outlets shall be tested to (and meet) Category 6A compliance.
 - 1. Horizontal UTP Category 6A 23AWG copper cabling system shall be guaranteed to exceed all TIA-568-C.2 link and channel performance requirements and be capable of supporting 10G Base-T (802.3an) and ISO/IEC 11801 Class EA applications for a total distance of 100 meters with equipment cords. System shall be guaranteed to meet all Cat 6A requirements for short links and channels down to a 10 foot link (5 meter channel) with a guaranteed 4 dB margin of Alien Crosstalk.
 - 2. Upon completion of the work, the multimode optical fiber cable system (if multimode is used on this project) shall be capable of 10 Gb/s data rates over a distance of 300 meters and of transmitting signals with a minimum bandwidth of 200 MHz at both 850 and 1300nm. The cumulative signal loss, through connectors, jumpers, couplers, and fiber cable, shall be less than 10 dB.

- B. Upon completion of the work, the single mode optical fiber cable system shall be capable of transmitting signals with a bandwidth of up to 500 MHz at both 1310 and 1550 nm. The cumulative signal loss, through connectors, jumpers, couplers, and fiber cable, shall be less than 10dB.

1.09 GUARANTEE

- A. The Cabling System shall meet the performance requirements of the ANSI/TIA/EIA-568-C.2 standard. The warranty on the material, services, and operation of the cabling system to this specification must be for a period of at least 15 years. The connecting hardware shall have a lifetime extended warranty against defects in material and workmanship.
- B. The warranty must include the following statements regarding the cabling system:
 - 1. “Will support and conform to TIA/EIA-568-C.2 specifications covering any current or future application which supports transmission over a properly constructed horizontal cabling system premises network which meets the channel and/or basic link performance as described in TIA/EIA-568-C”.
 - 2. “Will be free from defects in material or faulty workmanship for the entire warranty period”.
 - 3. The Contractor shall apply for a warranty from the manufacturer within 60 days from end of project. In order to achieve a warranty the contractor must be in good standing with current training records on file.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Copper & Fiber Cable
 - 1. BerkTek, Superior Essex, Avaya, Siecor, or equal
- B. Fiber Optic Distribution Panels and Interconnects
 - 1. Leviton, ADC Telecommunications, Siecor, or equal
- C. Copper Patch Panels and Devices
 - 1. Ortronics, Leviton, Avaya, Ortronics, Siemon, or equal
- D. Cabinets and Racks
 - 1. Ortronics, ESW (Encore), Leviton, Homaco, Chatsworth, or equal
- E. Innerduct
 - 1. Eastern, Endot, or equal
- F. Firestopping
 - 1. STI (Specified Technologies, Inc.), 3M, or equal
- G. Steel Wire Cable Tray:

1. Cablofil, Mono-Mesh, GS Metals, or equal
- H. Cable Runway:
1. Cablofil, B-Line, Chatsworth, Mono-System Inc, or equal
- I. Fiber Optic Cable Trough:
1. Ortronics, ADC Telecommunications, or equal

2.02 SYSTEM PERFORMANCE

A. Category 6A (CAT6A) Unshielded Twisted Pair (UTP) Systems

1. Category 6A 23AWG UTP copper cabling system shall be guaranteed to exceed all TIA-568 link and channel performance requirements and be capable of supporting 10G Base-T (802.3an) and ISO/IEC 11801 Class EA applications for a total distance of 100 meters with equipment cords. System shall be guaranteed to meet all CAT6A requirements for short links and channels down to a 10 foot link (5 meter channel) with a guaranteed 5 dB margin of Alien Crosstalk.
2. Basis of Design is Berk-Tek Leviton Technologies CX6850 Cat6A Premium UTP System, or approved equal.
3. Category 6A Performance Parameters, headroom over TIA-568 standard:

INSERTION LOSS	NEXT	PSNEXT	ACR-F (ELFEXT)	PSACR-F (ESELFEXT)
3%	5DB	6DB	10DB	10DB
RETURN LOSS	ACR-N	PSACR	PSANEXT	PSAACR-F
4DB	7DB	7DB	5DB	11DB

A. Connectors

1. Provide mission-critical, modular-type, information connectors/outlets (jacks) for 23-24 AWG copper cable. These connectors shall be individual snap-in style, and exceed compliance with TIA-568 specifications. The connectors shall comply with the following:
 - a. Shall be 8-position 8-conductor (8P8C) "RJ45"-style modular jack, Category 6 (CAT6) and Category 6A (CAT6A), with IDC terminals, T568A/B wiring scheme (use T568B), and utilize a non-punchdown simplified manual termination style.
 - b. Shall be encased in a die-cast housing to protect from potential EMI/RFI, and utilize a universal Keystone-style insertion footprint as the manufacturer's main "flagship" line of products.
 - c. CAT6A connectors shall exceed all component performance requirements for Augmented Category 6 in the ANSI/TIA-568 standard, as well as Class EA requirements as described in ISO/IEC 11801, from 1 MHz to 500 MHz to support the IEEE 802.3an standard for 10GBASE-T network performance.

- d. CAT6 Connectors shall exceed all component performance requirements for Category 6 in the ANSI/TIA-568-C.2 standard, as well as Class E requirements as described in ISO/IEC 11801, from 1 MHz to 250 MHz. Shielded connectors shall utilize the same form factor, design, and tool-less installation process as the unshielded connectors in the product line.
- e. Shall be tested by an Independent testing body such as Intertek (ETL) for component compliance (i.e. "Component rated") to ANSI/TIA-568 and for POE+ applications. Test results shall be published and publicly available without special request.

2.03 MATERIALS

A. Copper Cable:

- 1. Inter-building outside-plant cable shall be multi-pair unshielded twisted pair type, #23 AWG, Superior Essex type ANMA or equal. The wiring shall comply with the following:
 - a. Maximum DC resistance: 26.5 Ohms Per 1000 feet
 - b. Maximum mutual capacitance at 1 kHz: 15.7 nF per 1000 feet
 - c. Nominal attenuation @ 1 MHz: 6.7 db per 1000 feet
 - d. Characteristic impedance @ 1.0 Hz: 1.0 MHz: 100 Ohms (+) 15%
- 2. Interior backbone cable shall be multi-pair unshielded twisted pair type, #23 AWG, Superior Essex AR Series Riser Cable type ARMM or equal. The cable sheath shall be armored and riser-rated (CMR). The cable shall meet ANSI / TIA / EIA-568 standards for 100 ohm category 3 UTP multi-pair backbone cable and also comply with the following:
 - a. Maximum DC resistance: 26.5 Ohms per 1000 feet
 - b. Maximum mutual capacitance at 1 kHz: 15.7 nF per 1000 feet
 - c. Nominal attenuation @ 1 MHz: 7.6 db per 1000 feet
 - d. Characteristic impedance @ 1.0 - 16.0 MHz: 100 Ohms, (+) 15%
- 3. Inter-building and interior backbone cable shall meet the following requirements.
 - a. Cable Conductors specifications:
 - 1) 23 AWG solid copper conductors.
 - 2) Individual conductors PVC jacketed.
 - b. Cable construction specifications:
 - 1) Core wrap - Polypropylene film.
 - 2) Shield - Corrugated aluminum tape bonded to riser-rated jacket.
 - 3) Cable Jacket marking: Must be legible and shall contain the following information:
 - 4) Manufacturer's name.

- 5) Copper conductor gauge.
 - 6) Pair counts.
 - 7) UL and CSA listing.
 - 8) Manufacturer's trademark.
 - 9) Category rating.
 - 10) Sequential foot markings, in 1-foot increments.
 - 11) Cable jacket shall be gray with black lettering.
4. Horizontal distribution cable in conduit shall consist of four unshielded twisted pairs, #23 AWG, BerkTek Lanmark Cat. 6A type CMR or equal, with the following characteristics: Cable shall be characterized to 750 MHz and UL/ETL Listed by the Manufacturer printed on the cable jacket and package, as well as Intertek (ETL) Verified to TIA-568 Category 6A and ISO/IEC 11801 Class EA requirements for channel, link and component performance to support IEEE 10GBASE-T (802.3an) networks.
 5. Horizontal distribution cable, where not installed in conduit in plenum spaces, shall be plenum rated and consist of four unshielded twisted pairs, #23 AWG, BerkTek Lanmark Cat. 6A type CMP or equal, with the following characteristics: Cable shall be characterized to 750 MHz and UL/ETL Listed by the Manufacturer printed on the cable jacket and package, as well as Intertek (ETL) Verified to TIA-568 Category 6A and ISO/IEC 11801 Class EA requirements for channel, link and component performance to support IEEE 10GBASE-T (802.3an) networks..
 6. Horizontal cable shall meet the following requirements.
 - a. Cable jacket marking: Must be legible and shall contain the following information:
 - 1) Manufacturer's name.
 - 2) Copper conductor gauge.
 - 3) Pair counts.
 - 4) UL and CSA listing.
 - 5) Manufacturer's trademark.
 - 6) Category rating.
 - 7) Sequential foot markings, in 2-foot increments.
 - b. Telecom station (and wireless antenna) cable jacket shall be blue with black lettering and shall be in 1000-foot boxes.
 - c. The jacket for telecom cabling serving AV devices and equipment shall be yellow with black lettering and shall be in 1000-foot boxes.

- d. Type CMR cable shall be solid annealed copper with polyolefin insulation round design with flexible web separator with flame retardant PVC jacket.
- e. Type CMP cable shall be same as Type CMR except with type FEP insulation.
- 7. Data Equipment Inter-Connect patch Cords: Four twisted-pair stranded, Category 6A, 23 AWG copper conductors. Individual conductors PVC jacketed. Each conductor provided with unique color code. Manufacturer terminated on each end with Ortronics or Systimax Category 6A 8-pin / 8-position modular plug to be pinned as per EIA / TIA 568 C. Connector plug shall be polarized to prevent polarity reversal or split pairs, and shall be factory-marked to indicate top of connector. Inter-connect cord shall be UL listed.
- 8. The Contractor shall complete data interconnects between patch panels and Owner-provided active network electronics.
- 9. Lengths as required running from the data station cable terminations to the ports on equipment mounted in any rack position. Minimum length shall be 5 feet and the maximum length shall be 15 feet.
- 10. Voice Cross-Connect Wire (for use on facilities where voice cables are terminated on blocks): One and Two twisted pair, 23 AWG solid copper conductors. Individual conductors PVC jacketed. One pair shall be yellow/blue color code and 2 twisted pairs shall be red/blue and red/orange coded. Must be UL listed for use as cross-connect wire. Provide one 1,000 foot reel of each type for use by Owner.
- 11. Contractor to assist Owner to perform all voice cross-connects.
 - a. Minimum performance specifications:
 - 1) Cross-connect wire used on "voice" (telephone) cross-connects must meet the EIA/TIA 568 B impedance, attenuation and NEXT requirements for Category 3 horizontal cable.

B. Fiber Optic Cables

- 1. The mechanical and environmental specifications for fiber optic cable shall be in accordance with ANSI/TIA-492.AAAC-B, Bellcore, FDDI, and NEC sections 770 standards. Optical fiber cables run shall be low-water-peak multimode or singlemode (OS2), and meet all of the requirements delineated within the specifications of ANSI/TIA-568.
 - a. Cable shall meet/exceed Bellcore TR-TSY-000020, FDDI and NEC sections 770-6(b) and (c) standards.
 - b. Strand counts shall be per drawings.
 - 1) Singlemode inter-building (exterior) backbone fiber optic cable shall be outside plant rated, with number of single mode strands as noted on the drawings, with dielectric central member, non-armored, water-blocking material, ripcord, dielectric strength member over loose buffer tubes, and polyethylene jacket, BerkTek, Superior Essex (11--9T01) Loose Tube Single Jacket All-Dielectric Cable or equal, and shall meet/exceed the following cable characteristics:
 - (a) Single mode Core / Cladding size: 8.31/125um

- (b) Maximum attenuation: 0.40 dB/km @ 1310nm, 0.30 dB/km @ 1550nm
- 2) Singlemode indoor backbone fiber optic cable shall be plenum rated, with number of single mode strands as noted on the drawings, with dielectric central member, non-armored, ripcord, dielectric strength member over TB11 buffered fiber, PVC jacket, BerkTek, Superior Essex (44---9101) or equal, and shall meet/exceed the following cable characteristics:
 - (a) Single mode Core/Cladding size: 8.3/125um
 - (b) Maximum attenuation: 0.40 dB/km @ 1310nm, 0.30 dB/km @ 1550nm
- 3) All cable assemblies are to be Leviton Opt-X type or equal.
- 4) General Fiber Optic Cable Requirements:
 - (a) See the Drawings for required fiber counts and routing.
 - (b) ANSI.EIA/TIA-568.3-D.
 - (c) The cable manufacturer must guarantee the supplied single mode fiber optic cable will meet the specifications covering latest following standards and network applications using standard off-the-shelf, non-proprietary network hardware:
 - (d) OC-12 625 Mb/s
 - (e) OC-48 1024 Mb/s
 - (f) IEEE 1000 Base SX 1000 Mb/s
 - (g) ATM 625 Mb/s
 - (h) ATM 1.2 Gbps
 - (i) Fibre Channel 1.062 Gbps
 - (j) Fiber optic cable sheath construction shall be of a tight-buffered MIC style design with integrated strength member.
 - (k) The fiber optic cable shall have an integrated strength member, which is a high tensile strength dielectric providing axial strength and anti-buckling properties for the fibers.
 - (l) The fiber optic cable shall utilize aramid yarn as a flexible strength member surrounding the buffered fibers beneath the cable jacket.
 - (m) The individual fibers in a tight-buffered fiber optic cable shall be placed in groups of 6 or 12 fiber strands per subunit.
 - (n) The individual subunits shall be color coded for easy identifications.
 - (o) The cable tensile load rating shall be a maximum of 461 lbf for a 24-fiber count 6-fiber subunit.

- (p) The cable minimum bend radius at 0-150lbs pulling or handling load shall be 10 times the outside diameter of the sheath.
- (q) The cable minimum bend radius at 151-600 kbs pulling or handling load shall be 20 times the outside diameter of the sheath.
- (r) The fiber optic cable shall be low smoke, flame retardant and shall meet the flame test requirements of UL 910. It shall be UL listed as OFNP.
- (s) Multimode fiber optic connectors shall be duplex LC.
- (t) Fiber optic patch cables LC to LC shall be duplex with an oval over-sheath. Each fiber shall be labeled 'A' or 'B' to provide fast identification of "Transmit" and "Receive" fibers in patching between network electronics and backbone connections. Fiber optic duplex patch cables shall be provided in a 15 foot length as follows:
- (u) Avaya FL3EP-EP-15 or Leviton 5LDLC-M05.

C. Data Outlets

1. Cable termination hardware shall be individual; Category 6A rated Leviton (or equal) jacks. The listed product shall have the following characteristics:
 - a. One eight-position, eight-conductor jack (non-keyed), TIA/EIA-568-C Compliant, wired to T568B, Leviton category 6A.
 - b. The cover of the information outlet shall be labeled above the jack. The number on the outlet jacks shall coincide with the identification requirements listed in Part 3 of this Section below.
 - c. The color of all general use jacks shall be blue.
 - d. The color of all jacks at AV-related devices or racks shall be yellow.
 - e. The color of all faceplates and blank inserts or visible mounting plates shall match the adjacent power or signal outlet covers on the project (provided under another Section).
 - f. The devices at outlets and the devices in the patch panels shall be of the same manufacturer and same type.
 - g. See Drawings for number of jacks at each outlet, jack arrangement, and mounting type.
- 1) The 8-pin 8-position jacks at terminal blocks and at each 4-pair termination shall be labeled with laser-printed polyester self-laminating wrap-around labels.
 - (a) Eight-pin 8-position jack label-faceplates;
 - (1) All labels shall be polyester and white in color;
 - (2) All labels shall be 1.80-inch in width and 0.375-inch in length;
 - (3) Labels shall have an adhesive backing;

- (4) Labels shall be attached to the faceplate by adhesive and clipping in behind the snap in clear plastic cover;
- (5) Labels shall be laser printed with the labeling scheme as specified;
- (6) Labels shall be Panduit Pan-CODE Laser Labels (PLL) part EFPL-1, Leviton LabelWare, or equal.
- (7) Terminal block designation strip:
- (8) All labels shall be polyester;
- (9) Labels shall be white in color for 4-pair data station cable terminations, located within a blue plastic label holder;
- (10) Labels shall be attached to the designation strip provided with the blue plastic holders;
- (11) All labels shall be 7.88 inches in width and 0.50 inches in length;
- (12) Labels shall have an adhesive backing;
- (13) Labels shall be laser-printed with the labeling scheme as specified;
- (14) Labels shall be Panduit Pan-CODE Laser Labels (PLL) part number PLL-22-Y3-1, Leviton LabelWare, or equal.
- (15) Labeling for all cable, jacks, and other elements of the telecom cabling system shall follow TIA/EIA-606 Standards. Provide color-coded labels for all wiring blocks as follows:
 - (16) Interface to Site Cabling - Brown
 - (17) Interface to Equipment Cabling - Purple
 - (18) Interface to Horizontal Cabling - Blue
 - (19) Interface to Telephone Company - Green

D. Termination Hardware at MDF /IDF's (Fiber Optic)

- 1. Optical Fiber Interconnect Equipment: Interconnect equipment shall be mounted on two or four post equipment racks as indicated on the drawings. Interconnect equipment shall be affixed to the rack by at least (4a) screws. The screws shall be the correct size and thread configuration for the holes in the rack. The screws shall be tightened to the extent that they hold the equipment firmly to the rack, without distorting the equipment or stripping the threads. All optical fiber interconnect devices shall be assembled and installed in accordance with the manufacturer's instructions and recommendations.
- 2. Fiber Interconnect Equipment shall be of sufficient size to permit termination of all fiber strands, maintaining minimum bend radius for both multimode and singlemode cables, and maintaining required cable storage. In the event that an enclosure must be oversized (number of termination

ports) due to manufacturer's product standardization, the next larger available enclosure size shall be utilized.

3. Adapter plates, which accommodate Duplex LC type connectors, shall be provided within each Fiber Optic Distribution Panel (unless otherwise noted on the drawings). Multimode and Singlemode connectors (quantity and type as indicated on the drawings) shall be included on adapter plates.
 - a. The duplex LC adapter at the main distribution frame (MDF) shall be mounted in a B-A configuration.
 - b. The duplex LC adapter at each intermediate distribution frame (IDF) shall be mounted in an A-B configuration for cables coming from the MDF, and in a B-A configuration for cables going to an additional IDF (if applicable) further downstream.
 - 1) Fiber optic distribution panels shall be rack-mount type, utilizing Leviton Opt-X fiber System components, or equal, with fiber capacity as indicated on the drawings, equipped with snap-in adapter panels.
 - (a) Provide quantity of connector panels for complete termination of all fiber strands, complete with duplex LC adapters.
 - (1) Provide blank connector plates for all spaces not equipped with adapter panels.
 - (2) All glass strands of each fiber optic cable shall be terminated on Leviton Fast Cure type duplex LC connectors which require no epoxy or heat cure devices, allow re-termination to reduce waste, and have the following characteristics:
 - (3) Ceramic ferrule
 - (4) 568LC style
 - (5) Plastic housing
 - (6) Low loss - 0.2 db (typical), 0.5 (guaranteed)
 - (7) All inter-building fiber optic cables (loose tube type) shall be terminated at fiber optic distribution panels using a Leviton 49887 Series (or equal) buffer tube fan-out kit.
 - (8) Labeling for fiber optic cabling and distribution panels shall match the labeling system for data cabling and hardware.

E. Termination Hardware at MDF / IDF's (Data)

1. All cables installed application shall be terminated in rack-mounted modular patch panels and the entire installation shall be in compliance with TIA/EIA-568-D Category 6A requirements.
2. Patch panels shall be Leviton Category 6A discrete port-type. Port panels shall be certified by the manufacturer as suitable for 1000 Mbps data transmission. Patch panels shall be manufactured of aluminum or steel.

3. Wire management hardware shall be Leviton Versi-Duct 49265 Series, or equal, installed at both the top and the bottom and between each patch panel and along the sides of the rack for patch cable routing and management.
4. Wire managers shall be of sufficient width and depth to permit orderly routing of all patch cables at one hundred percent utilization.
5. Patch panels shall be mounted on equipment racks. Panels shall be affixed to the rack by at least four (4) screws. The screws shall be of the correct size and thread configuration for the holes in the rack. They shall be tightened to the extent that they hold the equipment firmly to the rack, without distorting the equipment or stripping the threads.
6. Patch panel quantity of ports as noted on the drawings.
 - a. Termination Hardware at MDF / IDF's (if voice cables are indicated on the drawings to be terminated at 110 blocks rather than at patch panels)
 - 1) All cables installed for voice application shall be terminated in accordance with industry standards on 110S type wiring blocks.
 - 2) Avaya or Leviton 110A type wiring blocks with metal backboard category 6A insulation displacement style, or equal shall be installed with sufficient spacing to permit the orderly routing of jumper cables between wiring blocks, and wire management accessories shall be provided for each 110 block.
 - 3) UTP cable terminating blocks: Compact 110-type or equal Category 6A insulation displacement terminal blocks complete with mounting hardware, connecting blocks, retainers, wire guides, designation strips, etc, UL listed.
 - (a) Minimum performance specifications: Must meet EIA/TIA 568-D requirements for Category 6A.
 - (b) Avaya Systimax or Leviton Category 6A - 110 Cross Connect System Terminal block kit in 300 pair configuration with vertical cable manager.
 - (c) Leviton Category 6A 300-pair Vertical Cord Manager, Basic Unit, with bottom cable tray, with vertical cable manager each side.
 - (d) Or equal.
 - (1) Wiring blocks, metal frame, and cable managers shall be mounted to plywood backboards. Each frame or wire management accessory shall be mounted such that its horizontal dimension is level. All blocks shall be aligned vertically. Each block shall be affixed to the plywood backboard by means of screws suitable for fastening to plywood. A minimum of four (4) of the mounting holes provided shall be utilized for fastening. Screws shall be tightened to the extent that they hold the frame or wire management accessory snug to the backboard, but not so tight as to distort or damage the device. Wiring blocks shall be terminated in accordance with the manufacturer's instructions and recommendations. Installation of wire

management accessories shall also be conducted in accordance with the manufacturer's instructions and recommendations.

- (2) Labeling at wire troughs and for all cable, jacks, and other elements of the voice/data cabling system shall follow TIA/EIA-606 Standards. Provide color-coded labels for all wiring blocks as follows:
- (3) Interface to Site Cabling - Brown
- (4) Interface to Equipment Cabling - Purple
- (5) Interface to Horizontal Cabling - Blue
- (6) Interface to Telephone Company - Green

F. Equipment Racks

1. Communication Cabinets - Wall Mounted

- a. Wall mounted communication cabinets shall be utilized wherever noted on the drawings, to provide adequate mounting space for patch panels, wire managers, fiber optic distribution panels, and network integration equipment.
- b. Height of cabinet shall be as noted on the drawings. The cabinet shall be provided with 19" equipment mountings and shall have the following physical characteristics:
 - 1) Depth suitable for mounting of equipment up to min. 30" deep.
 - 2) Cabinet shall be supplied with front and rear equipment mounting rails, drilled and tapped to a 5/8", 5/8", 1/2" hole pattern.
 - 3) Finish shall be black powder coat finish.
 - 4) Locking front Plexiglas door.
 - 5) Vented top and bottom/back open for cable entry.

PART 3 - EXECUTION

3.01 CABLE AND WIRE INSTALLATION:

- A. This contractor shall be responsible for the provision and installation of all telecom cables including all supports, hangers, and hardware necessary for a complete installation. Under no circumstances shall cables be laid on the suspended ceiling. This contractor shall be responsible for providing and installing all necessary cable support hardware to meet Category 6A requirements. Refer also to Section 26 27 00 Basic Materials & Methods:
 1. T-Bar Suspended Ceilings: Copper station cabling may be run outside of conduits when routed above T-Bar suspended ceilings. Cables installed in this fashion are to be run horizontally in bundles and tied down neatly suspended from J-hooks, and well clear of any light fixtures or other electrical appliances that may affect data transmissions.

- B. At each telecom room cables are to be segregated by type, neatly tied together, properly dressed, and routed to the patch panels. All cables shall be tagged.
- C. Cable distances from patch panels to data outlet shall not exceed 295 feet. This contractor is responsible to ensure the distance specified is not exceeded.
- D. Care shall be exercised in routing both station and backbone/tie cables so as to avoid areas where sources of high levels of EMI (such as electric motors, transformers and fluorescent lighting fixtures) may exist. Maintain a minimum distance of 12" for voltages of 3KVA or less and 36" separation for voltage of 5KVA and more from these sources when run parallel. Cross at 90-degree angles where crossing must occur.
- E. Each station cable shall be "home run" (no splices or cross connection points) between jacks and patch panels.
- F. All openings or raceway transitions through firewalls and floors shall utilize UL listed fire-rated penetrations.
- G. The fiber optical cable manufacturer's installation instructions shall be followed in order to avoid damage during placement within the facility. All fiber optic cable shall be placed within innerduct to provide mechanical protection and to provide visual warning or caution when handling or other work operations are performed adjacent to the installed fiber cable.
- H. No more than (2) 90-degree bends shall be allowed on all conduit runs for the horizontal voice/data cabling system, without an intermediate pullbox or junction box.
- I. Station cable terminations.
 - 1. Cable pair twists of Category 6A Cable shall be maintained within 0.5-inch of the point of termination. Under no circumstances shall cable pairs be untwisted or otherwise altered prior to termination.
 - 2. Do not bend Category 6A station cables to a radius of less than 4 times the cable diameter - approximately 2-inches.
 - 3. Allow slack in Category 6A cable bundles at entrances and exits of conduit sleeves and at transitions from "J" hooks to cable trays. Do not exceed maximum 25 pounds of pulling tension on cabling. Never pull cables tight at cable tray transitions; doing so may damage the cables by crimping them on the cable tray side of the bundles.
 - 4. Keep the cable evenly distributed within the cable tray. Do not allow the cables or bundles to be pulled tight against the splines or to be unevenly balanced on one side of the tray.
 - 5. Bundles of station cable in floor slots shall not exceed 2.5 inches in diameter, and shall be spaced 4 inches apart for proper fire stopping of the floor slot.
 - 6. Bundles of station cable in 4-inch floor sleeves shall not exceed a 39 percent fill.
- J. Fiber optic cable and termination installation.
 - 1. The Contractor shall place all optical fiber backbone cabling in accordance with these Specifications, and as indicated on the Drawings.

2. Fiber optic cables: After dressing the cable to its final destination, sheath shall be removed to a point that allows the strands to be placed in break out kits to be splayed and terminated in a neat and uniform fashion. At this point all fibers shall be terminated in strict compliance with the manufacturer's submitted instructions.
 - a. Cable sheaths shall be clamped to the outside of fiber termination shelf. The cable clamp shall be manufactured by the manufacturer of the termination shelf and shall be designed to clamp outside plant fiber optic cable sheaths.
 - b. The tight-buffered sheath cable shall have the OFNR sheath and Kevlar strength members terminated at the cable clamp on the outside of the shelf. Only the buffer tubes and buffered fibers shall continue into the termination shelf.
 - c. Provide a minimum of 48-inches of subunit buffer tube and 40 inches of buffered fiber inside of the termination shelf.
- K. Where fiber or copper cable enters an equipment room, it shall be affixed to the backboard via "D" Rings and cable ties. All cable shall be neatly bundled, combed, and tied. All exposed cable runs shall be horizontal or vertical, and bends shall comply with manufacturer required minimum cable bending radii.
- L. All openings into wall mounted cabinets and fiber optic distribution panels shall have grommets for the protection of cabling.
- M. Fiber innerduct shall be installed in accordance with manufacturer's instructions and industry standards. Within the equipment rooms, the innerduct shall extend from the end of conduit to (4) feet above the floor and shall be affixed to the backboard by means of clamps designed for that purpose. Care shall be taken to avoid kinking the innerduct or applying excessive tension during the installation process.
 1. Innerduct runs do not have to be continuous throughout. Breaks are acceptable at pull boxes where required. This contractor is responsible for determination of actual lengths of innerduct required. This contractor is responsible for determination of actual lengths of innerduct required. Enough innerduct shall be provided and installed to extend from the fiber service loops at the MDF to the fiber service loops at each IDF. In pullboxes, segments of innerduct shall extend a minimum of (12) inches into the pullbox.
- N. During installation of optical fiber cable in conduit, special care shall be taken to avoid damage to the cable. While under pulling tension, the cable shall not be bent into a curve with a radius of less than (20) times the cable diameter. Pulling tension shall not exceed manufacturer's recommended maximum tensile load. Contractor shall utilize a winch with tension control or a "break-away" link designed to break away at or below the recommended maximum tension.
- O. A minimum (30) foot service loop shall be provided at each terminal location for all fiber optic cables. Provide service loop via backboard attached cable reels.
- P. Each end of gel-filled voice cable shall be dammed at the breakout point-using manufacturer recommended blocking kit. All pairs extending beyond the breakout point and dam shall be cleaned such that no gel remains.
- Q. Provide (1) patch cable for each activated jack on the project. Lengths shall be 5ft. minimum or as required for the MDF or IDF design. Patch cords shall be factory tested to ensure compliance with current standards.

- R. Provide one fiber jumper for each two strands of fiber at each equipment rack, with duplex LC type connectors unless otherwise noted on the drawings.
- S. Labeling: Coordinate with District IT staff for District standard labeling scheme.

3.02 GROUNDING SYSTEM AND CONDUCTORS

A. Bonding and Grounding:

- 1. Communication bonding and grounding shall be in accordance with the NEC and NFPA. Guidelines of ANSI/TIA-607-C shall be followed. Horizontal cables shall be grounded in compliance with ANSI/NFPA 70 and local requirements and practices. Horizontal equipment includes cross connect frames, patch panels and racks, active telecommunication equipment and test apparatus and equipment.

B. Telecommunications Bonding Backbone:

- 1. Provide a Telecommunications Bonding Backbone utilizing a minimum #6 AWG bonding conductor (or as shown on drawings) that provides direct bonding between equipment rooms and telecommunications closets. Connect this bonding backbone cable to the main grounding electrode system at the electric service switchboard.
- 2. Provide a copper ground bar at each telecommunications equipment room or rack location, connected to the bonding backbone.
- 3. Provide a #6 AWG stranded copper cable from each ground bar to each adjacent rack or cable trays system.

3.03 PLYWOOD BACKBOARDS

- A. Provided backboards shall be fire retardant, 3/4-inch A-B grade plywood, void free, 2440-mm (8 feet) high unless otherwise noted, capable of supporting attached equipment, and painted with a minimum of 2 coats of fire retardant off-white semi gloss paint. Manufacturer's stamps visible from the front side of the plywood backboard shall be masked to painting.
- B. Plywood backboards shall be fastened to the structural members of the building only using an approved fastener. Plywood backboards shall not be anchored to GBW.
- C. Plywood shall be mounted from +6-inches AFF to +8 feet 6-inches at the locations indicated on the Drawings.
- D. Plywood backboards shall be cut to fit in width and shall have holes cut into the backboard to accommodate and provide access to devices behind the backboard, such as switches and outlets.

3.04 TESTING AND DOCUMENTATION

A. Fiber Optic Cable Test Equipment:

- 1. Cable tester shall be NRTL certified for compliance to be used as an Optical Loss Test Set.
- 2. Cable testers shall be Optical Power Meter and High Resolution Optical Time Domain Reflectometer (OTDR). The cable tester shall be NRTL certified for compliance to latest TIA/EIA performance requirements at 850, 1300, 1310 and 1550 nm.

3. Testers shall have been calibrated at least one year prior to use on this project. Calibration must be in accordance to IEC 61315 and IEC 61746 respectively. Contractor to provide proof to Owner if requested.
4. All testing equipment (OTDR, Light Loss, Splicer etc.) shall be owned by the Contractor. Contractor must prove ownership of equipment if requested
 - a. Cable segments and links shall be tested from both ends of the cable for each of the construction phases. (Verify that cable labeling matches at both ends).
 - 1) The system will not be considered certified until the tester has certified to the Owner that the performance of the physical layer of the system has been fully tested and is operational at the completion of the installation phase.
 - 2) Testing Procedures:
 - (a) Perform each visual and mechanical inspection and electrical test, including optional procedures, stated in NETA ATS, Section 7. Certify compliance with test parameters and manufacturer's written recommendations. Test optical performance with optical power meter capable of generating light at all appropriate wavelengths.
 - (b) Prior to testing, all connectors shall be properly cleaned with an approved product manufactured specifically for this purpose.
 - (c) Prior to beginning testing, confirm that all testing equipment is fully charged or operating on building power. If the test equipment power levels drop below 50%, recharge unit or continue testing with a different (fully charged) tester.
 - (d) All testing shall comply with latest standards, requirements, and procedures of ANSI/TIA/EIA. Tests shall be conducted using ANSI/TIA-526-14A, Method B. Test results evaluation for the panel to panel (backbone) shall be based on the values set forth in ANSI/TIA-568.
 - (e) Initially test optical cable with a light source and power meter utilizing latest Tier 1 procedures as stated in TIA/TSB-140.
 - (f) Measured results shall be plus/minus 1 dB of submitted loss budget calculations. If loss figures are outside this range, test cable with Optical Time Domain Reflectometer (OTDR) to determine cause of variation. Correct improper splices and replace damaged cables at no charge to the Owner.
 - 3) Fiber Optic Cables:
 - (a) Shall be tested bi-directionally for length and attenuation at both the short and long wavelengths as specified in TIA TSB-140.
 - (b) Single-mode fibers shall be dual wave length and provide attenuated wavelength of the 1310 nm and 1550 nm. 850 nm for single-mode fiber shall not be acceptable under any circumstances. Multimode shall be tested at 850nm and 1300nm.

- (c) After installation of connectors, visually inspect each fiber end-face at 10X magnification. Refinish fibers with visible defects and / or striations in the core area.
 - (d) Demonstrate that measured link loss does not exceed the “worst case” allowable loss, defined as the sum of the connector losses (based on number of mated connector pairs at the EIA / TIA 568 maximum allowable loss of 1.5dB per mated pair), the optical fiber loss (based on length) and the EIA / TIA 568 maximum allowable loss (3.75dB/km @ 850nm and 1.0dB/km @ 1300nm).
 - (e) Strands whose measured attenuation fall outside the acceptable range shall be subject to further inspection and testing to determine the nature of the fault. At a minimum, an OTDR shall be used to determine the true loss for each connector pair, the exact length of the fiber and to identify the presence of any core damage.
 - (f) Faults related to connectorization shall be corrected, and the fiber re-tested, until acceptable attenuation measurements are recorded.
 - (g) Where defects are found to be inherent in the fiber itself, replace any cable having fewer than the manufacturer’s guaranteed number of serviceable fibers.
 - (h) All fiber optic test instruments used on the site shall be capable of storing test data files and downloading these test results as data files. The fiber optic strand number shall be used as the record identifier for each test.
 - (i) All OTDR traces shall be delivered to the Owner’s Representative in electronic format. The Contractor shall provide the Owner’s Representative with software to read the OTDR traces. The application software shall be licensed to the Owner.
 - (j) All Power meter readings shall be provided in a file format capable of being inserted into a Microsoft Excel spreadsheet for review. Power meter readings shall be delivered to the Owner’s Representative in electronic format.
- 4) All cables shall be tested after termination using a cable certification tester that contains the test equipment manufacturer’s most current version of firmware.
 - 5) Upon completion of testing, all connectors shall be capped with a product made for that specific function by the connecting hardware manufacturer to prevent the contamination of the fiber from construction debris or other foreign objects.
 - 6) Test Results:
 - (a) The test results information for each link shall be recorded in the memory of the field tester upon completion of the test. The tester shall be capable of storing test data in either internal or external memory. The external media used shall be left to the discretion of the user.
 - (b) Test results saved by the tester shall be transferred into a Windows based database utility that allows for maintenance, inspection and archiving of these test records. A guarantee must be made that the measurement results are transferred to the PC unaltered as well as any printed reports generated from the software application.

- (c) The test results information for each link shall be recorded in the memory of the field tester upon completion of the test. The tester shall be capable of storing test data in either internal or external memory. The external media used shall be left to the discretion of the user.
- (d) Test results saved by the tester shall be transferred into a Windows based database utility that allows for maintenance, inspection and archiving of these test records. A guarantee must be made that the measurement results are transferred to the PC unaltered as well as any printed reports generated from the software application.
- (e) Optional formats of data reporting are: comma separated variable (.csv), Portable Document File (.pdf) or compatible, plain text (.txt), or hypertext markup language (.html/.htm).
- (f) Test results shall include the following:
 - (1) Telecommunications Room number
 - (2) Location of fiber pull i.e. (Equipment Room # to Telecom Room #)
 - (3) Patch panel # and location
 - (4) Connector type
 - (5) Distance
 - (6) Wavelength tested
 - (7) Technician who performed the testing
- 7) The Owner and Architect reserve the right to observe testing and/or randomly sample completed links for conformance to project specifications.

3.05 COPPER CABLE TESTING AND DOCUMENTATION

- A. Cabling systems shall meet or exceed the electrical and transmission characteristics of the systems specified.
- B. Cable segments and links shall be tested from both ends of the cable for each of the construction phases. (Verify that cable labeling matches at both ends).
- C. The system shall not be considered certified until the tester has acknowledged that the performance of the physical layer of the system has been fully tested and is operational at the completion of the installation phase.
- D. After the installation is complete, in addition to any other required testing as described herein, and at such times as the Owner or Architect directs, the Contractor shall be present while the Owner conducts an operating test for approval. The installation shall be demonstrated to be in accordance with the requirements of this specification. Any defects revealed shall be corrected promptly at the Contractor's expense and the tests performed again.
- E. After review of the completed test results, the Owner reserves the right to retest the installed cables, utilizing the Contractor's tester and the Contractor's labor.

F. Equipment Manufacturer's Factory Test

1. Each cable and equipment manufacturer shall factory test their respective products being installed on this project and provide test reports at time of delivery. Provide separate respective test reports indicating that they meet or exceed the latest applicable TIA/EIA Standards and technical bulletins.
2. All other products relative to this specification shall be tested to its respective industry strictest standards.
3. Each manufacturer shall factory test their respective cable or equipment provided to this project at several lower frequency levels, including the minimum and maximum frequency level indicated herein. The test reports shall indicate test results for at least five equal incremental frequency levels including the maximum required.
 - a. Field Testing Equipment: Submit during shop drawing review on the testing equipment to be utilized on this project. Tester shall be a Level IV device or better and configured to the specific cable installed. The installer shall test all cables installed under this Section.
 - 1) Unshielded Twisted Pair Testing Equipment:
 - (a) The cable tester shall have a wide variety of preprogrammed cable types as an integral part of its testing system and have the ability to test cables less than 6 feet (6ft.) from the test point.
 - (1) Testing shall be accomplished using level III or higher field tester that is loaded with the most current version of test software by the manufacturer of the test equipment.
 - (2) Provide factory calibration report of field test equipment.
 - 2) Testing Procedures:
 - (a) Testing shall conform to TIA-568 standards.
 - (b) Testing shall be to the Permanent Link Test Parameters.
 - (c) Test each pair and shield of each cable for opens, shorts, grounds, and pair reversal. Correct grounded and reversed pairs. Examine open and shorted pairs to determine if problem is caused by improper termination. If termination is proper, tag bad pairs at both ends and note on termination sheets.
 - (d) Test each UTP cable and passive components. Provide certification that entire installation of UTP cabling, equipment and jacks are NRTL certified meeting or exceeding a minimum of category performance specified on all four pairs of conductors.
 - (e) Tests shall be based on each pair of conductors and not the aggregate multiple pair results.
 - (f) Test all installed cable segments end-to-end, from the telecommunications room horizontal patch panel/cross connect block panel to each work area outlet and from each telecommunications room backbone patch panel/cross-connect block panel to

respective main cross connect, and from the work area outlet to the main cross-connect (through patch cables or cross- connect wiring) with a Signal Injector, Graphical Link Testing Meter and Time Domain Reflectometer (TDR) for compliance to latest TIA performance requirements, as well as NEXT, ELFEXT, structural return loss, alternating power sum, opens, shorts, continuity, cable length, and characteristic impedance.

- (g) Provide report indicating failures and what actions were taken to ensure a passing horizontal cable and its terminations. Any cable failing the certification test (Fail, Fail* or, Pass*) must have remedial work done to provide a full pass test result; Remediation may include re-termination or replacement of the cable, which fails. Cables passing within tolerance only (Conditional Pass*) will not be accepted.

3) Test results:

- (a) The test results information for each link shall be recorded in the memory of the field tester upon completion of the test. The tester shall be capable of storing test data in either internal or external memory. The external media used shall be left to the discretion of the user.
- (b) Test results saved by the tester shall be transferred into a Windows based database utility that allows for maintenance, inspection and archiving of these test records. A guarantee must be made that the measurement results are transferred to the PC unaltered as well as any printed reports generated from the software application.
- (c) Optional formats of data reporting are: comma separated variable (.csv), Portable Document File (.pdf) or compatible, plain text (.txt), or hypertext markup language (.html/.htm).
- (d) Test Results shall include the following:
 - (1) Applicable room number of jack location (room number per Contract Documents)
 - (2) Applicable Telecommunications Room number
 - (3) Circuit I.D. number with corresponding jack identifier
 - (4) Wire Map - shall include the following:
 - (5) Continuity to the remote end
 - (6) Shorts between any two or more conductors
 - (7) Crossed pairs
 - (8) Reversed pairs
 - (9) Split pairs
 - (10) Any other mis-wiring
 - (11) Length

- (12) Insertion Loss
- (13) Near-end Crosstalk (NEXT) Loss
- (14) PS-NEXT (Power Sum Near End Cross Talk)
- (15) ELFEXT (Equal Level Far End Cross Talk)
- (16) PS-ELFEXT (Power Sum Equal Level Far End Cross Talk)
- (17) Propagation Delay
- (18) Delay Skew
- (19) Return loss

3.06 TRAINING AND PATCHING

- A. The Contractor shall provide a minimum of (1) person for a minimum of (8) man-hours beginning with the first scheduled move-in date to train Owner personnel in maintenance and repair of cabling system. This technician shall also assist the Owner in patching telecom services throughout the facility during the move-in period. It is at this time that all Owner-provided connectivity for voice and data services will be provided to the Contractor. Patching of the station assignments between the Owner's services demark shall also be considered part of this Contractor's work.

3.07 ACCEPTANCE

- A. Prior to acceptance all the following conditions must be met:
 - 1. As required the Contractor shall make submittals and deficiencies or rejected submittals shall be corrected.
 - 2. All specified cable management devices including cable ladder, steel wire cable tray, 2-sided vertical rack cabling sections, horizontal ring panels, and fiber optic troughs shall be installed as indicated and specified. All parts not installed shall be inventoried and provided to the Owner in the manufacturer's packaging.
 - 3. All seismic bracing shall be in place.
 - 4. All specified station cabling with associated termination components, labeling and fire stopping shall be installed properly. Any component not installed shall be inventoried and provided to the Owner in the manufacturer's packaging; loose miscellaneous parts shall not be accepted.
 - 5. Terminal blocks shall be clean and free of trimmed or cut-off copper pairs, sheaths, armors, cable lubricants or any other disposables used in the installation of the station cables.
 - 6. All station cables shall be neatly dressed behind the terminal blocks in the IDF.
 - 7. The backbone fiber optic cable system including all strands, connectors, termination shelves, fiber optic distribution panels, and fiber optic storage shelves has been installed and tested per these Specifications.

8. Do not install fiber optic cross-connects until after the backbone distribution cable test reports have been reviewed and accepted by the Owner.
 9. All required submittals indicated in this Specification Section shall be made by the Contractor, and any deficiencies or rejected submittals shall be corrected.
 10. All specified fiber optic backbone cabling with associated termination components, splicing, labeling and testing shall be installed and completed properly. Any component not installed shall be inventoried and provided to the Owner in the manufacturer's packaging. Loose miscellaneous parts shall not be accepted.
 11. The fiber optic termination shelves and the racks and floors around the shelves, shall be clean and free of trimmed or cut-off fiber optic strands, buffering, sheath and cable lubricants and any other disposables used in the placement and termination of the fiber optic backbone cables.
 12. All innerducts and fiber optic backbone cables shall be neatly dressed into the pathways, communications vaults and vault racking.
 13. Any deficiencies and punch list items shall be corrected.
 14. All as-built documentation shall be complete, reviewed and provided to the Owner.
- B. Acceptance of the telecommunications system by the Owner shall be based on the result of testing, functionality, and the receipt of documentation and warranty. With regard to testing, Contractor shall provide two technicians, equipped with the specified test equipment, to do random test verification in the presence of, and at the direction of, an Owner designated representative. Verification testing shall not exceed 20% of the cable plant, provided cables tested are verified to be 100% compliant, per requirements previously stated. If more than 5% of cables tested during the verification process fail, Owner reserves the right to have the entire cable plant retested, at the Contractor's expense, and in the presence of an Owner-designated representative.

3.08 RECORD DRAWINGS

- A. The project record drawings shall show the types, locations and counts of installed:
1. Fiber optic cables and strands;
 2. Fiber optic terminations counts and types.
- B. The project record drawings shall show the types, locations, cable numbers and pair counts of installed twisted-pair cable:
1. Cable routing and numbers.
- C. The project record drawings shall show the types and locations of installed equipment racks.

END OF SECTION

SECTION 28 3100
FIRE ALARM SYSTEM WITH VOICE EVACUATION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This project shall include the furnishing, installation, connection, programming, commissioning, and testing of new fire alarm equipment required to form a complete coordinated system ready for operation at the existing portable classroom campus (to serve the new Portable being added). The fire alarm system additions shall include, but not be limited to, new alarm initiating devices, alarm notification appliances, voice evacuation system, auxiliary control devices, and all associated wiring and extensions from the existing system.
- B. The existing system consist of a standalone fire alarm control panel an amplifier, to control and operate all initiation and notification appliances at each building. The standalone fire alarm control panel includes a digital dialer with off-site monitoring connection in order to identify the specific location of the control panel to the Fire Department.
- C. The existing system includes an emergency voice evacuation alarm communication system. A digitized pre-recorded voice message shall notify occupants that a fire alarm condition has been reported. The message shall instruct the occupants with emergency instructions. All new notification shall be speakers and speaker/strobes.
- D. The work shall include all required programming to allow proper sequence and operation as required by code. Final programming shall be done based on the actual physical room names and numbers used on site, if different from the room names or numbers on the approved plans.
- E. All work shall comply with Sections 26 0500 and 26 2700.

1.02 SCOPE OF WORK

- A. This specification outlines the requirements for a microprocessor based, addressable (intelligent) automatic fire detection and alarm system. The system and components shall match the existing campus system.
- B. The work described in this specification consists of all labor, materials, equipment and services necessary and required to complete and program and test the automatic fire detection and alarm system extension of the existing system. Any material not specifically mentioned in this specification or not shown on drawings but required for proper performance and operation shall be furnished, installed, and connected complete.
- C. Final system programming (or re-programming for existing systems) shall be done based on the actual physical room names and numbers used on site, if different from the room names or numbers on the approved plans.
- D. The contractor shall contact the local fire department and/or emergency communications authority to obtain local testing and acceptance criteria for emergency radio responder criteria.
 - 1. Contractor is to provide testing of the facility to ensure the entire structure meets approved radio coverage for emergency responders within the building. Coverage shall be in accordance with California Fire Code (CFC) section 510. Testing shall be coordinated with, and witnessed by, the

local Fire Department, and shall be performed by a certified qualified technician as defined in section 510.5.2 of the California Fire Code. Testing shall be performed at a time when the building structure, including ceilings and walls, is judged adequately complete by the Fire Department.

2. The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 95% of all areas on each floor of the building meet signal strength requirements in sections 510 4.1.1 and 510 4.1.2 of the California Fire Code. Areas designated as vital, as determined by the Fire Department, shall have 99% coverage at signal strength required. Signal strength shall be measured on frequencies defined in section 510.4.2.2 of the CFC and as required by the Fire Department. Minimum signal strength of -95 dBm shall be receivable within the building and received by the agency's radio system outside the building, when transmitted from within the building.
3. For passing tests, document the results of the test and submit with project close-out documentation.
4. If the building/structure cannot support the required radio coverage, the Owner and the Architect shall be immediately notified, and a plan of action shall be put in place by the Owner and the design / construction team, for implementation of an augmented amplification system as required by section 510.4.2 of the California Fire Code.

1.03 REQUIREMENTS

- A. This installation shall be made in accordance with the drawings, specification and the following:
 1. National Electrical Code Article 760
 2. NFPA Standard 72
 3. Local Codes and Authorities Having Jurisdiction
 4. ADA and 2025 CBC Chapter 11b requirements and regulations.
- B. Fire Watch:
 1. Provide an AHJ approved Fire Watch plan and Fire Watch for any portion of the fire alarm system that is left inoperative in a normally occupied building.
 2. At no time during the project shall a normally occupied building, or portion thereof that remains occupied, be left without a functioning fire alarm system, unless an approved Fire Watch is provided.
 3. Include all required planning and labor for a Fire Watch, where required.

1.04 RELATED WORK

- A. Division 26: Basic Materials and Methods

1.05 FIRE ALARM SYSTEM DESCRIPTION

- A. The system shall be a supervised, non-coded, 24 volt DC, power limited system and shall be capable of having all addressable initiation devices on the system in alarm at one time. Notification device circuits shall be wired Class B. Initiation device circuits shall also be wired Class B. A single ground or open on

any initiating device circuit or notification appliance circuit shall not cause system malfunction, loss of operating power, or the ability to report an alarm.

- B. Provide initiation, notification and other devices as per specifications and indicated on drawings.
- C. Indicate alarms, supervisory, and trouble signals on the main fire alarm control panel and annunciator at each building and at the building fire alarm control panel in a networked system.
- D. Transmit alarm signals to off-site reporting agency via a digital communicator at each fire alarm control panel, with specific building address ID.
- E. The fire alarm system shall function as follows when any smoke or duct detector, waterflow switch, manual station or other initiating device operates:
 - 1. Operate required audible/visual and visual devices indicated on the drawings.
 - 2. Automatically notify off-site reporting agency.
 - 3. Indicate at the control panel alphanumeric display the number and location of the alarmed device.
 - 4. Light an indicating lamp on the smoke detector initiating the alarm.
 - 5. Light an indicating lamp on the remote annunciator indicating the location alarmed as well as the type of device alarmed (area smoke detector, duct detector, manual pull station, waterflow switch, kitchen fire suppression system panel, valve supervisory switch, etc.).
- F. Provide additional system features and capacities as indicated in Part 2 of this Section of the Specifications.

1.06 GUARANTEE

- A. All work performed and all material and equipment furnished under this contract shall be free from defects and shall remain so for a period of at least one (1) year from the date of acceptance.

1.07 APPLICABLE PUBLICATIONS

The publications listed below form a part of this specification.

- A. National Fire Protection Association (NFPA) - USA:

No. 70	National Electrical Code (NEC)
No. 72	National Fire Alarm Code
No. 101	Life Safety Code

- B. Underwriters Laboratories Inc. (UL) - USA:

No. 268	Smoke Detectors for Fire Protective Signaling Systems
No. 864	Control Units for Fire Protective Signaling Systems

No. 268A	Smoke Detectors for Duct Applications
No. 521	Heat Detectors for Fire Protective Signaling Systems
No. 464	Audible Signaling Appliances
No. 1971	Visual Signaling Appliances
No. 38	Manually Actuated Signaling Boxes
No. 346	Waterflow Indicators for Fire Protective Signaling Systems

- C. Local and State Building Codes.
- D. All requirements of the Authority Having Jurisdiction (AHJ).

1.08 APPROVALS

- A. Fire alarm control panels and all peripherals shall have proper listing and/or approval from Underwriters Laboratory (UL) and be California State Fire Marshall listed and approved.

PART 2 - PRODUCTS

2.01 EQUIPMENT AND MATERIAL, GENERAL

- A. All equipment and components shall be new, and the manufacturer's current model.
- B. The system shall be UL 864 (9th Edition) listed.
- C. Acceptable System Manufacturers:
 - 1. Notifier (to match existing).
- D. All equipment and components shall be installed in strict compliance with manufacturers' recommendations.
- E. All Equipment shall be attached to and ceiling/floor assemblies and shall be held firmly in place. (e.g., detectors shall not be supported solely by suspended ceilings). Fasteners and supports shall be adequate to support the required load.

2.02 CONDUIT, BOXES, AND WIRE

- A. All conduit and wire shall comply with section 26 27 00 of these specifications.
- B. Conduit:
 - 1. Conduit shall be in accordance with The National Electrical Code (NEC), local and state requirements.
 - 2. Conduit fill shall not exceed 40 percent of interior cross sectional area where three or more cables are contained within a single conduit.

3. Cable must be separated from any open conductors of Power, or Class 1 circuits, and shall not be placed in any conduit, junction box or raceway containing these conductors, as per NEC Article 760-29.
4. Conduit shall be 3/4 inch minimum.

C. Wire:

1. All fire alarm system wiring shall be new and installed in conduit. All wiring shall be in conformance with fire alarm system manufacturer's requirements.
2. Wiring shall be in accordance with local, state and national codes (e.g., NEC Article 760). Number and size of conductors shall be as recommended by the fire alarm system manufacturer, but not less than 16 AWG for initiating device circuits and signaling line circuits, and 12 AWG for Notification device circuits.
3. All field wiring shall be completely supervised, Class B for initiation loops, and Class B also for notification loops with end-of-line devices located as shown on the riser diagram.
4. All cable used in conduit outdoors or underground shall be Outside Plant Rated.

D. Terminal Boxes, Junction Boxes and Cabinets:

1. All boxes and cabinets shall be UL listed for their use and purpose.
2. Outlet boxes for surface mounting shall be fire alarm listed use boxes with exactly the same size of the device. Standard galvanized outlet or j-boxes are not acceptable.

2.03 CONTROL PANEL

- A. The control panel is existing (Notifier NFS-320).

2.04 INITIATION DEVICES

- A. Addressable photoelectric smoke detectors, (intelligent), shall be provided as indicated on the drawings, with features and characteristics as follows:
1. The detector shall be self-compensating for ambient temperature and humidity.
 2. The detector shall be addressed, tested and programmed prior to installation using a UL listed programmer/tester. The detector readout shall yield a discrete electrical value for status tracking and logging for determining maintenance and cleaning requirements.
 3. The detector shall be suitable for two wire operation and two way communication on the intelligent analog signaling circuits.
 4. The detector shall display a flashing red LED when in the alarm state when the system is operating from normal or standby power.
 5. The detectors furnished shall be listed for use in environments as covered by Factory Mutual, UL and shall be installed according to the requirements of NFPA 72 for open area coverage.

6. Detectors for magnetic door hold open functions shall be provided with an auxiliary relay base for auxiliary function wiring connections.
 - a. Door holder power shall be routed via the relay base on smoke detectors denoted with an "R" to release the associated doors upon alarm.
- B. Heat detectors shall be provided as indicated on drawings. Heat detector shall be of the rate compensation type, 135 degree.
- C. A monitor module interface device shall be provided for required interface points such as water flow devices and tamper switches, or any contact type devices as indicated on drawings. This interface device shall have one or two Class B (Style 4) circuits as required.
- D. Provide a 120VAC circuit connection to each sprinkler system water flow bell (provided by Division 21). Wire power via the local water flow switch auxiliary contact to ring the bell upon water flow activation.

2.05 BATTERIES

- A. Batteries shall be 12 volt, sealed type, with combined Amp-Hour ratings as required by Code.
- B. Battery shall have a minimum sufficient capacity to power the fire alarm system for not less than twenty-four hours in standby mode, plus 15 minutes of full system alarm upon a normal AC power failure.
- C. The batteries are to be completely maintenance free, no liquids required. Fluid level checks, refilling, spills and leakage control shall not be required.

2.06 CONTROL DEVICES

- A. Control modules shall be provided as indicated on the drawings for fire alarm output functions. These devices shall be connected to the Network Communications Lines, and be field programmable for one of the following options; Remote Relay (form C 1amp 24vdc, 200ma 120vac) with supervised relay operation; Remote Supervised Indicating Appliance Circuit (fused at 1 amp). There shall be an LED on the device that shall flash to indicate the unit is being monitored and a steady LED to indicate the unit has been activated. Secondary relays with control power connections shall be provided as required where contact ratings (voltage & amps) so dictate.

2.07 NOTIFICATION DEVICES

- A. Speaker / Strobe Notification Devices:
 1. All speakers shall operate on 70.7 VRMS, with field selectable output taps from 1/8 to 2 Watts in 3dB steps. Frequency response shall be a minimum of 400 HZ to 4 KHZ.
 - a. Speaker circuits shall have 20% space capacity for future expansion or increased power output requirements. All speaker tap settings shall be set per recommended settings (minimum 1/4 watt) for area coverage, and shall be re-tapped as required after final testing to provide adequate audible coverage throughout each area (to meet NFPA requirements).
 - b. Speaker circuits and control equipment shall be arranged such that loss of any one (1) speaker circuit will not cause the loss of any other speaker circuit in the system.

- c. Provide amplifier modules as required to carry the full designed load, plus 20% spare capacity. Provide (1) additional back-up amplifier module for automatic back up of any failed amplifier module.
 - d. Speaker/Strobe combinations shall be provided as indicated on Drawings. The speaker / strobe combination shall be Wheelock or equal, ADA, 2025 CBC Chapter 11b, and UL 1971 compliant (candela values as required) - white finish.
- B. Strobe Lights shall be provided as indicated on drawings. The strobe lights shall be either ceiling mounted, or wall mounted at +80" AFF or 6" below the ceiling level, whichever is lower, Wheelock or equal, ADA, 2025 CBC Chapter 11b, and UL 1971 compliant (candela values as required) - White finish. See drawings for locations.
- C. All devices in the gymnasium, multipurpose and locker rooms shall be provided with clear protective covers for vandalism protection. Provide protective covers as recommended by the manufacturer.
- D. Refer to Part 3 below for required synchronization of strobes when located in the same field of view.

2.08 AUDIO AMPLIFIERS

- A. The Audio Amplifiers shall provide audio power at 70.7 Volts RMS for distribution to speaker circuits.
- B. Multiple audio amplifiers shall be mounted in the FACP, or at the FACP or expander panel locations, either to supply incremental audio power, or to function as an automatically switched backup amplifier(s).
- C. The audio amplifiers shall include an integral power supply, and shall provide the following controls and indicators:
 - 1. Normal Audio Level LED
 - 2. Incorrect Audio Level LED
 - 3. Brownout LED
 - 4. Battery Trouble LED
 - 5. Amplifier Trouble LED

2.09 AUDIO AMPLIFIER GAIN ADJUST

- A. Adjustment of the correct audio level for the amplifier shall not require any special tools or test equipment.
- B. Amplifiers shall include audio input and amplified output supervision; back up input, and automatic switch over function, (if primary amplifier should fail).
- C. Amplifiers shall be backed up in groups (1 amplifier backs up several at the same location). Failure of any one amplifier in the system shall not degrade system performance in any way

2.10 AUDIO MESSAGE GENERATOR (PRERECORDED VOICE)

- A. Each initiating zone or intelligent device shall interface with an emergency voice communication system capable of transmitting a prerecorded voice message to all speakers in the building.
- B. Activation of any alarm-initiating device shall cause a prerecorded message to sound over the designated speakers. The message shall be repeated a minimum of four (4) times.
- C. A built in microphone shall be provided to allow paging through speaker zone circuits.
- D. The audio message generator shall have the following controls and indicators to allow for proper operator understanding and control:
 - 1. All Call LED
 - 2. On Line LED
- E. All Call Switch Local Speaker Volume Control Local (Test) Speaker

2.11 SPEAKER CIRCUIT CONTROL SWITCHES / INDICATORS

- A. The speaker circuit control switches/indicators shall include visual indication of active and trouble status for each speaker circuit in the system.
- B. The speaker circuit control panel shall include switches to manually activate or deactivate each speaker circuit in the system.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Installation, programming and testing shall be performed by current factory-authorized contractor of the specified system.
- B. Installation shall be in accordance with the NEC, NFPA 72, local and state codes, as shown on the drawings, and as recommended by the major equipment manufacturer.
- C. All conduit, junction boxes, conduit supports and hangers shall be concealed in finished areas and may be exposed in unfinished areas. Smoke detectors shall not be installed prior to the system programming and test period. If construction is ongoing during this period, measures shall be taken to protect smoke detectors from contamination and physical damage.
- D. All fire detection and alarm system devices, control panels and remote annunciators shall be flush mounted when located in finished areas and may be surface mounted when located in unfinished areas.
- E. Provide identification labeling on all initiation and notification devices to identify loop and device number/address. Labeling shall consist of min. 3/8" black lettering on white background P-Touch style adhesive labels with machine printing, Helvetica font or similar.
- F. At the final inspection a factory trained representative of the manufacturer of the major equipment shall perform the tests in Section 3.3 TESTING.
- G. Wiring:

1. See Part 1 of this Section of the Specification and the drawings for wiring requirements.
2. When (3) or more visual notification devices are located within the same field of view and are less than 55 feet apart (within the field of view), all devices within that field of view shall be synchronized to provide the same flash rate and frequency. Provide all required sync modules and compatible strobe devices to provide a synchronized output.

3.02 PROGRAMMING

- A. Provide system programming as required by code to provide a fully functional system. Final programming shall be done based on the actual physical room names and numbers on site, if different from the room names or numbers on the approved plans.
- B. Include changes to existing system programming (if existing), to accommodate the new devices and equipment, as well as any sequence of operation changes.
- C. When the device address(es) shown on plan is already programmed to an existing device, use another available address and show any changes or revisions on the as-built drawings during the project closeout.

3.03 TESTING

- A. Refer to Scope of Work in Part 1 of this section for required emergency radio responder system testing requirements and documentation.
- B. Provide the service of a competent, factory trained engineer or technician authorized by the manufacturer of the fire alarm equipment to technically supervise and participate during all of the adjustments and tests for the system. Each building shall be separately tested as completed and where a networked system is indicated on the drawings, the entire networked system tested just prior to project completion. Include contractor pre-test for each building prior to the final AHJ testing to insure a suitable final test result.
 1. Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation.
 2. Close each sprinkler system flow valve and verify proper supervisory alarm at the respective FACP and/or annunciator.
 3. Verify activation of all flow switches.
 4. Open initiating device circuits and verify that the trouble signal actuates at the respective FACP and/or annunciator.
 5. Open and short all notification appliance circuits and verify that trouble signals actuate at the respective FACP and/or annunciator.
 6. Ground circuits and verify response of trouble signals at the respective FACP and/or annunciator.
 7. Check presence and audibility of tone at all alarm notification devices.
 8. Check installation, supervision, and operation.
 9. Verify that each initiating device alarm is properly received and processed by the respective FACP and annunciator (Walk Test).

10. Conduct tests from each FACP to verify trouble indications for common mode failures, such as alternating current power failure.
- C. Test reports shall include, but not be limited to:
1. A complete list of equipment installed indicating proper operations as listed above.
 2. Point print of all devices connected to all the FACP's.

3.04 FINAL INSPECTION

- A. Final acceptance will require the contractor to deliver to the Owner the following;
1. A single bookmarked PDF file of the operating instructions and system maintenance manuals.
 2. A single bookmarked PDF file of record drawings.
 3. A single bookmarked PDF file of the final test reports.
 4. A single bookmarked PDF file indicating the name and phone number of person to contact in the event of equipment failure, and date when system warranty will be terminate.
 5. A single bookmarked PDF file of data sheets for each piece of equipment supplied.
- B. The fire alarm system notification audibility and intelligibility shall be tested and approved prior to final acceptance. Verify that all occupied spaces in the buildings are provided with adequate audibility and intelligibility of the temporal 3 alarm tone and voice evacuation recorded message. Test to be conducted in the presence of the IOR, who will provide acceptance of test outcome. Provide, install, and test additional alarm devices as required, if any deficiencies are noted.

3.05 GUARANTEE

- A. See Part 1 of this Section of the Specifications.

3.06 INSTRUCTION

- A. Provide complete instruction manuals and training to the building personnel. "Hands-on" demonstrations of the operation of all system components and the entire system shall be provided.

END OF SECTION

SECTION 31 1000

SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Protecting existing vegetation to remain.
 - 2. Removing existing vegetation.
 - 3. Clearing and grubbing.
 - 4. Stripping and stockpiling topsoil.
 - 5. Removing above- and below-grade site improvements.
 - 6. Disconnecting, capping or sealing, and abandoning site utilities in place.
 - 7. Temporary erosion- and sedimentation-control measures.
- B. Related Sections:
 - 1. Section 01 7300 "Execution" for field engineering and surveying.

1.3 DEFINITIONS

- A. Subsoil: All soil beneath the topsoil layer of the soil profile and typified by the lack of organic matter and soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other non-soil materials.
- D. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.
- E. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 INFORMATIONAL SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
 - 1. Use sufficiently detailed photographs or videotape.
 - 2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.
- B. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Gateway School on Diablo Way, Brentwood, CA.

1.7 PROJECT CONDITIONS

- A. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises.
- B. Utility Locator Service: Notify Call Before You Dig for area where Project is located before site clearing.
- C. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.
- D. The following practices are prohibited within protection zones:
 - 1.
 - 2. Storage of construction materials, debris, or excavated material.
 - 3. Parking vehicles or equipment.
 - 4. Foot traffic.
 - 5. Erection of sheds or structures.
 - 6. Impoundment of water.
 - 7. Excavation or other digging unless otherwise indicated.
 - 8. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- E. Do not direct vehicle or equipment exhaust towards protection zones.
- F. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.
- G. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 31 2000 "Earthwork."

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated. Wrap a 1-inch blue vinyl tie tape flag around each tree trunk at 54 inches above the ground.
- C. Protect existing site improvements to remain from damage during construction.
 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

- A. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.

3.4 EXISTING UTILITIES

- A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing, when requested by Contractor.
 1. Verify that utilities have been disconnected and capped before proceeding with site clearing.
- B. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
 1. Arrange with utility companies to shut off indicated utilities.
 2. Owner will arrange to shut off indicated utilities when requested by Contractor.
- C. Locate, identify, and disconnect utilities indicated to be abandoned in place.

- D. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Architect not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Architect's written permission.
- E. Excavate for and remove underground utilities indicated to be removed.
- F. Removal of underground utilities is included in earthwork sections and with applicable fire suppression, plumbing, HVAC, electrical, communications, electronic safety and security and utilities sections and Section 024116 "Structure Demolition" and Section 024119 "Selective Demolition."

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.
 - 3. Use only hand methods for grubbing within protection zones.
 - 4. Chip removed tree branches and dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to depth of 3 inches in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and non-soil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
 - 1. Limit height of topsoil stockpiles to 60 inches.
 - 2. Do not stockpile topsoil within protection zones.
 - 3. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
 - 4. Retain subparagraph above or below to suit Project.
 - 5. Stockpile surplus topsoil to allow for resspreading deeper topsoil.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 31 1000

SECTION 31 2000

EARTHWORK

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. All earthwork shall be in conformance with the soils report.
- B. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division I Specification Section, apply to this section.
- C. Published specifications, standards, tests, or recommended methods of trade, industry, or governmental organizations apply to Work of this Section where cited by abbreviations noted below (latest editions apply unless otherwise noted).
 - 1. California Code of Regulations, Title 24, 2025 edition, also known as California Building Code (CBC).
 - 2. American Society for Testing and Materials (ASTM).
 - 3. American Association of State Highway and Transportation Officials (AASHTO), "Standard Specifications for Highway Materials and Methods of Sampling and Testing."
 - 4. State of California, Business and Transportation Agency, Department of Public Works, Division of Highways:
 - a. "Standard Specifications."
 - b. "Materials Manual," (CMM)

1.2 SUMMARY

- A. Section Includes:
 - 1. Excavation including removal of known on- or below-grade construction or obstructions, and filling and backfilling.
 - 2. Provision of rock courses, sand beds, and vapor retarders under slabs on grade.
- B. Related Sections include:
 - 1. Section 31 2333 "Trenching and Backfill" for trenching and backfilling underground utilities and detectable warning tapes.

1.3 DEFINITIONS

- A. Compaction: Ratio expressed as percentage of dry density of material compacted in field to maximum dry density of same material as determined by ASTM D1557.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Comply with rules and regulations of local and State agencies having jurisdiction.
 - 2. Comply with State and local code requirements for disposal of debris.
- B. Allowable Tolerances:
 - 1. Excavations shall not exceed 1/10-foot variation from dimensions and elevations shown or noted on plans.
 - 2. Fill and backfill shall be placed within tolerance of plus or minus 1/10-foot.

1.5 PROJECT CONDITIONS

- A. Existing Conditions:
 - 1. Carefully maintain benchmarks, monuments, and survey control references.
 - 2. Verify or determine locations of underground utilities and avoid damage. Should damage occur, notify the Architect and repair at no additional cost to the Contract.
 - 3. Restore grades disturbed by construction activity or other causes to elevations shown or noted.
- B. Environmental Requirements: When unfavorable weather conditions necessitate interrupting filling and grading operations, prepare areas by compaction of surface and grading to avoid collection of water. Provide adequate temporary drainage to prevent erosion. After interruption, re-establish compaction specified in last layer before resuming work.
- C. Protection: Conduct earthwork operations so as to prevent windblown dust and dirt from interfering with the Owner's and adjacent property owner's normal operations. Assume liability for all claims related to windblown dust and dirt. Protect building structures and adjacent surfaces to remain.
- D. Sequencing: Sequence operations so as to maintain safe working conditions and preserve existing Work which is to remain.
- E. Layout: If any discrepancies are found by Surveyor between Drawings and actual conditions at Site, Architect reserves right to make such minor adjustments in Work specified hereunder, as are necessary to accomplish the intent of the Contract Documents, at no increase in Contract price.

1.6 RECORDS OF INVESTIGATION

- A. The following record of investigation is available as a reference for the Contractor:
 - 1. Title: Geotechnical Investigation and Geologic and Seismic Hazards Assessment Report; Liberty Adult Education Center Gateway and Tobin Sites, Brentwood, CA
Author: BSK Associates
Date: August 4, 2023
Availability: Available for reference at the offices of the author of the report and the Architect.
 - 2. Title: Supplemental Geotechnical Recommendations Letter; Liberty Adult Community Education School, Gateway Portable Building and Shade Structure, Brentwood, CA
Author: BSK Associates
Date: February 2, 2026
Availability: Available for reference at the offices of the author of the report and the Architect.

1.7 RESPONSIBILITY FOR ACCURACY OF SITE DATA

- A. The Contractor shall promptly, and before such condition is disturbed, notify the Architect in writing of soil or subsurface conditions which differ materially from those conditions shown in the Contract Documents or in the records of investigations of soil or subsurface conditions referred to above. The Architect shall promptly investigate the conditions. If he finds the conditions materially different from those which reasonably should have been anticipated on the basis of a careful consideration of said records of investigations, logs of borings and examination of the site, and finds that said conditions will cause an increase or decrease in the cost of, and/or the time

required for performance of the Contract, he will, after approval by the Owner, modify the Contract Terms in writing to provide for an equitable adjustment in cost and/or time of performance. Any claim of the Contractor shall not be allowed unless he has given the required written notice.

PART 2 PRODUCTS

2.1 MATERIALS

- A. All earthwork shall be in conformance with the soils report.
- B. Typical Fill and Backfill:
 - 1. Granular, not showing excessive shrinkage or swelling when subjected to changes in water content.
 - 2. Free of organic matter and other deleterious substances and containing no rocks or lumps over 3-inches in greatest dimension.
 - 3. All fill material shall be moisture conditioned to at least 2-percent over optimum moisture content as determined by ASTM D1557.
 - 4. On-site soils may be used as fill material except where granular fill material is specified. The moisture content must be within the above limits to be acceptable. Some drying of on-site soils may be required.
 - 5. Imported and non-expansive fill shall conform to the following minimum requirements:
 - a. Maximum Plasticity Index: 12
 - b. Liquid Limit: Less than 30%.
 - c. % Passing #200 Sieve: 8% - 40%

PART 3 EXECUTION

3.1 INSPECTION

- C. The Contractor shall be deemed to have inspected site and informed himself of actual grades, levels, and other conditions under which Work is to be performed.

3.2 EXCAVATION

- A. All earthwork shall be in conformance with the soils report.
- B. General Requirements:
 - 1. Excavate to dimensions and elevations shown or noted with bottoms square and true.
 - 2. Remove debris, old foundations, tree stumps, and loose rocks from bottom of excavation.
 - 3. Shore, brace, sheet, and slope excavations as required to prevent caving, erosion, danger to persons and structures, or interference with construction operations and as required to comply with safety laws.
 - 4. Keep excavation free of water at all times until concrete work and backfilling is complete. Grade excavated areas to provide drainage to prevent ponding of water.
- C. Excavated Soil Material: All excavated material determined unsuitable for use as fill or backfill or in excess of backfill requirements shall be removed from the site.
- D. Provisions for Formwork Construction:
 - 1. Extend excavations sufficient distance from walls and footings to permit placing and removal of forms, installation of services and inspection.
 - 2. Trim excavation walls and bottoms to reasonably smooth lines and grades.

- E. Earth Forms: The Contractor may excavate to dimensions of footing required in order to avoid constructing formwork, provided excavations are clean cut and free of spaces or cave-ins and provided the Owner's Soils Engineer approves. Continuous trenching for individual footings will not be permitted.
- F. Over-Depth Excavations: Rebuild to grade with lean concrete as directed by the Owner's Soils Engineer.
- G. Topsoil: Strip topsoil as directed by the Owner's Soils Engineer at the time of grading. The Contractor shall stockpile topsoil on the site as directed.
- H. Removal of On- or Below-Grade Construction or Obstructions:
 - 1. Remove known existing construction or obstructions including wells, vaults, walls, or otherwise enclosed spaces wherever they occur below new grade within immediate areas of new construction, new paving or new planted areas.
- I. Reworking of Holes, Depressions, Softened, or Disturbed Areas:
 - 1. Cut out the hole, depression, or unsuitable soil area to workable "cat" width or wider by use of "cat and blade" or similar means, cutting to firm subgrade at the bottom and sides.
 - 2. Compact the subgrade as recommended in Appendix E of the soils report.
 - 3. Fill as specified for structural backfill. "Hook" into the side of the excavation as each lift or fill is spread, as far as may be required to reach firm soil at the sides of the excavation and to bond new fill into the existing soil.
 - 4. Fill excavation in manner specified hereinbefore until a surface is obtained which is even and continuous with adjoining grade and offers a firm, even subgrade for final usage or placement of additional fill thereon.
- J. Dewatering:
 - 1. Provide, operate, and remove dewatering equipment necessary to drain and keep excavations free of water under all circumstances.
 - 2. Prevent surface water from flowing into excavation; promptly remove any water accumulated.
 - 3. Dewatering system shall remain in place until construction Work below groundwater table is completed.

3.3 FILLING AND BACKFILLING

- A. All earthwork shall be in conformance with the soils report.
- B. General Requirements:
 - 1. Do not place fill or backfill until forms, rubbish and deleterious materials have been removed, waterproofing measures completed, and areas have been approved by the Architect.
 - 2. Scarify surface of area to receive fill to 12-inch depth and until surface is free from ruts, hummocks or other uneven features. Disc or blade scarify surface until free from large clods.
 - 3. Bring scarified material to proper moisture content and compact to specified density.
 - 4. Spread material in layers not to exceed 8-inch depth before compaction. Sprinkle material with sufficient moisture to compact properly; permit material with excess moisture to dry to proper water content. Thoroughly mix soil and water by blading and discing before compacting.

5. Place granular backfill material as adjacent backfill is being placed.
 6. Adequately brace and shore footings, walls, etc., against which backfill is to be placed to prevent displacement or damage during placement. Do not remove shores or braces until permanent supports are in place and have attained their required strength.
 7. All fill material should be moisture conditioned as recommended in Appendix E of the soils report per ASTM D1557.
- C. Minimum Compaction Requirements:
1. As recommended in Appendix E of the soils report.
 2. Do not compact soil in planting areas.
- D. Compacting:
1. Compact by power tamping, rolling or combinations thereof as approved by the Owner's Soils Engineer. Where impractical to use rollers in close proximity to walls, stairs, etc., compact by mechanical tamping. Scarify and recompact any layer not attaining compaction until required density is obtained.
 2. Compaction by flooding, ponding or jetting will not be permitted.

3.4 SLAB BASE AND VAPOR RETARDER INSTALLATION

- A. All earthwork shall be in conformance with the soils report.
- B. Rock Courses:
1. Verify that all improvements such as floor drains are installed.
 2. Verify that the Owner's Soils Engineer has approved rough graded and compacted subgrade.
 3. Place nominal 6-inch thick rock course under building slabs.
 4. Level and compact to smooth surface.
- C. Vapor Retarder Installation: Place vapor retarder sheeting with longest parallel with direction of pour. Lap seams 6" minimum and seal with manufacturer's recommended tape.

3.5 GRADING

- A. All earthwork shall be in conformance with the soils report.
- B. Begin grading only after debris and construction materials are removed from area concerned.
- C. Grade areas to smooth, level or evenly sloped, uniform surface in conformity to contour lines and spot elevations noted. Make grades level where not otherwise indicated. Round smooth abrupt changes in slopes. Refill to required levels any settled grades. Slope ground away from building walls.
- D. Ensure finished grades and surfaces conduct water directly to area drain, gutters, etc.
- E. Place stockpiled topsoil in maximum 6-inch lifts to depth indicated. Scarify subgrade to minimum depth of 6-inches and obtain the Architect's approval before placing topsoil. Topsoil shall not be used for engineered fill.
- F. Prevent erosion of freshly graded areas during construction and until permanent drainage and erosion control measures are installed. At cut slopes, place layer mesh and plant ground cover.

- G. After finish grading is completed, perform no further excavation or filling operations except by the Architect's approval and under observation of the Owner's Soils Engineer.

3.6 FIELD QUALITY CONTROL

A. The Owner's Soils Engineer will:

1. Sample and test fill material from source designated by the Contractor.
2. Observe site preparation, excavation and placing and compacting of fill and backfill.
3. Perform tests and inspections deemed necessary to ensure compliance with specifications.
4. Issue final report to the Owner on grading and certification of compliance with specifications.
5. Submit verified report to the DSA per CBC Section 1704A.

B. The Contractor shall:

1. Furnish access to site and facilities for inspection.
2. Notify the Soils Engineer 48-hours prior to any fill or backfill operations.
3. Pay costs for additional inspections and tests due to noncompliance with Contract Documents.

END OF SECTION 31 2000

SECTION 31 2313

SUBGRADE PREPARATION & BASE MATERIAL

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Provide subgrade preparation and the base material installation complete, including clearing, grading, excavation, filling and compaction and dewatering.
- B. Subgrade is that area on which concrete, aggregate base, or layer of any other non-organic material is to be placed.

1.2 QUALITY ASSURANCE

- A. Reference Standards
 - 1. Perform all work in accordance with all applicable laws, codes and regulations required by the City of Brentwood, and County of Contra Costa.
 - 2. Perform work in accordance to applicable sections of the Caltrans Standard Specifications.
 - 3. Reference to "Caltrans Standard Specifications" shall mean the Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation, CALTRANS.
- B. Related work specified elsewhere includes:
 - 1. Section 31 2000, Earthwork
 - 2. Section 32 1216, Asphalt Concrete Paving
 - 3. Section 32 1313, Concrete
- C. Stipulations
 - 1. The finished surface of the subgrade, at any point, shall not vary more than 0.05' above or below the elevation indicated on the drawings.
 - 2. Finish Surface Tolerance: 1/4-inch maximum variation in 10 feet.
- D. ASTM Standards.

1.3 SUBMITTALS

- A. Provisions: Comply with Division 1 Requirements.
- B. Material list and product data of all items proposed to be provided under this Section.
- C. Certificates (certified analysis of certificate of compliance) signed by the material producer.

1.4 PROJECT CONDITIONS

- A. Coordination: Coordinate this work with the work of other Sections to avoid delay and interference with other work.

1.5 SOILS REPORT

- A. A soil investigation report has prepared for the project by the firm of BSK, entitled:
 - 1. Geotechnical Investigation and Geologic and Seismic Hazards Assessment Report; Liberty Adult Education Center Gateway and Tobin Sites, Brentwood, CA by BSK Associates dated August 4, 2023.
 - 2. Supplemental Geotechnical Recommendations Letter; Liberty Adult Community Education School, Gateway Portable Building and Shade Structure, Brentwood, CA by BSK Associates dated February 2, 2026.
- B. This report is available in the office of the Architect and the Construction Manager for inspection by the Contractor. Unless otherwise specified, it is intended that all work be performed in accordance with the provisions of these report.

1.6 SOILS BORINGS

- A. Subsurface soils investigations have been made at the site and logs of the test holes are available with the soils report. Such investigations have been made for the purposes of design only, and neither the Architect, the Owner, nor the Soils Engineers guarantee adequacy or accuracy of the data, or that data are representative of all conditions to be encountered. Such information is made available for general information only and shall not relieve the Contractor of the responsibility for making his own investigations

1.7 PROJECT CONDITIONS

- A. Coordination: Coordinate this work with the work of other Sections to avoid delay and interference with other work.
- B. Protect excavations by shoring, bracing, sheeting, underpinning, or other methods as required to prevent cave-ins or loose dirt from entering excavations. Barricade open excavations and post warning flags at work adjacent to public streets and walks.
- C. Underpin adjacent structure(s), including utility service lines, which may be damaged by excavation operations.
- D. Promptly repair damage to adjacent facilities caused by earthwork operations. Cost of repair at Contractor's expense.
- E. Promptly notify the Inspector of unexpected subsurface conditions.
- F. If during the course of operations, an area of pumping or otherwise unstable soil is encountered, the contractor shall immediately modify his operations in such a way as to limit the frequency and weight of vehicles traveling over the area and promptly notify the Inspector who will contact the Geotechnical Engineer for an evaluation.

1.8 EXISTING CONDITIONS

- A. A topographic survey of the property has been included in the drawings for reference only. Upon beginning the work, Contractor represents that he has inspected the site and satisfied himself as to actual grades and levels and the true conditions under which the work is to be performed.

1.9 PROTECTION

- A. Furnish, place and maintain all supports, shoring and sheet piling which may be disturbed by earthwork operations.
- B. Maintain all benchmarks, monuments, and other reference points. If disturbed or destroyed, replace as directed.
- C. Adequate protection measures shall be provided to protect workmen, passers-by, and the site. Streets and adjacent property shall be fully protected throughout the operations.
- D. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions on the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours.
- E. Any construction review of the Contractor's performance conducted by the Inspector is not intended to include review of the adequacy of the Contractor's safety measures in, on, or near the construction site.
- F. Adjacent streets, sidewalks, and property shall be kept free of mud, dirt, or similar nuisances resulting from earthwork operations.
- G. Provide for surface drainage during the period of construction in a manner to avoid creating a nuisance to adjacent areas.
- H. Water as required to suppress dust nuisance.
- I. Protection of Existing Improvements
 - 1. Provide barricades, covering, or other types of protection necessary to prevent damage to existing improvements indicated to remain in place. Protect improvements on adjoining properties. Repair damaged existing improvements to original condition as approved by authority having jurisdiction.
- J. Provide erosion control measures as required.
- K. Protection of Other Property: Excavation and other work over, under and adjacent to existing pipelines, cables, conduit runs or structures of any kind shall be procured in such a manner as not to interfere with the safe operation and use of such installations. Should any damage be incurred to existing facilities during the Contractor's operations, the Contractor shall immediately notify the Owner's Representative and authorities, and shall arrange for the immediate repair of same at his own expense.
- L. Underground Obstruction: The locations of existing underground utilities and structures, insofar as they are known from information furnished by the respective utility companies and agencies, have been shown on the drawings. The Owner assumes no responsibility for the accuracy or completeness of said data, which is offered solely for the convenience of the Contractor.
- M. Control of Water: Take measures as may be required and furnish, install and operate such pumps or other devices as may be necessary to remove any seepage, storm water or sewage that may be found or may accumulate in the excavations during the progress of the work. Keep excavations entirely free from water at all times during the construction of the work,

and until the Geotechnical Engineer gives permission to cease pumping.

- N. Pavement Restoration: Pavement, bases and compacted subgrade disturbed by trenching operations shall be replaced in an acceptable manner with materials equal to the adjacent compacted subgrade, bases and pavement for a minimum distance of 12" on each side of the trench, and shall conform to the requirements of these Specifications or to local ordinances governing such replacement.

1.10 FIELD QUALITY CONTROL

- A. Contractor shall provide adequate notice, cooperate with, provide access to the work, and assist testing agency and their representatives in execution of their function.
- B. When, during the progress of work, field tests indicate that installed compacted materials do not meet specified requirements, provide additional compaction until specified density is achieved, or remove and replace defective materials with new materials as directed by the Inspector. Cost of additional labor, materials, and testing to attain specified density at Contractor's expense.
- C. The Contractor shall engage a California Registered Civil Engineer or licensed Land Surveyor to perform field engineering.

1.11 TESTING

- A. Testing and Inspection: Testing shall be performed by a qualified independent testing laboratory under the supervision of a registered professional engineer, specializing in soils engineering.
- B. The Owner will direct, provide and pay for initial testing and inspection during operations .
- C. Provide and pay for re-testing and inspection during operations. Laboratory and inspection service shall be acceptable to the Owner.
- D. Where reference is made to relative compaction, it shall be the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material, determined by the ASTM 01557 laboratory test procedure. Optimum moisture is the water content that corresponds to the maximum dry density.
- E. For structural fills under footings, slabs or pavements, determine moisture-density relationships in accordance with ASTM 01557.
- F. Plasticity Index: ASTM 4318-98.

1.12 GENERAL REQUIREMENTS

- A. When rain is forecast, temporary measures to protect areas of the exposed subgrade from saturation by rainfall or runoff shall be taken. These include, but are not limited to, covering grading and sloping of subgrade surfaces to prevent ponding, sealing disturbed, uneven subgrade, surfaces with a smooth drum roller, grading and excavating diversionary swales, trenches or detention basins.
- B. Failure by the Contractor to comply with the above requirements to take reasonable and adequate measures or exercise sound engineering and construction practices to protect the work from damage. All repair work shall be performed at no additional cost to the Owner.

PART 2 - MATERIALS

2.1 AGGREGATE BASE - CLASS 2

- A. Aggregate base shall be Class 2, and free from vegetable matter or other deleterious substances. The percentage composition by weight of aggregate base shall conform to Section 26 of the Caltrans Standard Specifications.

2.2 RECYCLED AGGREGATE BASE - CLASS 2

- A. Subject to the approval of the Geotechnical Engineer, recycled aggregate base shall be Class 2, and free from vegetable matter or other deleterious substances. The percentage composition by weight of aggregate base shall conform to Section 26 of the Caltrans Standard Specifications.
- B. Recycled aggregate compliant with the above provisions is acceptable for on-site work only. In accordance with City of Brentwood prohibitions, no recycled aggregate shall be used for off-site work in the public right-of-way.

PART 3 - EXECUTION

3.1 SUBGRADE PREPARATION

- A. Remove topsoil, stumps, roots, grasses and weeds to the satisfaction of the Geotechnical Engineer.
- B. Scarify subgrade to a depth specified in the geotechnical report.
- C. Remove all boulders, hardened material or rock encountered that is over 3 inches in size. The earth shall be uniform for the full depth and width of the subgrade.
- D. The properly moisture condition and compaction per the geotechnical report.
- E. The finished subgrade surface shall be firm and unyielding under the weight of a loaded water truck traveling over the surface.

3.2 AGGREGATE BASE

- A. Deliver to site as a uniform mixture and spread each layer in one operation without segregation.
 - 1. Class 2 Aggregate Base shall be readily compacted and spread with equipment that will provide a uniform layer conforming to the planned section, and as specified in Section 26 of the Caltrans Standard Specifications.
- B. The aggregate base shall be compacted to at least 95 percent relative compaction.
 - 1. Proof roll and mark "soft spots" for additional compaction or correction. Proof rolling operations must be performed in the presence of a Geotechnical Engineer.

- C. Unsatisfactory material shall be removed and repaired to the satisfaction of the Geotechnical Engineer.

END OF SECTION 31 2313

SECTION 31 2333

TRENCHING AND BACKFILL

PART 1 - GENERAL

1.1. RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2. SUMMARY

- B.
- C. Section includes:
 - 1. Excavating and backfilling for utility trenches.
- D. Related Sections include:
 - 1. Section 31 2000 "Earthwork" for
 - (a) Preparing subgrades for slabs-on-grade, walks, pavements, lawns, and grasses, and exterior plants.
 - (b) Excavating and backfilling for buildings and structures.
 - 2. Section 22 1100 "Site Water Distribution" for underground water lines outside of buildings.
 - 3. Division 26 Section for underground electrical conduits.

1.3. DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Course placed between the subgrade and surface pavement in a paving system.
- C. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe and initial backfill over pipe and conduit.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
 - 2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.
- F. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

- G. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below base course, drainage course, or topsoil materials.
- H. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4. SUBMITTALS

- A. Product Data: For the following:
 - 1. Each type of plastic warning tape.
- B. Soil Samples: As required by Owner's Geotechnical Engineer for sampling and testing of proposed offsite borrow soil material.
 - 1. Deliver a representative sample of each type of imported borrow material to Owner's geotechnical testing agency's laboratory at least 7 days prior to delivery to site, for evaluation and testing.
- C. Material Test Report: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
 - 1. Classification according to ASTM D 2487 of each on-site and borrow soil material proposed for fill and backfill.
 - 2. Laboratory compaction curve according to ASTM D 1557 for each on-site and borrow soil material proposed for fill and backfill.

1.5. SOILS REPORT

- A. A soil investigation report has prepared for the project by the firm of BSK, entitled:
 - 1. Geotechnical Investigation and Geologic and Seismic Hazards Assessment Report; Liberty Adult Education Center Gateway and Tobin Sites, Brentwood, CA by BSK Associates dated August 4, 2023.
 - 2. Supplemental Geotechnical Recommendations Letter; Liberty Adult Community Education School, Gateway Portable Building and Shade Structure, Brentwood, CA by BSK Associates dated February 2, 2026.
- B. This report is available in the office of the Architect and the Construction Manager for inspection by the Contractor. Unless otherwise specified, it is intended that all work be performed in accordance with the provisions of these report.

1.6. QUALITY ASSURANCE

- A. Geotechnical Testing and Inspection: Owner will employ and pay for a qualified independent geotechnical testing and inspection agency to perform soils testing and inspection services during utility trenching and backfill operations. All imported borrow materials must be approved by Owner's geotechnical testing agency.

1.7. PROJECT CONDITIONS

- A. Site Information: Data in subsurface investigation reports was used for the basis of the design and is available to Contractor for information, only. Conditions are not intended as representations or warranties of accuracy or continuity between soil borings.

- B. Existing Utilities: Locate existing underground utilities in areas of excavation work. If utilities are indicated to remain in place, provide adequate means of support and protection during earthwork operations.
 - 1. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation, if required. Repair damaged utilities to satisfaction of utility owner.
 - 2. Do not interrupt existing utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - (a) Notify Architect not less than five working days in advance of proposed utility interruptions.
 - (b) Do not proceed with utility interruptions without Architect's written permission.
 - 3. Demolish and completely remove from site existing underground utilities identified for removal. Coordinate with utility companies for shutoff of services if lines are active.
- C. Use of explosives is not permitted.
- D. Protection of Persons and Property:
 - 1. Barricade open excavations and post with warning lights as per requirements of authorities having jurisdiction.
 - (a) Conform to all applicable occupational safety regulations.
 - 2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
 - 3. Excavation within drip line of trees to remain to be performed by hand. Protect root systems from damage or dry out to the greatest extent possible. Maintain moist condition for root system and cover exposed roots with moistened burlap.
- E. Dust Control: Conduct earthwork operations so as to prevent windblown dust and dirt from interfering with Owner's and adjacent property owners' normal operations.

PART 2 - PRODUCTS

2.2 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: As specified in Section 31 2000 "Earthwork," and free of debris, waste, frozen materials, vegetation, and other deleterious matter.
 - 1. Onsite native soils below the stripped layer having an organic content of less than 3 percent by weight are suitable for use as backfill at utility trenches.
- C. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

2.2 MISCELLANEOUS MATERIALS

- A. Concrete: Normal-weight concrete with not less than 3,000-psi compressive strength (28 days), 3-inch slump. Measure, batch, and mix according to ASTM C 94.
 - 1. Portland Cement: ASTM C 150, Type I or II.
 - 2. Aggregate: ASTM C 33; 1-inch maximum size.
 - 3. Water: ASTM C 94; potable.

2.3 ACCESSORIES

- A. Detectable Warning Tape: Acid-resistant and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
 - 1. Red: Electric.
 - 2. Yellow: Gas, oil, steam, and dangerous materials.
 - 3. Orange: Telephone and other communications.
 - 4. Blue: Water systems.
 - 5. Green: Storm and sewer systems.

PART 3 – EXECUTION

3.1. PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.2. DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage caused by rain or water accumulation.

3.3. EXCAVATION, GENERAL

- A. Do not use explosives.
- B. Unclassified Excavation: Excavation is unclassified and includes excavation to required subgrade elevations regardless of the character of materials and obstructions encountered.
- C. Stability of Excavations:
 - 1. Comply with all applicable local codes, ordinances, and requirements of authorities having jurisdiction to maintain stable excavations. Maintaining stability of excavations is sole responsibility of Contractor.

- (a) Support all trench and other excavations in accordance with California Code of Regulations, Title 8 -Industrial Relations (Cal/OSHA Standards), Chapter 4 - Division of Industrial Safety, Subchapter 4 – Construction Safety Orders.

3.4. EXCAVATIONS FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
 - 2. Where trench runs parallel to perimeter edge of adjacent structure, do not locate trench excavations within distance to structure, such that any portion of structure, including footings, will occur 9 inches above a plane projected upward at a slope of one vertical to two horizontal from any point in the excavation.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit, unless otherwise indicated.
 - 1. Clearance: 12 inches each side of pipe or conduit, or as otherwise indicated.
- C. Trench Bottoms: Excavate trenches 6 inches deeper than bottom of pipe elevation to allow for bedding course. Hand excavate for bell of pipe.

3.5. SUBGRADE INSPECTION

- A. Notify Architect and Geotechnical Engineer when excavations have reached required subgrade.
- B. If Geotechnical Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect and Geotechnical Engineer, without additional compensation.

3.6. STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust and saturation from rain.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
 - 2. Dispose of excess excavated soil material and materials not acceptable for use as backfill or fill. Comply with all applicable state and local requirements for offsite disposal of soil and other waste materials.

3.7. UTILITY TRENCH BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Surveying locations of underground utilities for Record Documents.
 - 2. Testing, inspecting, and approval of underground utilities.
 - 3. Removal of trash and debris from excavation.
 - 4. Removal of temporary shoring and bracing, and sheeting.

- B. Place bedding and backfill material on subgrades free of mud, frost, snow, and ice. Remove vegetation, topsoil, debris, wet and unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placing backfill materials.
- C. Place and compact bedding course 6 inches in depth on trench bottoms. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
 - 1. Prevent displacement of piping or conduit by placing and compacting material uniformly around piping or conduit to approximately same elevation in each lift.
 - 2. Place bedding material to an elevation of 12 inches above top of pipe or conduit.
- D. Use satisfactory soil material for trench backfill.
- E. Trenches Under Footings: Where trenches pass under footings or are excavated within 18 inches of footings, fill to elevation of bottom of footings with lean concrete.
- F. Placement and Compaction of Bedding and Backfill Material: Place to final subgrade elevation.
 - 1. Place backfill materials in layers not more than 8 inches in loose depth.
 - 2. Soil Moisture Control: Uniformly moisten or aerate subgrade and each subsequent backfill soil layer before compaction to levels indicated.
 - 3. Compact each layer of bedding material and backfill soil material as recommended in the geotechnical report, according to ASTM D 1557, except as follows:
 - (a) Where occurring within turf or planted areas, compact upper 18 inches of backfill soil material at 85 percent relative compaction at a moisture content of 3 to 5 percent above laboratory optimum value.
 - 4. Correct improperly compacted areas or lifts as directed by Architect or Geotechnical Engineer if soil density tests indicate inadequate compaction.
- G. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.8. PAVEMENT BASE COURSES

- A. Place base courses under paved areas on prepared subgrade, in indicated thicknesses, or if not indicated, to match thickness of existing base course, and as specified in Section 32 1216 "Asphalt Concrete Paving."

3.9. FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.
 - 1. Notify Owner's testing agency at least 2 working days prior to date when observation and testing services are needed.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:

1. Trench Backfill: At each compacted initial and final backfill layer, at least one test for each 150 feet or less of trench length, at a frequency of no less than 18 inches vertically, but no fewer than two tests.
- D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.
 1. Additional testing and inspection required by failure to meet specified requirements will be at Contractor's expense.

3.10. PROTECTION

- A. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.11. DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, debris, and legally dispose of it off Owner's property.

END OF SECTION 31 2333

SECTION 32 1216

ASPHALT CONCRETE PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Work Included: Furnish all labor, materials, equipment, facilities, transportation and services to complete all asphaltic concrete paving operations including the preparation and paving of new areas, paving overlays, patch paving of all existing paved areas disturbed by construction and related work as shown on the drawings and/or specified herein.
- B. Related Sections include:
 - 1. Section 31 2000: Earthwork
 - 2. Section 31 2333: Trenching and Backfilling
- C. References:
 - 1. Sections and chapters of Standard Specifications mentioned herein refer to Standard Specifications, State of Californian, Department of Public Works, Division of Highways, Latest Edition.

1.3 SUBMITTALS

- A. Provide owner with complete materials listing for approval. Materials certificates shall be signed by the material producer and the Contractor, certifying that each material item complies with or exceeds specified requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Engineering fabrics shall be furnished in protective covers capable of protecting the fabric from ultraviolet rays, abrasion, and water.

1.5 PROJECT CONDITIONS

- A. Weather Limitations
 - 1. Do not lay base course on muddy subgrade, during wet weather, or when atmospheric temperature is below 35 degrees Fahrenheit.
 - 2. Do not apply asphaltic surfacing on wet base, during hot weather, or when atmosphere temperature is below 40 degrees Fahrenheit
- B. Grade Controls
 - 1. Establish and maintain required lines and grades, including crown and cross slope.

1.6 PERFORMANCE REQUIREMENTS

- A. Qualifications of asphalt concrete producer: Use materials that are furnished by bulk asphalt concrete producers regularly engaged in production of hot-mix, hot-laid asphalt concrete.
- B. Applicator qualification: Company specializing in the application of asphalt concrete paving.
- C. Asphalt concrete paving shall show no evidence of cracking, uneven settlement or improper drainage. Contractor will be responsible for correcting work displaying such conditions.
- D. Allowable tolerances: Finish surface shall be true to established elevations with 1/8" in ten feet as measured from a 10-foot straight edge in any direction.

PART 2 - PRODUCTS

2.1 STANDARDS

- A. Reference State of California design methods of flexible pavements.

2.2 MATERIALS

- A. Aggregate Base: Aggregate base material and method of placing shall conform to Section 26 of the State Specifications excepting modifications as herein specified. The aggregate base shall conform to the grading providing for 3/4 inch maximum grading as shown herein.

<u>Sieve Size</u>	<u>Percentage Passing Sieve By Weight</u>
2"	100
1-1/2"	100
3/4"	90-100
No. 4	35-55
No. 30	10-30
No. 200	2-9

- B. Asphaltic Concrete: Shall be Type "B" in conformance to Sections 39 and 92 of the State of California Specifications, except as herein modified:
 - 1. Aggregate for Asphaltic Concrete: Shall be a 1/2 inch maximum gradation for new pavement areas, medium grade.
- C. Asphalt Emulsion: Shall conform to Section 94 of the State Specifications.
- D. Redwood Header: All headerboards shall be two (2) inch by eight (8) inch. The headerboards shall be held in place with two (2) inch by six (6) inch by twenty-four (24) inch, or long enough to extend 12 inches into solid ground, whichever is greater.

PART 3 - EXECUTION

3.1 PLACEMENT OF AGGREGATE BASE

- A. The Contractor shall proof roll subbase prior to placement of aggregate base. If soft areas are encountered, the Contractor shall excavate backfill with aggregate base or suitable material and

compact to 95%. The Contractor shall remove any loose material or debris. Prior to correction of any soft areas identified by proof rolling, a Change Order must be authorized by the Owner.

- B. Aggregate Base Method of Placing: The Contractor shall conform to Section 26 of the State Specifications excepting modification as herein specified.
- C. Aggregate Base shall be placed in 6" maximum lifts and each lift will be compacted to 95% relative compaction.
- D. The material will be deposited on the subgrade in such a manner as to provide a uniform section of material within five percent tolerance of the pre-determined required depth. Deposition will be by spreader box or bottom dump truck to prevent segregation of the material. The material so deposited on the subgrade shall have sufficient moisture, which in the opinion of the Soils Engineer, is adequate to prevent excessive segregation. It shall then be immediately spread to its planned grade and cross section. Undue segregation of material, excessive drifting or spotting of material will not be permitted and any material, in the opinion of the City and Owner, to be unsuitably segregated, shall be removed from the subgrade or completely reworked to provide the desired uniformity of the material.

3.2 PLACEMENT OF FRAMES, COVERS AND GRATES

- A. The Contractor shall set and adjust to finish grade all new and existing frames, covers, and grates of all manholes, drop inlets, drain boxes, valves, cleanouts, electrical boxes and other appurtenant structures prior to placement of asphaltic concrete.

3.3 ASPHALT CONCRETE

- A. The Asphalt Concrete method of placing shall conform to Sections 39 and 92 of the State Specifications, except as herein modified.
- B. Prior written approval of the City is required before the Contractor may place asphalt concrete without the use of paving machine. After compaction, the asphalt concrete shall have a density of not less than 95 percent (95%) of the maximum theoretical unit weight, as determined in the laboratory by Test Method No. Calif. 304.

3.4 ASPHALT EMULSION

- A. Asphalt Emulsion method of placing shall conform to Sections 37, 39 and 94 of the State Specifications.

3.5 REDWOOD HEADER

- A. Stakes shall be of sound material, neatly pointed, driven vertically, located at butt joints and elsewhere, spaced not over 4 feet on center and securely nailed to the headerboards. Headerboards shall have a continuous beading on undisturbed earth or compacted earth or base rock.
- B. The top edges of the headerboard shall conform to the line and grade of the pavement.

END OF SECTION 32 1216

SECTION 32 1313

CONCRETE PAVING

PART 1 - GENERAL

1.1 DESCRIPTION

A. Provide Portland cement concrete site work complete. including the following principal items:

1. Concrete work shown on Civil Drawings.

B. Related requirements include:

1. Section 31 2000, Earthwork
2. Section 31 2313, Subgrade Preparation and Base Material
3. Section 32 1216, Asphalt Concrete Paving
4. Division 22 – Related Deliverables

1.2 QUALITY ASSURANCE

A. Reference and Standards

1. Perform work in accordance with all applicable laws, codes and regulations required by City of Brentwood and County of Contra Costa and the State of California.
2. Reference to "Standard Specifications" shall mean the current Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation, CALTRANS.
3. The American Concrete Institute (ACI): "Manual of Concrete Practice," Parts 1, 2 and 3.

B. Stipulations

1. Finish Surface Tolerance: 1/4-inch maximum variation in 10 feet.

1.3 TESTS

A. The Project Inspector will select a qualified testing laboratory to take samples for testing during the course of the work as considered necessary. The Owner will pay costs for such tests. Contractor shall cooperate in making tests and shall be responsible for notifying the designated laboratory in sufficient time to allow taking of samples at time of pour.

B. Should tests show that concrete is below specified strength, Contractor shall remove all such concrete, as directed by the Project Inspector. Full cost of removal of low strength concrete, its replacement with concrete of proper specified strength and testing, shall be borne by Contractor.

1.4 COORDINATION

A. Coordinate items of other trades. Contractor shall be responsible for the proper installation of all accessories embedded in the concrete and for the provision of holes, openings, etc., necessary to the execution of the work of the trades.

1.5 SOILS REPORT:

A. A soil investigation report has prepared for the project by the firm of BSK, entitled:

1. Geotechnical Investigation and Geologic and Seismic Hazards Assessment Report; Liberty Adult Education Center Gateway and Tobin Sites, Brentwood, CA by BSK Associates dated August 4, 2023.
 2. Supplemental Geotechnical Recommendations Letter; Liberty Adult Community Education School, Gateway Portable Building and Shade Structure, Brentwood, CA by BSK Associates dated February 2, 2026.
- B. This report is available in the office of the Landscape Architect and the Construction Manager for inspection by the Contractor. Unless otherwise specified, it is intended that all work be performed in accordance with the provisions of these report.

1.6 SOILS BORINGS

- A. Subsurface soils investigations have been made at the site and logs of the test holes are available with the soils report. Such investigations have been made for the purposes of design only, and neither the Landscape Architect, the Owner, nor the Soils Engineers guarantee adequacy or accuracy of the data, or that data are representative of all conditions to be encountered. Such information is made available for general information only and shall not relieve the Contractor of the responsibility for making his own investigations

1.7 SUBMITTALS

- A. Submittals per Division 1 requirements
- B. The Contractor's Testing Laboratory's certificate of compliance.
- C. The Contractor shall submit:
1. Certified copies of mix designs for each concrete class specified including compressive strength test reports.
 2. Certification that materials meet requirements specified.
 3. Certification from vendor that samples originate from and are representative of each lot proposed for use.
- D. Mock-ups of all materials under this Division shall be supplied for testing as requested by the Architect
- E. Provide mockup of all concrete finishes, color and joints (with curing compound if any to be used) indicated on the drawings. Accepted mock-ups shall be kept at the job site to serve as a prerequisite for all finishes.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Supply ready mixed concrete throughout. Batch mix and transport in accordance with ASTM C-94, "Specifications for Ready Mixed Concrete."
- B. Mix and deliver concrete in quantities that will permit immediate use only.
- C. Indiscriminate addition of water for any reason will be cause for rejection of the load. 2.

PART 2 - PRODUCTS

2.1 FORMWORK MATERIALS

- A. Forms shall be wood.
 - 1. Plywood: APA Plyform, Grade B-B, 5/8-inch thickness minimum.
 - 2. Lumber: Douglas fir, "Standard" grade or better (grade marks not required).
 - 3. Plywood: 5/8-inch thickness minimum. Use overlaid plywood complying with U.S. Product Standard PS-1 "A-C or B-B High Density Overlaid Concrete Form", Class 1. Panels to receive specified form sealer to ensure uniform finish of exposed surfaces
- B. Form Coatings: Knox-Crete, or equal.
- C. Form Ties: Burke "Penta-Tie," or equal, cone and rod type with 1-inch break-back. Do not use form ties on exposed concrete of seat walls.

2.2 REINFORCING MATERIALS

- A. Bar Reinforcement ASTM A615.
 - 1. #3 and smaller: Grade 40.
 - 2. #4 and larger: Grade 60.

2.3 CONCRETE MATERIALS

- A. Portland Cement: ASTM C150, Type II.
- B. Aggregate: ASTM C33.
 - 1. Coarse Aggregate: Normal weight; 3/4-inch maximum size; clean, uncoated, crushed aggregate, free of materials which cause staining or rust spots.
 - 2. Fine Aggregate: Clean, natural sand.
- C. Water: Clear and potable, free from deleterious impurities.
- D. Admixtures: Admixtures are optional, must be compatible with color pigments where required. Any proposed admixture shall comply with State Section 2603(b) 5 of Part 2, Title 24 CCR. Accelerating admixtures are not permitted.

2.4 CONCRETE MIXES

- A. Concrete mixes shall be accepted and shall be in accordance with CalTrans Standard Specifications Section 90. Unless otherwise noted, mix shall be Class "A," 3,000 psi, Type II Portland cement and 3/4- inch maximum aggregate.
- B. Lamp Black: Concrete for exposed "natural colored" concrete shall be darkened by the addition of accepted agents at the mixer. The proportion of lampblack or other accepted colorant, to a great extent dependent on the color of the cement used in the mix, shall be that required to properly darken the concrete to reduce glare, and shall be subject to the approval of the Project Inspector or as required by Landscape Architect. Provide mock-ups with a ratio of one pound of lamp black for each cubic yard of concrete or as otherwise approved.

2.5 ANCILLARY MATERIALS

- A. Expansion Joint Material

1. Fiber Expansion Joint: A non-extruding resilient filler, saturated with high quality bituminous materials having preserving characteristics. W. R. Meadows or accepted equal. Conform to ASTM- 01751-83. Include Joint Sealant
- B. Curing Compound: ASTM C309, Water-base type, free of permanent color, oil or wax, or accepted equal. Curing compound shall be compatible with color pigments.
- C. Concrete Sealer: As manufactured by L. M. Scofield Co. or silicone-based, non-staining product such as Siloxane as manufactured by Prosoco and available from White Cap (415) 626-3750 and as accepted by Architect. Concrete Sealer shall be compatible with color pigments.
- D. Combination Curing Compound Concrete Sealer: W. R. Meadows Vocomp-20, (800-342-5976) or accepted equal. Combination Curing Compound. Combination Curing Compound Concrete Sealer shall be compatible with color pigments.
- E. Joint Sealant: W. R. Meadows or Sonneboum 2-part joint sealant or Sikaflex-1a elastomeric joint sealant or equal product. Available from Sika Corporation, Hayward (510) 487-2294. Color shall be as selected by Landscape Architect.
- F. Color of Concrete: Pigments for integral colored concrete as manufactured by Davis Colors, 800-356- 4848, applied at manufacturer's specified rates of application, or accepted equal

2.6 WATERPROOFING

- A. Subseal-60 Self-adhering Waterproofing Membrane available from MFM Building Products Corp or accepted equal.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Install all concrete work true to line and grade as indicated on the drawings.
- B. Correct irregularities to the satisfaction of the Project Inspector.

3.2 PREPARATION

- A. Take every precaution to obtain a subgrade of uniform bearing power by compaction to provide a firm base.
- B. Subgrade shall be kept moist and shall not be allowed to dry out before placement of concrete. Place no material on muddy subgrade.
- C. Aggregate base, where indicated, shall be placed and compacted in conformance with CalTrans Standard Specifications 26-1.04 and 26-1 .05.
- D. Obtain acceptance of subgrade from Project Inspector prior to placing steel and concrete.

3.3 FORMS

- A. Forms shall be constructed in accordance with ACI 347 and shall be of sufficient strength and sufficiently tight to prevent visible distortion or leakage of mortar and fines.

- B. Forms for exposed surfaces shall be designed to protect intended finish. Deflection of facing material between studs shall not exceed 0.0025 of the span. Facing material and pattern of joints shall be as accepted by the Architect.
- C. For vertical surface of wall footings below grade, clean-cut trench may be used in lieu of form if character of soil will permit installation without sluffing and width of concrete is increased at least 1 inch beyond indicated dimension of each face poured against earth.
- D. Curb and pavement edge forms shall extend full depth of concrete. Curves shall be formed with flexible metal or wood made up of thin laminations. Curve forms shall extend one stake space straight beyond tangent point.
- E. Maintain forms within the following tolerances.
 - 1. Top of Form: Plus or minus 1/8 inch in 10 feet and no abrupt variations; at required elevation to plus 3/8 inch.
 - 2. Face of Form: Plus or minus 1/4 inch in 10 feet longitudinal and no abrupt variations; perpendicular to surface plus or minus 1/8 inch.
- F. Obtain approval of formwork from Project Inspector prior to placing concrete.

Forms may be reused upon cleaning and coating with parting compound to ensure separation from concrete without damage.

After concrete is placed, the following minimum times shall elapse before removal of forms.

- 1. Footing sides: 24 hours.
- 2. Mow bands, curbs and pads: 48 hours.

3.4 REINFORCEMENT

- A. All concrete shall be steel reinforced unless specifically noted to be "not reinforced." If no reinforcement is shown, reinforce in same manner as that shown in similar places.
- B. Fabricate and place reinforcement as indicated on the Drawings and in accordance with ACI "Detailing Manual" SP-66. No reinforcement shall be placed prior to distribution of the accepted shop drawings.
- C. Secure reinforcement in position by suitable supports and by wiring at intersections with tie wire. Supports shall be of sufficient number and strength to resist crushing or displacement under full load. Metal shall not extend to surface of concrete.
- D. At time of placing concrete, reinforcing shall be free of excessive rust, mill scale, or other bond reducing matter. Immediately before placing concrete, check and adjust position, support and anchorage.

3.5 MIXING AND PLACING CONCRETE

- A. Conform to applicable requirements set forth in CalTrans Standard Specifications Section 90.

3.6 JOINTS AND GROOVES

- A. Plane of joints shall be perpendicular to surface. Where new pavements join existing, joints shall align.

- B. Install joint sealant at fiber expansion joints per manufacturer's specifications.
- C. Construction Joints: Place construction joints at the end of pours and at locations where placement operations are stopped for a period of more than one half hour, except where such pours terminate at expansion joints.
 - 1. Construction joints shall be keyed with formed tongue and groove.
 - 2. Tool concrete edge both sides of construction joint.
- D. Saw Cut Joints: Begin as soon as concrete has hardened enough to support saw and operator, and to allow cutting without raveling, or deforming the surface finish. Use a concrete cutting blade. Form a smooth uniform joint 1/8" wide, to 1" depth unless shown otherwise. Joints shall be cut within 48 hours of pour. Hold saw cuts 1/2" from edge of concrete.
- E. Score Joints: Form in the fresh concrete using a jointer to cut the groove so that a smooth uniform impression is obtained to 1" depth unless shown otherwise. All joints shall be struck before and after brooming. Tool concrete both sides of joint.
- F. Expansion Joints and Edging: Provided at the location and intervals as shown on the drawings, and at all locations where concrete paving abuts buildings, curbs or other structures, and not greater than 20 feet on center. Approved joint material shall be placed with top edge below the paved surface and shall be securely held in place to prevent movement. Joint and other edges shall be formed in the fresh concrete using an edging tool to provide a smooth uniform impression. All edges shall be struck before and after brooming.

3.7 FINISHING

- A. Mow bands, paving and other exposed work.
 - 1. Surface Finishes
 - a. Float Finish (typical preliminary finishing for slabs to receive other finishes): The surface of the slab shall be screeded and all surface water and laitance removed. Floating shall be started as soon as the screeded surface has stiffened sufficiently. Floating shall be performed by hand using a wood float and shall be the minimum necessary to produce a relatively smooth, level, even-textured surface.
 - b. Medium Broom Finish: After the slab has been float finished as described above, the surface shall be uniformly directional textured by coarse stable broom to match accepted mock up to be a non-slip finish.
 - c. Sandblast Finish: Perform in as continuous an operation as possible, utilizing the same work crew to maintain continuity of finish to match accepted mock up. Use abrasive grit of the proper type and gradation to expose the aggregate and surrounding matrix surfaces to match mock up panel, as follows:
 - 1) Medium Cut: Approximately 1/8" to 3/16" depth.
 - 2) Heavy cut: Approximately 1/2" to 3/4" depth.
 - 3) Blast corners and edge of patterns carefully, using backup boards in order to maintain a uniform corner of edge line.
 - 4) Use same nozzle, nozzle pressure and blasting technique as used for mock up panel.
 - 5) Maintain control of abrasive grit and concrete dust in each area of blasting. Clean up and remove all expended abrasive grit, concrete dust and debris at the end of each day of blasting operations.

3.8 DEFECTIVE CONCRETE

- A. If any concrete work is not formed as indicated, is under strength concrete, if concrete is out of line, level or plumb, or showing objectionable cracks, honeycomb, rock pockets, voids, spelling or exposed reinforcing, it shall be removed, repaired or replaced as directed by the Landscape Architect.

3.9 CURING

- A. Cure exposed concrete in accordance with CalTrans Standard Specifications Section 90.
- B. Only water or curing compounds that impart no permanent color or gloss shall be used for curing concrete.

3.10 CONCRETE SEALING

- A. Seal all exposed surfaces according to manufacturer's specifications.

3.11 WATERPROOFING

- A. Where soil is backfilled against seat walls install waterproofing per manufacturer's specifications. Hold 2" below finish grade.
- B. During construction, wash off work as quickly as possible when stains or splashes are unavoidable.

3.12 CLEANUP: Per Division 1 requirements.

- A. Upon completion, clean exposed surfaces carefully. Brushing and cleaning solution, if used, must be preceded and followed with a through rinsing of clear water. No sandblasting will be allowed to clean surfaces.
- B. Remove from premises; equipment, debris and surplus material needed for, or resulting from, this work. Remove all concrete waste from planting areas and legally dispose of it.
- C. All work shall be left in a condition satisfactory to the Landscape Architect.

END OF SECTION 32 1313

SECTION 32 1723

PAVEMENT MARKING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Provide pavement striping and symbols complete.
- B. Related work specified elsewhere includes:
 - 1. Section 32 1313 Concrete Paving
 - 2. Section 32 1216, Asphalt Concrete Paving

1.2 QUALITY ASSURANCE

- A. Reference Standards
 - 1. State of California "CALTRANS Standard Specifications," Sections 84.
 - 2. State of California, Title 24, Accessibility Standards and 'California Accessibility Reference Manual, November 1994.
 - 3. Manufacturer's specifications and recommendations.
 - 4. Perform all work in accordance with all applicable laws, codes and regulations required by the City of Brentwood.

1.3 SUBMITTALS: Per Division 1 requirements.

- A. Data on paint with color samples.

PART 2 - PRODUCTS

2.1 PAINTING

- A. Paints shall conform to CALTRANS Standard Specifications 84-2.
- B. Traffic paint and pavement markers shall include a slip-resistant, textured surface.
- C. Utilize paint compatible with the surfacing material.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Pavements shall be fully cured and clean.
- B. Lay out markings accurately and obtain approval before installation. Striping line width on pavement for play courts shall be 2" minimum wide and white except where noted on drawings as yellow.
- C. Pavement markings shall be applied only on dry surfaces during periods of favorable weather. Temperature shall be above 35 degrees F. and rising, humidity less than 80 percent and falling, and no precipitation predicted for 24 hours.

3.2 INSTALLATION

- A. Install pavement markings in accordance with reference standards.
 - 1. Paints, where indicated, shall be applied in accordance with CALTRANS Standard

- Specifications 84-3.03 through 84.3.05. Edges shall be clean and well defined.
2. Apply two coats of paint to the satisfaction of the Project Inspector and Architect.

3.3 CLEANING: Per Division 1 requirements.

- A. Remove from premises; equipment, debris and surplus material needed for, or resulting from, this work. Remove excess adhesives or paint over-spray or tracking onto unmarked areas.
- B. All work shall be left in a condition satisfactory to the Project Inspector and Architect.

END OF SECTION 32 1723

**SECTION 32 3113
CHAIN LINK FENCES AND GATES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Posts, rails, and frames.
- B. Wire fabric.
- C. Gates and related hardware.
- D. Automatic gate operators.
- E. Accessories.

1.02 RELATED REQUIREMENTS

- A. Pertinent Sections specifying Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 01 8113 - Sustainable Design Requirements.
- C. Section 03 3000 - Cast-in-Place Concrete: Concrete anchorage for posts.
- D. Section 08 7100 - Door Hardware: Gate locking device.

1.03 REFERENCE STANDARDS

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- B. ASTM F567 - Standard Practice for Installation of Chain-Link Fence.
- C. ASTM F668 - Standard Specification for Polyvinyl Chloride (PVC), Polyolefin and Other Polymer-Coated Steel Chain Link Fence Fabric.
- D. ASTM F1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
- E. ASTM F1665 - Standard Specification for Poly(Vinyl Chloride) (PVC) and Other Conforming Organic Polymer-Coated Steel Barbed Wire Used with Chain-Link Fence.
- F. ASTM F2200 - Standard Specification for Automated Vehicular Gate Construction.
- G. CLFMI CLF-SFR0111 - Security Fencing Recommendations.
- H. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- I. NFPA 70 - National Electrical Code.
- J. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations.
- K. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations.

- L. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.
- M. UL 325 - Underwriters Laboratories Standard 325, latest edition.
- N. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- O. California Code of Regulations, Title 24, Part 2, California Building Code (CBC), International Building Code with California amendments.
- P. California Code of Regulations, Title 24, Part 11, California Green Building Standards Code, "CAL-Green".

1.04 SUBMITTALS

- A. See Section 01 3300 - Submittals, for submittal procedures.
- B. Product Data: Provide data on fabric, posts, accessories, fittings and hardware. Demonstrate compliance with specified attributes.
 - 1. Gate Operators: Operating Instructions, motor characteristics.
- C. CAL-GREEN Submittals: Product Data – VOC Limits: For adhesives sealants, fillers, primers and coatings, documentation including printed statement of VOC contents, comply with limits specified in related section.
- D. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, and schedule of components. See CLFMI CLF-SFR0111 for planning and design recommendations.
 - 1. Include plans, elevations, sections, details, and attachments to other work.
 - 2. Include accessories, hardware, gate operation, and operational clearances.
 - 3. Gate Operator: Show locations and details for installing operator components, switches, and controls. Indicate motor size, electrical characteristics, drive arrangement, mounting, and grounding provisions.
 - 4. Wiring Diagrams: For power, signal, and control wiring.
- E. Samples: Submit two samples of fence fabric, slat infill, 8 inch by 10 inch in size illustrating construction and colored finish.
- F. Manufacturer's Installation Instructions: Indicate installation requirements, post foundation anchor bolt templates, and ____.
- G. Project Record Documents: Accurately record actual locations of property perimeter posts relative to property lines ____.

1.05 FIELD CONDITIONS

- A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

1.06 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace components of chain-link fences, gates and operators that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure to comply with performance requirements.
 - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - c. Faulty operation of gate operators and controls.
 - 2. Warranty Period: Five years from date of Substantial Completion.

1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Fence Installer: Company with demonstrated successful experience installing similar projects and products, with not less than five years of documented experience.

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. VOC Limits for adhesives, sealants, fillers, primers and coatings . Comply with limits specified in related section.
- B. Structural Performance: Chain-link fence and gate frameworks shall withstand the design wind loads and stresses for fence height(s) and under exposure conditions indicated according to ASCE/SEI 7. Design shall account for added wind resistance from privacy slats and windscreen fabrics where these items are shown on the drawings.
 - 1. Design Wind Load: As indicated on Drawings.
 - 2. Minimum Post Size and Maximum Spacing: As indicated on Drawings and as determined according to CLFMI WLG 2445, based on mesh size and pattern specified, except that if drawing details conflict with CLFMI WLG 2445, provide larger posts and closer spacings as detailed.

2.02 MANUFACTURERS

- A. Chain Link Fences and Gates:
 - 1. Master-Halco, Inc: <https://www.masterhalco.com/#sle>.
 - 2. Builders Fence Company: www.buildersfence.com

3. Merchants Metals: <https://www.merchantsmetals.com/#sle>.
4. Substitutions: See Section 01 6000 - Product Requirements.

2.03 MATERIALS AND COMPONENTS

- A. Materials and Components: Conform to CLFMI Product Manual for structural performance as specified.
- B. Fabric Size: CLFMI Standard Industrial, Heavy Residential service and as specified below.
 1. Top and bottom selva knuckle ends closed
 2. Security Anti-Climb Chain Link Fabric: 5/8 inch mesh, 11 gauge, 0.120 in. diameter steel wire core having a break load of 850 lbf, height as shown on Drawings, except if no height is shown, provide 6'-0" height.
 3. Polymer coated steel chain link fabric per ASTM F668, Class 2b Fused and adhered to metallic coated steel wire.
 - a. Color of chain link fabric per ASTM F934, Black.
 4. Coat selva ends of metallic-coated fabric before the weaving process with manufacturer's standard clear protective coating.
- C. PVC Color Coated Steel Fence Framework.
 1. Framework color to match fabric.
- D. Intermediate Steel Posts: Type I round.
- E. Fittings
 1. All fittings to be PVC thermally fused color coated having a minimum thickness of 0.006" per ASTM F626. PVC color to match fabric and framework. Moveable parts, nuts and bolts to be field coated with PVC liquid touch up after installation.
 2. Post caps: ASTM F626 galvanized pressed steel, malleable iron, or aluminum alloy weather tight closure cap for tubular posts. Provide one cap for each post. "C" shaped line post without top rail do not require post caps. When top rail is specified provide line post loop tops to secure top rail.
 3. Rail ends: Galvanized pressed steel per ASTM F626, for connection of rails to post using a brace band.
 4. Top rail sleeves: 7" galvanized steel sleeve per ASTM F626. [If expansion and contraction of the rail is of concern, add a 0.137" wire diameter by 1.80" long expansion spring between the adjoining rails]
 5. Wire ties: 9 gauge (0.148") galvanized steel wire for attachment of fabric to line posts and rails. Alternate double wrap 13 gauge (0.092") galvanized steel wire for rails and braces. Pre-formed hog ring ties to be 9 gauge (0.148") galvanized steel or aluminum for attachment of fabric to tension wire. Tie wire and hog rings PVC coated and in compliance with ASTM F626. Color to match fabric color.

6. Brace and tension (stretcher bar) bands: ASTM F626 galvanized 12 gauge (0.105") pressed steel by 3/4" formed to a minimum 300 degree profile curvature for post attachment. Secure bands using minimum 5/16" galvanized carriage bolt and nut.
7. Tension (stretcher) galvanized steel bars: One piece lengths equal to 2 inches less than full height of fabric with a minimum cross-section of 3/16" x 3/4" (per ASTM F626. Provide tension (stretcher) bars where chain link fabric is secured to the terminal post.
8. Truss rod assembly: Galvanized steel minimum 5/16" diameter truss rod with pressed steel tightener, in accordance with ASTM F626
9. Carriage bolts and nuts: Galvanized of commercial quality

F. Tension Wire

1. Tension wire: Poly Vinyl Chloride (PVC) coated metallic coated steel tension wire per ASTM F 1664 7 gauge steel core wire, 0.177" PVC coating class and color to match chain link fabric.

G. Concrete: Type specified in Section 03 3000.

2.04 CHAIN LINK SWING GATES

A. Swing gates, single and double leaf types where indicated, height of gate to equal height of fence.

1. Gate Width: As shown on Drawings, except if no dimensions are shown then provide single leaf type minimum 48 inches wide and double leaf gates 96 inches wide, (48 inches per leaf).
2. Fabricate chain link swing gates of welded construction with gate frame members spacing no greater than 8' 0" apart horizontally or vertically, in accordance with ASTM F900. Exterior members to be 1.900 inch OD pipe, interior members shall be 1.660 inch OD pipe. PVC coated pipe to be Grade 1 ASTM F1083.
3. Chain link fabric to match material of fence. Stretch fabric tightly and secure to vertical outer frame members using tension bar and tension bands spaced 12 inches on center and tied to the horizontal and interior members 12 inches on center using 9 gauge galvanized steel ties.

B. Hardware for Single Swinging Gates: 180 degree hinges, 2 for gates up to 60 inches high, 3 for taller gates; fork latch with gravity drop and padlock hasp; keeper to hold gate in fully open position.

2.05 HORIZONTAL SLIDE GATES

A. General: ASTM F 1184 for gate posts and single or double sliding gate types.

B. Sliding Gates, single and double leaf types where indicated, height of gate to equal height of fence.

1. Gate Width: As shown on Drawings, except if no dimensions are shown then provide single sliding type minimum 72 inches wide and double sliding gates 144 inches wide, (72 inches per leaf).
2. Classification: ASTM F1184, Type II, horizontal cantilever slide, Class I with external roller assembly. Pipe and tubing to be aluminum. Gate posts, frames and bracing to be steel. Finish and color to match fence.

3. Chain link fabric to match material of fence. Stretch fabric tightly and secure to vertical outer frame members using tension bar and tension bands spaced 12 inches on center and tied to the horizontal and interior members 12 inches on center using 9 gauge galvanized steel ties.
4. Hardware: Hangers, track, roller assemblies and stops, fabricated from galvanized steel.
5. Latch: Electronic and remote operated per the drawings.

2.06 Automatic Gate Operators

- A. Sliding Gates: Pre-wired, pedestal mounted gate operator for horizontal sliding gates, per ASTM F2200 and UL 325.
 1. Operating type: drive belt.
 2. Control Functions: Open, Pause, Close.
 3. Maximum Open/Close Time: 10 seconds.
 4. Access: Remote.
 5. Maximum gate weight: 500 pounds (187 kilograms).
 6. Horsepower Rating: Suitable for connected load.
 7. Entrapment Protection Devices: Provide sensing devices and safety mechanisms complying with UL 325.
 8. Enclosures: Comply with NEMA EN 10250, and list and label as complying with UL 50 and UL 50E.
 - a. Environment Type per NEMA EN 10250: Unless otherwise indicated, as specified for the following installation locations:

2.07 ACCESSORIES

- A. Privacy Slats: High density virgin polyethylene, stable color pigment with ultraviolet inhibitors, 25 year limited warranty against color fading and breakage of slats and locking-channel used under normal climactic extremes experienced in North America and Hawaii. Color: Black. Standard PDS self-locking using horizontal bottom channel locking system.

2.08 GATE OPERATOR

- A. General: Factory-assembled, automatic gate-operating system designed for gate size, type, weight and frequency of use. Control suitable for project conditions, including all control stations, safety devices and weatherproof enclosures.
 1. Operator design shall allow for removal of cover or motor without disturbing limit-switch adjustment and without affecting auxiliary emergency operation.
 2. Electronic components shall have built-in troubleshooting diagnostic feature.

3. Unit shall be designed and wired for both right-hand/left-hand opening, permitting universal installation.
- B. Manufacturers:
 1. DKS Doorcking:
 2. Substitutions: See Section 01 6000 - Product Requirements.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- D. UL Standard: Manufacture and label gate operators according to UL 325.
- E. Motors: Comply with NEMA MG 1.
 1. Duty: Continuous duty at ambient temperature of 40 deg C and at altitude of 3300 feet (1000 m) above sea level.
 2. Capacity and Torque Characteristics: Sufficient to start, accelerate, and operate connected loads at designated speeds, at installed altitude and environment, with indicated operating sequence, and without exceeding nameplate ratings or considering service factor.
 3. Service Factor: 1.15.
 4. Electrical Characteristics:
- F. Gate Operators: Gate mounted and as follows:
 1. Mechanical Slide Gate Operators:
 - a. Duty: Heavy duty, commercial industrial type.
 - b. Gate Speed: Minimum 45 feet (13.7 m) per minute.
 - c. Maximum Gate Weight: 600 lb (272 kg).
 - d. Frequency of Use: 10 cycles per hour
 - e. Operating Type: Roller Chain with manual release.
 - f. Drive Type: Enclosed Worm gear, reducers and roller chain drive.
- G. Controls: Electric controls separated from gate and motor and drive mechanism, with NEMA 250, Type 3R enclosure for surface mounted equipment base/pad mounting and with space for additional optional equipment.
 1. Radio Control: Digital system consisting of code-compatible universal receiver for each gate, located for clear access to gate area, with remote antenna with coaxial cable and mounting brackets designed to operate gates. Provide ____ programmable transmitter(s) with multiple-code capability, permitting validating or voiding of not less than 1000 codes per channel configured for the following functions:
 - a. Transmitters: Single button operated, with open and close function.

- H. Vehicle Presence Detector: System that includes automatic closing timer with adjustable time delay before closing, timer cut-off switch, and presence detector designed to hold gate open until traffic clears.
- I. Obstruction Detection Devices: Provide each motorized gate with automatic safety sensor(s). Activation of sensor(s) causes operator to immediately function as follows:
 - 1. Action: Stop gate in opening cycle and reverse gate in closing cycle and hold until clear of obstruction.
 - 2. Internal Sensor: Built-in torque or current monitor senses gate is obstructed.
 - 3. Sensor Edge: Contact-pressure-sensitive safety edge, profile, and sensitivity designed for type of gate and component indicated, in locations as follows. Connect to control circuit using gate edge transmitter and operator receiver system.
 - a. Along entire gate leaf leading edge.
 - b. Along entire gate leaf trailing edge.
 - c. Across entire gate leaf bottom edge.
 - d. Along entire length of gate posts.
 - 4. Photoelectric/Infrared Sensor: Designed to detect an obstruction in gate's path when infrared beam in the zone pattern is interrupted.
- J. Limit Switches: Adjustable switches, interlocked with motor controls and set to automatically stop gate at fully open and fully closed positions.
- K. Emergency Release Mechanism: Quick-disconnect release of operator drive system, permitting manual operation if operator fails. Control circuit power is disconnected during manual operation.
 - 1. Type: Integral fail-safe release, allowing gate to be pushed open without mechanical devices, keys, cranks, or special knowledge.
- L. Operating Features:
 - 1. Digital Microprocessor Control: Electronic programmable means for setting, changing, and adjusting control features . Provide unit that is isolated from voltage spikes and surges.
 - 2. System Integration: With controlling circuit board capable of accepting any type of input from external devices.
 - 3. Master/Slave Capability: Control stations designed and wired for gate pair operation.
 - 4. Automatic Closing Timer: With adjustable time delay before closing and timer cut-off switch.
 - 5. Open Override Circuit: Designed to override closing commands.
 - 6. Reversal Time Delay: Designed to protect gate system from shock load on reversal in both directions.

7. Maximum Run Timer: Designed to prevent damage to gate system by shutting down system if normal time to open gate is exceeded.

M. Accessories:

1. Warning Module: Audio-Visual, strobe-light and audible alarm sounding three to five seconds in advance of gate operation and continuing until gate stops moving and according to the U.S. Access Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1.
2. Battery Backup System: Battery-powered drive and access-control system, independent of primary drive system.
 - a. Fail Safe: Gate opens and remains open until power is restored.
3. External electric-powered magnetic lock with delay timer allowing time for lock to release before gate operates.
4. Instructional, Safety, and Warning Labels and Signs: According to UL 325, Manufacturer's standard for components and features specified, and as indicated on Drawings.
5. Equipment Bases/Pads: Cast-in-place concrete, dimensioned and reinforced according to gate-operator component manufacturer's written instructions and as indicated on Drawings.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install framework, fabric, accessories and gates as indicated and in accordance with ASTM F567.
- B. Place fabric on inside of posts and rails.
- C. Set intermediate and other posts plumb, in concrete footings with top of footing 6 inches below finish grade. Slope top of concrete for water runoff.
- D. Line Post Footing Depth Below Finish Grade: ASTM F567, minimum and deeper as shown on drawings and to resist imposed loads as specified.
- E. Corner, Gate and Terminal Post Footing Depth Below Finish Grade: ASTM F567, minimum and deeper as shown on drawings and to resist imposed loads as specified.
- F. Brace each gate and corner post to adjacent line post with horizontal center brace rail _____. Install brace rail one bay from end and gate posts.
- G. Provide top rail through line post tops and splice with 6 inch long rail sleeves.
- H. Provide bottom rail at transformer and mechanical equipment enclosures and athletic backstops.
- I. Install center brace rail on corner gate leaves.
- J. Do not stretch fabric until concrete foundation has cured 2 days.
- K. Stretch fabric between terminal posts or at intervals of 100 feet maximum, whichever is less.
- L. Position bottom of fabric 2 inches above finished grade.

- M. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on centers.
- N. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.
- O. Install bottom tension wire stretched taut between terminal posts.
- P. Install operator in accordance with manufacturer's instructions and in accordance with NFPA 70.

3.02 GATE INSTALLATION

- A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation.
- B. Do not attach the hinged side of gate to building wall; provide gate posts.
- C. Provide concrete center drop to footing depth and drop rod retainers at center of double gate openings.

3.03 GATE-OPERATOR INSTALLATION

- A. Install gate operators according to manufacturer's written instructions, aligned and true to fence line and grade.
- B. Excavation: Hand-excavate holes for posts, pedestals, and equipment bases/pads, in firm, undisturbed soil to dimensions and depths and at locations according to gate-operator component manufacturer's written instructions and as indicated.
- C. Ground electric-powered motors, controls, and other devices according to NFPA 70 and manufacturer's written instructions.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch.
- B. Maximum Offset From True Position: 1 inch.
- C. Do not infringe on adjacent property lines.

3.05 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Automatic Gate Operator: Energize circuits to electrical equipment and devices, start units, and verify proper motor rotation and unit operation.
 - 1. Test and adjust operators, controls, alarms, and safety devices. Replace damaged and malfunctioning controls and equipment.
 - 2. Lubricate operator and related components.
- C. Lubricate hardware and other moving parts.

3.06 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain gates and operators.

END OF SECTION

**SECTION 32 3119
ORNAMENTAL FENCES AND GATES**

PART 1 GENERAL

1.01 SUMMARY

- A. Ornamental metal fence, gates, accessories, anchorage, labor and materials necessary for complete installation.

1.02 RELATED SECTIONS

- A. Pertinent Sections specifying Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 01 8113 - Sustainable Design Requirements.
- C. Divisions 31 and 32: Pertinent sections specifying grading, paving, site concrete, landscaping and underground utilities.
- D. Section 32 3113 - Chain Link Fencing and Gates.

1.03 REFERENCES

- A. ASTM A526-Steel Sheet Zinc-Coated (Galvanized by the Hot Dip Process)
- B. ASTM B117-Salt Spray Testing
- C. California Code of Regulations, Title 24, Part 11 California Green Building Standards Code, "CAL-Green."
- D. California Code of Regulations, Title 24, Part 2, California Building Code (CBC), International Building Code, with California Amendments.
- E. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; updated 2010.

1.04 SUBMITTALS

- A. See Section 01 3300 - Submittals, for submittal procedures.
- B. Product Data: Provide data for materials, coatings finish and assembly.
- C. CAL-GREEN Submittals:
 - 1. Product Data - VOC Limits: For adhesives, sealants, fillers, coatings and primers, documentation including printed statement of VOC contents, comply with limits specified in related section.
- D. Shop Drawings: Indicate fencing and gate layout specific to site conditions including field measurements. Indicate all support and attachment conditions. Indicate all interface conditions with other work.
- E. Samples: Submit two pickets, 12 inches in length, illustrating selected finish. Submit 2 pieces of perforated metal security panels, 6" square minimum.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum three years of experience.

1.06 DELIVERY, STORAGE, AND PROTECTION

- A. Check all materials for transit damage upon delivery to site. Do not accept damaged materials.
- B. Store materials to ensure proper ventilation and drainage, and prevent damage from weather, vandalism, and theft.

1.07 PROJECT CONDITIONS

- A. Coordinate fence installation with size, location and installation of service utilities. Avoid conflict of fence footings with underground work.

1.08 WARRANTY

- A. See Section 01 7000 - Contract Closeout, for additional warranty submittal requirements.
- B. Provide ten year manufacturer warranty for components and finish. Provide 5 year comprehensive labor warranty for replacement or restoration of warranted materials.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. VOC limits for adhesives, sealants, fillers, primers, and coatings. Comply with limits specified in related section.
- B. ADA Standards: Design and construct gates and hardware to comply with requirements of Americans with Disabilities Act (ADA) Standards for Accessible Design; updated 2010, and CBC 11B-404.
- C. Gate closures shall be adjusted so that from an open position of 90-degrees, the time required to move the gate to position of 12-degrees from the latch is 5 seconds minimum.
- D. Adjust and maintain gate spring hinges per CBC 11B-404.2.8.2, so that from the open position of 70-degrees, the gate shall move to the closed position in 1.5 seconds minimum.
- E. 5 lbs. max to open gate (11B-404.2.9).
- F. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate the operable parts shall be 5-lbs Max. (11B-309.4)

2.02 MANUFACTURERS

- A. Ameristar Fence Inc., Tulsa, Oklahoma, www.ameristarfence.com.
- B. Approved equal.
- C. Substitutions: See Section 01 6000 - Product Requirements.

2.03 ORNAMENTAL METAL FENCE

- A. Fence Product: Montage, Industrial Welded, "Majestic" Design with 3 rails, flush bottom rail treatment.
- B. Fence Framework. Pickets, Posts, and Rails: Fabricate all components from coil steel, 45,000 psi minimum yield strength, G-60 hot-dipped galvanized per ASTM A526;
 - 1. Fence Pickets: 1 inch square x 16 gauge steel tubing. Seal all picket-to-rail intersections with rubber grommets.
 - 2. Post Size/Spacing:
 - a. Posts: As indicated on drawings, except if post size is not shown, provide 2-1/2 inch square x 12 gauge tubing, minimum, otherwise.
 - b. Post Spacing: As indicated on drawings, except if spacing is not shown, provide 71-1/4 inches maximum for 6 feet on center nominal or 96 inches for 8 feet on center nominal, minimum otherwise.
 - 3. Rails: Manufacturer's Forerunner™ cross-section design with outside dimensions of 1.75 inches square, 12 gauge minimum thickness with picket holes at 4.75 inches (approx.) on center.
 - 4. Fence Panel design must reject a 4 inch diameter sphere.
 - 5. Height: As shown on Drawings, if no fence height is shown, provide 6'-0" height fence.

2.04 SWING GATES

- A. Gate Product: Montage II, Welded, "Majestic" Design with 3 rails, flush bottom rail treatment.
- B. Swing Gate Panels. Pickets, Posts, and Rails: Fabricate all components from coil steel, 45,000 psi minimum yield strength, G-60 hot-dipped galvanized per ASTM A526;
 - 1. Fence Pickets: 1 inch square x 14 gauge steel tubing. Seal all picket-to-rail intersections with rubber grommets.
 - 2. Post Size/Spacing:
 - a. Posts: As indicated on drawings, except if post size is not shown, provide 2-1/2 inch square x 12 gauge tubing, and 3 inch square x 12 gauge at gates wider than 36 inches, minimum, otherwise.
 - b. Post Spacing: As indicated on drawings, to suit size of gate.
 - 3. Rails: Manufacturer's Forerunner™ cross-section design with outside dimensions of 1.75 inches square, 12 gauge minimum thickness with picket holes at 4.75 inches (approx.) on center.
 - 4. Panel design must reject a 4 inch diameter sphere.
 - 5. Height: As shown on Drawings, if no gate height is shown, match height of fence.

- C. Swinging Gate: Fabricate Swing Gates from fence panels specified above in sizes as shown on Drawings.
1. Gates in the path of travel shall meet the door requirements of CBC 11B-404 with required clearances and reference details. Provide lever hardware and 10 inch minimum smooth bottom or kick plate. Provide Panic Hardware (Exit Device) and exit signs as required by Fire and Life Safety.
 2. Swinging Gate Hardware: Provide all hardware necessary for a complete, operational gate assembly, sizes and types recommended by manufacturer to suit conditions indicated, galvanized and shop finished to match adjacent gate components.
 - a. Hinges: Brass washer leaf hinges: 7 inch ball bearing hinges for medium and heavy gates. Provide two hinges for each leaf up to 6 foot nominal height, and one additional hinge for each additional 24 inches in height, or fraction thereof.
 - b. Hasps and Cane Bolts at Gates without exit devices.
 - c. Gates with Exit Devices:
 - 1) Schlage Classroom Security Locksets, ND95LD series, with Rhodes style lock levers.
 - 2) ASSA Maximum Plus cylinders; coordinate keying with District.
 - 3) Von Duprin 98/99 exit devices with cylinder dogging.
 - 4) Provide 10 inch smooth bottom or kick plate.
 3. Security Panels at Exit Gates: 16 gauge perforated metal, finished to match fencing. 1/8" holes at 3/16" staggered spacing. McNichols or equal.

2.05 ACCESSORIES

- A. Accessory Materials: Fasteners and other materials not specifically indicated but required to achieve the results specified; commercial quality. Types recommended by manufacturer to suit conditions.

2.06 FABRICATION

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible, to ensure proper fitting of the work. Allow for trimming and fitting where field conditions preclude accurate measurements or where final dimensions cannot be established prior to fabrication.
- B. Fit and shop assemble items in largest practical sections, for delivery to site.
1. Minimize field splicing and site assembly. Disassemble only to the extent necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
 2. Complete assembly, including welding, before start of finishing operations. Provide finish surfaces of members exposed in the final structure free of markings, burrs, and other defects.
 3. Use materials and items necessary to complete the work, using the best materials and methods ordinarily used for this type of work whether explicitly specified, indicated and detailed or not.

- C. Fabricate items with joints tightly fitted and secured.
- D. Machine-roll components or elements required to be curved or radiused. Do not field bend or "walk-down". Provide curves true to indicated dimensions, minimizing joints; segmented fabrication not allowed unless specifically noted.
- E. Continuously seal joined members by continuous welds.
 - 1. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
 - 2. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
 - 3. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- F. Use only materials smooth and free of blemishes including pitting, seam marks, roller marks, trade names and roughness.
- G. Fabricate steel members in accordance with drawings and as recommended by A.I.S.C. Verify all dimensions with field conditions prior to fabrication.
 - 1. Clean, prepare and shop-prime steel members. Do not prime surfaces to be field welded or in direct contact with concrete.
 - 2. Cutting and drilling: Provide holes for fabrication and for attachment of work specified elsewhere. Countersink holes for bolts and screws.
 - 3. Form changes in direction of railing members by radius bends, maintaining cross-section of tube throughout bend without buckling, twisting, cracking or otherwise deforming exposed surface of tube.
- H. Field Welding: Design fence components to avoid field welds to extent possible.
- I. Pre-cut Pickets, Rails, and Posts to specified lengths. Pre-punch Forerunner rails to accept pickets.
 - 1. Insert pickets through grommets inserted into pre-punched holes in rails so that pre-drilled picket holes align precisely with the internal upper raceway of Forerunner rails, utilizing an alignment jig.
 - 2. Insert retaining rods into each Forerunner rail to pass through the predrilled holes in each picket.
- J. Completed fence panel sections shall be capable of supporting a 600 lb. load applied at midspan without permanent deformation and conformable to a 25% change in grade.
- K. Swing Gates: Fabricate using Montage II /Majestic panel material and gate ends having the same outside cross-section dimensions as the Forerunner rail.
 - 1. Weld all connections, including:
 - a. Upright and Rail intersections.

- b. Picket and Rail intersections.
- c. Hinge and Hardware brackets.
- d. Security panels to frame and pickets.

2.07 FACTORY FINISHING

- A. All Fence Panels, Gates and components: Galvanize and pre-treat with six stage zinc phosphate pretreatment/wash followed by "PERMACOAT™", an electrostatic spray application of a two coat powder system with salt spray resistance of 3,500 hours without loss of adhesion per ASTM B117.
 - 1. Base Coat: Thermosetting epoxy powder coating (gray color) 2-4 mils minimum thickness.
 - 2. Top Coat: TGIC polyester "No-mar" powder coat, 2-4 mils minimum thickness.
 - 3. Color: Black.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that conditions are appropriate to begin work.
 - 1. Verify underground utility locations are as indicated.
 - 2. Verify that site paving conditions are as indicated.
- B. Confirm varying conditions are corrected before start. Start of work indicates acceptance of substrates.
- C. Field measurements to include determination of required "equal spacing" of posts at each run of fencing.

3.02 PREPARATION

- A. Lay out work as indicated. Identify and resolve potential conflicts before proceeding with installation.
- B. Protect adjacent completed work from damage. Repair or replace all damaged work.

3.03 INSTALLATION

- A. Fences: Plumb posts in each direction.
- B. Anchor posts in concrete by means of galvanized steel pipe sleeves, not less than 6 inches long, with an outside diameter not less than 1/2 inch greater than the outside diameter of the inserted pipe post.
Provide steel plate closure secured to bottom of sleeve of width and length not less than 1 inch greater than outside diameter of sleeve. After posts have been inserted into sleeves, fill annular space between post and sleeve solid with non-shrink, non-ferrous grout.
- C. Fence posts shall be set at equal spacings as indicated on drawings and as confirmed by field measurement.
- D. Gate posts shall be spaced according to the gate openings specified in the construction plans.

- E. Related sections specifying concrete and earthwork govern post base placement and accessory material requirements. Attach Panels to posts using panel brackets supplied by the bolt-on hardware supplied by manufacturer.
- F. Gates: Install gates plumb, level, and secure for full opening without interference. Anchor ground-set items in concrete. Adjust hardware and power operators for smooth operation and lubricate where necessary.

3.04 ERECTION TOLERANCES

- A. Maximum Variation From True Position: 1/4 inch.
- B. Maximum Offset From True Alignment: 1/4 inch.
- C. Maximum Variation from Plumb: 1/8 inch in 10 feet.

3.05 ADJUSTING

- A. Adjust gate hardware for smooth operation.

3.06 CLEANING AND PROTECTION

- A. Excavation Spoils:
 - 1. Post-hole excavation prior to finish grading and planting: Suitable materials conforming to requirements of other sections may be used in other locations on the site. Remove excess materials as specified in related sections.
 - 2. Post-hole excavation following finish grading and planting: Remove all materials from site.
- B. Clean fence and gates from concrete overspray and other soiling of finish.
- C. Protect installed work from subsequent construction operations.
- D. Dispose of all excess materials.
- E. Repair paving and landscape to conform to fencing installation, with material matching original conditions.

- END OF SECTION -

SECTION 33 4000

SITE STORM DRAINAGE

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes gravity-flow, non-pressure storm drain piping outside the building, and the following components:
 - 1. Drainage Inlets.
 - 2. Catch Basins
 - 3. Cleanouts
 - 4. Subdrain Systems
 - 5. Bioretention Systems
- B. Related Sections include: edit following list to suit project
 - 1. Section 31 2333 "Trenching and Backfill" for trenching and backfilling for underground storm drain lines, and detectable warning tapes.

1.3 DEFINITIONS

- A. DN: Dimension Nominal.
- B. NPS: Nominal Pipe Size.
- C. PVC: Polyvinyl chloride plastic.
- D. HDPE: High-Density Polyethylene.
- E. RCP: Reinforced Concrete Pipe
- F. SDR: Standard Dimension Ratio, derived by dividing the outside diameter of the pipe by the pipe wall thickness.

1.4 SUBMITTALS

- A. Product Data: For the following:
 - 1. Piping and related specialties.
 - 2. Drainage Inlets.
 - 3. Catch Basins.
 - 4. Cleanouts.
 - 5. Subdrain Systems.

- B. Shop Drawings: For the following:
 - 1. Drains and Inlets: Include plans, elevations, sections, details, and frames, covers, and grates.
- C. Coordination Drawings: Show pipe sizes, locations, and elevations. Show other piping in the vicinity and clearances from storm drainage system piping. Indicate interface and spatial relationship between manholes, piping, and proximate structures.
- D. Field quality-control test reports.
- E. Record drawings of installed storm drainage lines and appurtenances in accordance Division 1 Section for project closeout requirements.
 - 1. Locate and dimension work with reference to permanent landmarks. Indicate materials and sizes of all components.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.
- B. Protect pipe, pipe fittings, and seals from dirt and damage.
- C. Do not store plastic manholes, pipe, and fittings in direct sunlight.
- D. Handle catch basins and drainage inlets according to manufacturer's written rigging instructions.

1.6 PROJECT CONDITIONS

- A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
 - 1. Notify Architect no fewer than five working days in advance of proposed interruption of service.
 - 2. Do not proceed with interruption of service without Architect's written permission.
- B. Information shown regarding locations of existing utilities is based upon available records and data, but shall be regarded as approximate, only. Make minor deviations necessary to conform to actual locations and conditions without extra cost. Verify location and elevation of utilities prior to commencement of excavation.
 - 1. Exercise extreme care in excavating near existing utilities. Contractor is responsible for damage to existing utilities.

1.7 COORDINATION

- A. Coordinate connection in public right of way with City of Brentwood.
- B. Coordinate placement of structures with layout of pavement joints and patterns. Refer to Drawings for layout.

- C. Coordinate crossings with other underground utilities.
- D. Coordinate with locations of building down spouts.

PART 2 PRODUCTS

2.1 PIPING MATERIALS

- A. HDPE Pipe and Fitting.
 - 1. HDPE shall be DR-11 and conform to ASTM F714 and AASHTO designation M-294.
- B. PVC Pipe and Fittings
 - 1. PVC Sewer Pipe and Fittings, NPS 15 (DN 375) and Smaller: ASTM D 3034, SDR 26, with bell-and-spigot ends for gasketed joints with ASTM F477, elastomeric seals. Couplings and joints shall meet the requirements in ASTM D3212.
- C. RDP and Fittings
 - 1. Pipes specified on plans as RCP shall be Class IV, Type II Portland Cement conforming to ASTM C76 and C150.

2.2 DRAINAGE INLETS (DI)

- A. Precast reinforced concrete square drain box with galvanized steel frame for grate; galvanized welded steel bar grate with hold-down bolts.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Central Precast Products: Refer to structure types and sizes specified on plans.
 - b. Equal product in accordance with Division 1 requirements for product substitutions.
 - 2. Joint Sealants: ASTM C 990, bitumen or butyl rubber.

2.3 AREA DRAINS (AD)

- A. Refer to Area Drain detail shown on plans.
- B. Area Drains to be provided at locations shown on plans.
- C. Area Drain cover to be one of the following:
 - 1. NDS 9" Catch Basin with Model 980 Inlet Top
 - 2. Equal product in accordance with Division 1 requirements for product substitutions.

2.4 CLEANOUTS (CO)

- A. Refer to Storm Drain Cleanout detail shown on plans.
- B. Storm drain cleanouts to be provided at all locations rainwater leaders have a change in direction, not including the connection to the main.

- C. Riser pipe to be 4" PVC with plug.

2.5 CONCRETE

- A. General: Cast-in-place concrete according to ACI 318, ACI 350R, and the following:
 - 1. Cement: ASTM C 150, Type II.
 - 2. Fine Aggregate: ASTM C 33, sand.
 - 3. Coarse Aggregate: ASTM C 33, crushed gravel.
 - 4. Water: Potable.
- B. Portland Cement Design Mix: 4000 psi minimum, with 0.45 maximum water-cementitious materials ratio.
- C. Reinforcement:
 - 1. Reinforcement Fabric: ASTM A 185, steel, welded wire fabric, plain.
 - 2. Reinforcement Bars: ASTM A 615, Grade 60, deformed steel.

PART 3 EXECUTION

3.1 EARTHWORK

- A. Refer to Section 31 2000 "Earthwork" for excavation, trenching, and backfilling.

3.2 PREPARATION

- A. Where connecting to existing drain lines, verify existing line is free-draining prior to making connection. If required, clean existing line to achieve free-draining condition.

3.3 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take design considerations into account. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install piping free of sags and bends.
- D. Use fittings for changes in direction and branch connections unless indicated otherwise.
- E. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- F. Tunneling: Install pipe under streets or other obstructions that cannot be disturbed by tunneling, jacking, or a combination of both.

- G. Install gravity-flow, non-pressure drainage piping according to the following:
 - 1. Install piping pitched down in direction of flow, at slope indicated, but in no case less than 0.3 percent.
 - 2. Install piping at elevations and inverts indicated, but in no case with less than 18-inch cover.
 - 3. Install PVC storm drain piping according to ASTM D 2321 and ASTM F 1668.
- H. Clear interior of piping of dirt and superfluous material as work progresses. Maintain swab or drag in piping, and pull past each joint as it is completed. Place plug in end of incomplete piping at end of day and when work stops.

3.4 PIPE JOINT CONSTRUCTION

- A. Join gravity-flow, non-pressure drainage piping according to the following:
 - 1. Join PVC storm drainage piping according to ASTM D 2321 and ASTM D 3034 for elastomeric-seal joints or ASTM D 3034 for elastomeric gasket joints.
 - 2. Join dissimilar pipe materials with pressure-type couplings.

3.5 DRAINAGE INLET AND CATCH BASIN INSTALLATION

- A. Install drainage inlets at locations indicated on plans.
- B. Set drain frames and covers with tops flush with pavement surface.
- C. Fasten grates to drains.

3.6 SUBDRAIN INSTALLATION

- A. Install subdrains at locations indicated.
- B. Assemble pipes to slope down toward drain outlets.
- C. Install perforated pipes with holes facing down.

3.7 CONCRETE PLACEMENT

- A. Place cast-in-place concrete according to ACI 318/318R.

3.8 CONNECTIONS

- A. Make connections to existing storm drainage piping.
 - 1. Use commercially manufactured wye fittings for piping branch connections. Remove section of existing pipe; install wye fitting into existing piping; and encase entire wye fitting, plus 6-inch overlap, with not less than 6-inches of concrete with 28-day compressive strength of 3000 psi.
 - 2. Protect existing piping to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.

3.9 IDENTIFICATION

- A. Refer to Section 31 2333 “Trenching and Backfill” for continuous underground warning tape installed over underground storm drainage piping.

3.10 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
 - 1. Submit separate reports for each system inspection.
 - 2. Defects requiring correction include the following:
 - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
 - c. Crushed, broken, cracked, or otherwise damaged piping.
 - d. Infiltration: Water leakage into piping.
 - e. Exfiltration: Water leakage from or around piping.
 - 3. Replace defective piping using new materials and repeat inspections until defects are within allowances specified.
 - 4. Re-inspect and repeat the procedure until the results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
 - 1. Do not enclose, cover, or put into service before inspection and approval.
 - 2. Test completed piping systems according to authorities having jurisdiction.
 - 3. Schedule tests and inspections by authorities having jurisdiction with at least two working days advance notice.
 - 4. Submit a separate report for each test.
- C. Leaks constitute defects that must be repaired.
- D. Replace leaking piping using new materials.

3.11 CLEANING

- A. Clean interior of piping of dirt and superfluous materials. Flush with potable water.
- B. Where connecting to existing drain lines, clean existing line from point-of-connection to nearest downstream manhole or catch basin.

END OF SECTION 33 4000