PACIFIC GOVE UNIFIED SCHOOL DISTRICT

PROJECT MANUAL

FOR

Pacific Grove Adult School & Co-op Preschool Site Improvements

Bid Number: AE-B505

Bid Issued			
Mandatory Pre-Bid Walk	2:00	on	11/17/26
Bid Questions Due	2:00	on	12/3/26
Bid Due Date	2:00	on	12/17/26
Bid Opening	2:15	on	12/17/26

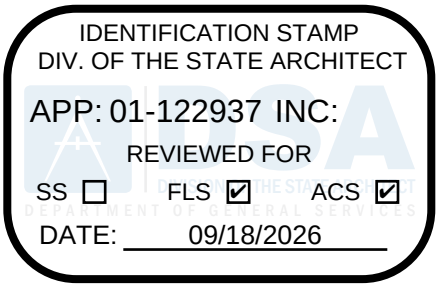
1st Publication Date: November 4, 2026
2nd Publication Date: November 11, 2026

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See attached documents for project specifications.

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NOTICE CALLING FOR BIDS

DISTRICT	**PACIFIC GROVE UNIFIED SCHOOL DISTRICT**
BID NUMBER	**AE – B505**
PROJECT DESCRIPTION	**Pacific Grove Adult School & Co-op Preschool Site Improvements**
LATEST TIME/DATE FOR SUBMISSION OF BID PROPOSALS	**2:00 P.M. Thursday, December 17, 2026**
LOCATION FOR SUBMISSION OF BID PROPOSALS	**Pacific Grove Unified School District District Office 435 Hillcrest Ave., Pacific Grove, CA 93950**
LOCATION FOR OBTAINING BID AND CONTRACT DOCUMENTS	**Pacific Grove Unified School District Maintenance, Operations & Transportation Department 435 Hillcrest Ave., Pacific Grove, CA 93950 OR AT https://www.pgusd.org/Parents--Community/Facilities/BID-OPPORTUNITIES/index.html**
ENGINEER'S ESTIMATE	**$1,700,000**

NOTICE IS HEREBY GIVEN that Pacific Grove Unified School District, will receive up to, but not later than the above-stated date and time, sealed Bid Proposals for the Contract for the Work generally described as the Pacific Grove Adult School & Co-op Preschool Site Improvements**.**

1. Submittal of Bid Proposals. All Bid Proposals must be received prior to **2:00 PM**, on **December 17, 2026**. Call for Bids must be submitted in a sealed envelope, marked with the Name and Address of the bidder and the **Bid Number and Project Title**, and returned to the Pacific Grove Unified School District, District Office at 435 Hillcrest Ave, Pacific Grove, CA 93950.

2. Site Visit. A **Mandatory** Site Visit will be held on **Tuesday, November 17, 2026, beginning at 2:00 PM.** Bidders are to meet at 1025 Lighthouse Ave., at the Front of the Building for conduct of the mandatory Site Visit. Because the Job Walk is mandatory, the Bid Proposal submitted by a Bidder whose representative(s) did not attend the Mandatory Job Walk will be rejected as being non-responsive. A sign-in sheet will be provided at the job walk to provide evidence of attendance. Additional materials may be dispersed at the site visit.

3. Bid Opening. Bids received later than the designated time and specified date will be returned to the bidder unopened. Emails or Facsimile (FAX) copies of the proposal will not be accepted. The District reserves the right to accept or reject any or all proposals or any combination thereof and to waive any informality in the bidding process. Bids will be open at the District Office at 2:15 PM on **December 17, 2026**.

4. Bid and Contract Documents. Copies of the Call for Bid (CFB) documents may be obtained from Pacific Grove Unified School District, Maintenance, Operations, & Transportation Department at 435 Hillcrest Ave, Pacific Grove, CA 93950, or at https://www.pgusd.org/Parents--Community/Facilities/BID-OPPORTUNITIES/index.html. **All costs incurred downloading/ acquiring bid docs and plans to be borne by bidder.**

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5. Pre-Bid Inquiries. Bidders may submit pre-bid inquiries or clarification requests. Bidders are solely and exclusively responsible for submitting such inquiries or clarification requests by **Thursday, December 3, 2026, at 2:00 pm**. PGUSD will not respond to any bidder inquiries or clarification requests, unless such inquiries or clarification requests are submitted timely to the following: jill@ausonio.com.

6. Bid Bond. If required Bidders must submit with their Bids cash, a cashier's check, or a certified check payable to the District, or a bid bond by an admitted surety insurer of not less than ten percent (10%) of amount of base Bid, plus all additive alternates when applicable. If the Bidder chooses to provide a Bid Bond as security, the Bidder must use the required form of corporate surety provided by District. The Surety on the Bidder's Bid Bond must be an insurer admitted in the State of California and authorized to issue surety bonds in the State of California. Bids submitted without necessary bid security will be deemed non-responsive and will not be considered. If the Bidder to whom a contract is awarded ("Contract" or "Agreement") fails or neglects to enter into Contract and submit required bonds, insurance certificates, and all other required documents, within SEVEN (7) calendar days after the date of the Notice of Award, District may deposit a Bid Bond, cash, a cashier's check, or a certified check for collection, and proceeds thereof may be retained by the District as liquidated damages for failure of Bidder to enter into Contract, in the sole discretion of the District. It is agreed that calculation of damages the District may suffer because of Bidder's failure to enter into the Contract would be extremely difficult and impractical to determine and that the amount of the Bidder's required bid security shall be the agreed and conclusively presumed amount of damages.

7. No Withdrawal of Bid Proposals. – Bid proposals may be withdrawn by the bidders prior to the time fixed for the opening of bids. However, No Bidder may withdraw their bid for a period **of ninety (90) days** from the date of opening of the bids for the purpose of reviewing the bids and investigating the qualifications of Bidders, prior to awarding of the contract. A successful bidder shall not be relieved of the bid submitted without the District's consent or bidder's recourse to Public Contract Code Sections 5100 et. seq.

8. Waiver of Irregularities**.** The District reserves the right to reject any or all Bid Proposals or to waive any irregularities or informalities in any Bid Proposal or in the bidding.

9. Execution of Contract (Award). The District shall award the Contract to the lowest responsive responsible bidder based on the criteria as indicated in the Notice to Bidders. In the event two or more responsible bidders submit identical bids, the District shall select the Bidder to whom to award the Contract by lot. In the event all Bids exceed the bid threshold, the District's Governing Board may elect to pass a resolution to award the Contract to the lowest responsible Bidder. Issuance of a Purchase Order shall be evidence the contractual agreement between the bidder(s) and the District and the bidder's acceptance of these Bid Instructions and Conditions. The District reserves the right of determination that items bid meet or do not meet bid specifications. Further, the District reserves the right to accept or reject any or all bids and to waive any informality in the bidding.

    A. The Bidder to whom a Contract is awarded shall execute and submit the following documents by 5:00 p.m. of the SEVENTH (7th) calendar day following the date of the Notice of Intent to Award. Failure to properly and timely submit these documents entitles District to reject the bid as non-responsive.

        i. Agreement: To be executed by successful Bidder. Submit one (1) signed electronic agreement.

        ii. Performance Bond (100% of Contract Price): On the form provided in the Contract Documents and fully executed as indicated on the form.

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iii. Payment Bond (100%) (Contractor's Labor and Material Bond): On the form provided in the Contract Documents and fully executed as indicated on the form.

iv. Certificates of Insurance and Endorsements, as required.

v. Workers' Compensation Certification.

vi. Prevailing Wage and Related Labor Requirements Certification.

vii. Drug & Tobacco Free Workplace Certification.

viii. Hazardous Materials Certification. (when required)

ix. Lead-Based Materials Certification. (when required)

x. Criminal Background Investigation/Fingerprinting Certification.

xi. Registered Subcontractors List: Must include Department of Industrial Relations (DIR) registration number of each subcontractor for all tiers.

10. Prevailing Wage Rates. Local prevailing wage rates shall be paid in accordance with Sections 1770, 1773, and 1782, as amended, of the California Labor Code. The Contractor must pay for any labor therein described or classified in an amount not less than the rates specified. Wage determinations can be found at https://www.dir.ca.gov/public-works/prevailing-wage.html. In accordance with the provisions of Section 1773.3 of the Labor Code, the District shall provide notice to the Department of Industrial Relations (DIR) of the award of any public works contract subject to the requirements of Chapter 1 of the Labor Code, within five days of the award. The notice shall be transmitted electronically in a format specified by the DIR (see https://www.dir.ca.gov/pwc100ext/) and shall include the name of the contractor, any subcontractor listed on the successful bid, the bid and contract award dates, the contract amount, the estimated start and completion dates, job site location, and any additional information the DIR specifies that aids in the administration and enforcement of this chapter. Any Bidder contractor awarded a public works contract that uses a craft or classification not in the general prevailing wage determinations may be required to pay the wage rate most closely related in the general determinations, effective at the time of the call for bids.

11. Contractors' License Classification. Bidders must possess the following classification(s) of California Contractors License at the time that the Bid Proposal is submitted and at time the Contract for the Work is awarded: **B - General Building.** The Bid Proposal of a Bidder who does not possess a valid and in good standing Contractors' License in the classification(s) set forth above will be rejected for non-responsiveness. Any Bidder not duly and properly licensed is subject to all penalties imposed by law. No payment shall be made for the Work unless and until the Registrar of Contractors verifies to the District that the Bidder awarded the Contract is properly and duly licensed for the Work.

12. Contract Time. Substantial Completion of the Work shall be achieved within the time set forth in Contract Documents after the date for commencement of the Work established in the Notice to Proceed issued by the District. Failure to achieve Substantial Completion within the Contract Time will result in the assessment of Liquidated Damages as set forth in the Contract.

13. Payment Bond; Performance Bond. The successful bidder(s) is required to provide a performance guarantee (performance bond). A continuous performance bond in the amount of 100% of the

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total amount of the award executed by an admitted surety in the State of California and satisfactory to the District and filed with the Manager of Purchasing Services is the preferred form of performance guarantee. Said bond, if required, shall be furnished within ten (10) calendar days from the date of Notice of Award. Failure to promptly submit a performance guarantee when requested may result in the rejection of an otherwise acceptable low bid.

14. Material and Labor Surety. The successful bidder(s) shall be required to provide a payment bond for all public works projects which incur expenses in excess of $25,000. The Contractor, at the time of signing and executing the contract, shall execute and file with the District a payment bond (public works labor and materials bond) to the satisfaction and approval of the District in a sum not less than 100 percent of the total amount payable pursuant to the public works contract. The bond shall be in the form of a bond and not a deposit in lieu of a bond. The bond shall be executed by an admitted surety insurer.

15. Escrow. The successful bidder will be allowed to substitute securities or establish an escrow in lieu of retainage, pursuant to Public Contract Code Section 22300, and as described in the Agreement Between MCOE and Contractor and General Conditions.

Advertisement publication dates: **Wednesday, November 4, 2026, and Wednesday, November 11, 2026**.

[END OF SECTION]

INSTRUCTIONS TO BIDDERS

1. Preparation and Submittal of Bid Proposal.

   1.1. Bid Proposal Preparation. Contractors shall follow the instructions contained within this document. All documents and information requested in this document must be completed using the forms supplied in the Call for Bids except where noted in the instructions. All information required by the bid forms must be completely and accurately provided. Numbers shall be stated in both words and figures where so indicated in the bid forms; conflicts between a number stated in words and in figures are governed by the words. Partially completed Bid Proposals or Bid Proposals not submitted using the bid forms included herein are non-responsive and will be rejected. Bid Proposals not conforming to these Instructions for Bidders and the Notice to Contractors Calling for Bids ("Call for Bids") may be deemed non-responsive and rejected.
      1.1.1. Completed forms shall be without interlineations, alterations or erasures.
      1.1.2. Signatures of all individuals must be in long hand.
      1.1.3. Unsigned bids will not be accepted.

   1.2. Bid Proposal Submittal. The District will receive sealed bids from bidders as stipulated in the Notice to Bidders. Bidders are solely responsible for timely submission of Bid Proposals to the District at the place designated in the Call for Bids.
      1.2.1. Date and Time of Bid Proposal Submittal. All bids must be sealed in an envelope, marked with the name and address of the Bidder, name of the Project, the Project Number and/or bid number, and time of bid opening.
      1.2.2. Bids must be submitted to the District Office, 435 Hillcrest Ave, Pacific Grove, California 93950. All bids shall be on the forms provided by the District and must be received by date and time shown in the Notice to Bidders. *If the bidder hand delivers the Bid, it is the Bidders responsibility to ensure that the office stamps the date and writes the time received on the envelope*.
      1.2.3. Bids must contain all documents as required herein.
      1.2.4. Bidders must submit Bids on the forms provided by the District included in the Bid package. Bids not submitted on the District's required forms shall be deemed nonresponsive and shall not be considered. When additional sheets are necessary, they are to be supplied with the required forms and NOT in lieu of.
      1.2.5. Bid Forms shall not be modified. Bidders shall NOT submit forms that have been reformatted or retyped. Bidder shall NOT make additions or deletions to forms. The District reserves the right to reject any bid containing erasures, deletions, or illegible contents.
      1.2.6. Bidders are advised that on the date that bids are opened, telephones will not be available at the District Office for use by bidders or their representatives

   1.3. The foregoing notwithstanding, whether or not Bid Proposals are opened exactly at the time fixed in the Call for Bids, no Bid Proposals shall be received or considered by the District after it has commenced the public opening and reading of Bid Proposals; Bid Proposals submitted after such time are non-responsive and will be returned to the Bidder unopened.

   1.4. Pacific Grove Unified School District ("District") will evaluate information submitted by the apparent low Bidder and, if incomplete or unsatisfactory to the District, Bidder's bid may be rejected at the sole discretion of the District

2. Bid Security. Each Bid Proposal shall be accompanied by Bid Security in the form of: (i) cash, (ii) a certified or cashier's check made payable to the District or (iii) a Bid Bond, in the form and content attached hereto, in favor of the District executed by the Bidder as a principal and a Surety as surety

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(the "Bid Security") in an amount equal to Ten Percent (10%) of the Bid Proposal amount, inclusive of the price(s) proposed for additive Alternate Bid Items, if any. A Bid Proposal submitted without the required Bid Security is non-responsive and will be rejected. If the Bid Security is in the form of a Bid Bond, the Bidder's Bid Proposal shall be deemed responsive only if the Bid Bond is in the form and content included herein and the Surety is an Admitted Surety Insurer under Code of Civil Procedure §995.120.

3. Documents Accompanying Bid Proposal; Signatures. Documents which must be submitted with each Bid Proposal are identified in the Call for Bids. Any document submitted with a Bid Proposal which is not complete, accurate and executed, as required by each document, will result in the Bid Proposal being deemed non-responsive.

4. Bidder Modifications: Withdrawal or Modification of Submitted Bid Proposal.

   4.1. Bidder Modifications to Bid Forms Prohibited. Modifications by a Bidder to the bid forms which are not specifically called for or permitted may result in the Bidder's Bid Proposal being deemed non-responsive and rejected.

   4.2. Withdrawal or Modification of Submitted Bid Proposal. A Bidder may not withdraw or modify a Bid Proposal submitted to the District except in strict conformity to the following. Bid Proposals may be withdrawn or modified only if: (i) the Bidder submitting the Bid Proposal submits a request for withdrawal or modification in writing to the District; and (ii) the written withdrawal or modification request is actually received by the District prior to the latest date/time for submittal of Bid Proposals. Requests for withdrawal of a Bid Proposal after the public opening of Bid Proposals pursuant to Public Contract Code §5100 et seq. will be considered only if in strict conformity with requirements of Public Contract Code §5100 et seq.

   4.3. Bid Negotiations. A bid response to any specific item of this bid with terms such as "negotiable", "will negotiate" or of similar intent, will be considered as non-responsive to the specific item.

   4.4. Bid Exceptions. All exceptions which are taken in response to this bid must be stated clearly. The taking of bid exceptions or providing false, incomplete, or unresponsive statements may result in the disqualification of the bid. Allowance of exceptions will be determined by the governing board whose decisions shall be final. Any bid exceptions or additional conditions requested after bid closure, which are not detailed within the bid response, may result in disqualification of the bid. No oral or telegraphic modification of any bid submitted will be considered.

5. Erasures; Inconsistent or Illegible Bid Proposals. Bid Proposals must not contain any erasures, interlineations or other corrections unless the same are suitably authenticated by affixing in the margin immediately opposite such erasure, interlineations or correction the surname(s) of the person(s) signing the Bid Proposal. Any Bid Proposal not conforming to the foregoing may be deemed by the District to be non-responsive. If any Bid Proposal or portions thereof, is determined by the District to be illegible, ambiguous or inconsistent, whether by virtue of any erasures, interlineations, corrections or otherwise, the District may reject such a Bid Proposal as being non-responsive.

6. Examination of Site and Contract Documents. Each Bidder shall, at its sole cost and expense, inspect the Site and to become fully acquainted with the Contract Documents and conditions affecting the Work. Failure of a Bidder to receive or examine any of the Contract Documents or to inspect the Site shall not relieve such Bidder from any obligation with respect to the Bid Proposal, or the Work required under the Contract Documents. The District assumes no responsibility or

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liability to any Bidder for, nor shall the District be bound by, any understandings, representations or agreements of the District's agents, employees or officers concerning the Contract Documents or the Work made prior to execution of the Contract which are not in the form of Bid Addenda duly issued by the District. The submission of a Bid Proposal shall be deemed prima facie evidence of the Bidder's full compliance with the requirements of this section.

7. Site Inspection. When a non-mandatory pre-bid conference and/or site visit ("Site Visit") is required as referenced in the Notice to Bidders, then Bidders must submit the Site Visit Certification with their Bid. During site visits or pre-bid conferences no questions will be answered or documented. All Bid Questions resulting from a site visit and/or pre-bid conference must be submitted in writing to jill@ausonio.com. All bid questions must be received 72 hours prior to the bid close to allow sufficient time for the District to answer questions. The bid due date may be extended at the discretion of the District to allow sufficient time to answer bid questions when necessary

8. Withdrawal of Bid Proposal. Any Bidder may withdraw its Bid Proposal only by written request actually received by the District prior to the scheduled closing time for the receipt of Bid Proposals and the District's public opening and reading of Bid Proposals; written requests to withdraw a submitted Bid Proposal received by the District after the scheduled closing time for receipt of Bid Proposals shall not be considered by the District, nor effective to withdraw such Bid Proposal.

9. Agreement and Bonds. The Agreement which the successful Bidder, as Contractor, will be required to execute along with the forms Payment Bond, Performance Bond and other documents and instruments which are required to be furnished are included in the Contract Documents and shall be carefully examined by the Bidder. The required number of executed copies of the Agreement and the form and content of the Performance Bond and the Payment Bond and other documents or instruments required at the time of execution of the Agreement are specified in the Contract Documents.

10. Interpretation of Drawings, Specifications or Contract Documents. Inquiries or clarification requests submitted by a Bidder in strict accordance with the Call for Bids will be responded to in writing by or on behalf of the District. If a response to an inquiry or clarification: (i) includes: interpretation, correction or clarification of the Contract Documents; or (ii) affects requirements of the bidding process or submittal of Bid Proposals, the District will issue addenda to the Contract Documents. A copy of any such addendum will be delivered by fax, email or mail to each Bidder who has obtained a set of the Contract Documents. No person is authorized to render an oral interpretation or correction of any portion of the Contract Documents to any Bidder, and no Bidder is authorized to rely on any such oral interpretation or correction. Failure to timely request interpretation or clarification of any portion of the Contract Documents pursuant to the foregoing is a waiver of any discrepancy, defect or conflict therein. Should a Bidder be in doubt as to the true meaning of any item in the Specifications or should Bidder discover items containing discrepancies or omissions, the District shall be immediately notified. All requests for interpretations must be submitted ninety-six (96) hours before bid opening. All questions must be directed to jill@ausonio.com. The project name and number must be referenced in all communications

11. District's Right to Modify Contract Documents. Before the public opening and reading of Bid Proposals, the District may modify the Work, the Contract Documents, or any portion(s) thereof by the issuance of written addenda disseminated to all Bidders who have obtained a copy of the Specifications, Drawings and Contract Documents pursuant to the Call for Bids.

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12. Addenda. The District will transmit to all prospective Bidders of record such Addenda as District in its discretion considers necessary in response to questions arising at the site visit and/or pre-bid conference. Oral statements shall not be relied upon and will not be binding or legally effective. Addenda issued by the District, if any, shall constitute the sole and exclusive record and statement of the results of bid questions. Such addenda are to be considered as part of the contract documents. No addenda can be issued less than forty-eight (48) hours before bid opening without an accompanying bid time extension. The District reserves the right to extending the bid period. Bidders must acknowledge all addenda if any on the Acknowledgement of Addenda Form and submit the form with their Bid. When Addenda are issued, Bids submitted without the Acknowledgement of Addenda Form shall be deemed non-responsive and will not be considered.

13. Bidders Interested in More Than One Bid Proposal: Non-Collusion Affidavit. No person, firm, corporation or other entity shall submit or be interested in more than one Bid Proposal for the same Work; provided, however, that a person, firm or corporation that has submitted a sub-proposal to a Bidder or who has quoted prices for materials to a Bidder is not disqualified from submitting a sub-proposal, quoting prices to other Bidders or submitting a Bid Proposal for the proposed Work to the District. The form of Non-Collusion Affidavit included in the Contract Documents must be completed and duly executed on behalf of the Bidder; failure of a Bidder to submit a completed and executed Non-Collusion Affidavit with its Bid Proposal will render the Bid Proposal non-responsive.

14. Award of Contract.
    - 14.1. Waiver of Irregularities or Informalities. The District reserves the right to reject any or all bids as the best interests of the District may dictate and, to the extent permitted by law, waive any irregularity in any bid. If there is any reason for believing that collusion exists among the bidders, the District may reject any or all bids. The District may purchase an individual item or combination of items, whichever is in the best interest of the District, provided also that bidder(s) may specify that the District's acceptance of one item shall be contingent upon the District's acceptance of one or more additional items submitted in the same bid. Bids shall remain open and valid and subject to acceptance for ninety (90) calendar days after the bid opening.
    - 14.2. Unbalanced Bid. Bids which are unbalanced may be rejected. For the purposes of this section, an unbalanced bid is a bid that has unit prices based on nominal prices for some items of work and enhanced unit prices for other items of work, and the amount and manner in which the unit prices are distributed is not reflective of the true cost to perform the work. Any unbalanced bid may be rejected by the District whether the result of the unbalanced bid increases the cost of the project to the District or not.
    - 14.3. Award to Lowest Responsive Responsible Bidder. The award of the Contract, if made by the District through action of its Board of Trustees, will be to the responsible Bidder submitting the lowest priced responsive Bid Proposal on the basis of the Base Bid Proposal and Alternate Bid Items, if any, selected in accordance with these Instructions.
    - 14.4. Selection of Alternate Bid Items. If Alternate Bid Items are included in the bidding for the Work, the selection of Alternate Bid Items for inclusion in the scope of the Work of the Contract and for determination of the lowest priced Bid Proposal will be by a "blind-bidder" process. After opening timely submitted Bid Proposals and before the public reading of Bid Proposals, District clerical staff ("Clerical Staff") who are not responsible for selecting Alternate Bid Items for inclusion in the Contract to be awarded will assign each Bidder an alphabetical letter for identification purposes. The Clerical Staff will mask all portions of the Bid Proposal and other documents submitted with Bid Proposals so that the identity of each Bidder is not revealed. The Clerical Staff will maintain a list ("the Bidders List") which

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identifies by name and the alphabetical letter assigned by the Clerical Staff to each Bidder. After completing the Bidders List, the Clerical Staff will publicly read the Bid Proposal amounts of each Bidder for the Base Bid as well as each Alternate Bid Item. In this public reading of Bid Proposals, Bidders will not be identified by name; Bidders will be identified only by alphabetical letter assigned to each Bidder by the Clerical Staff. After the public reading of Bid Proposals, the Clerical Staff will provide the Architect and the District's staff responsible for selection of Alternate Bid Items for inclusion in the Contract to be awarded ("District Project Staff") copies of Bid Proposals with the identities of Bidders masked. At such time as the Architect and the District Project Staff have determined which Alternate Bid Items, if any, are to be included in the scope of Work of the Contract, and the Bidder submitting the lowest, made a determination of which Bidder (by the alphabetical letter assigned by Clerical Staff) submitted the lowest priced Bid Proposal on the basis of the Base Bid Proposal and the combination of Alternate Bid Items, if any, for inclusion in the scope of Work of the Contract the Clerical Staff will provide the District Project Staff with the Bidders List so that the identity of the Bidder submitting the lowest priced Bid Proposal can be identified. Until such time as the District Project Staff have completed review of Bid Proposals and determination of which Alternate Bid Items are to be included in the Work and the scope of the Contract to be awarded, there will be no communication between the Clerical Staff and the Architect or the District Project Staff regarding the identities of Bidders or disclosure of any portion of the Bidders List to the District Project Staff.

14.5. Alternate Bid Items Not Included in Award of Contract. Bidders are referred to the provisions of the Contract Documents permitting the District, during performance of the Work, to add or delete from the scope of the Work any or all of the Alternate Bid Items with the cost or credit of the same being the amount(s) set forth by in the Alternate Bid Items Bid on the Proposal.

14.6. Responsive Bid Proposal. A responsive Bid Proposal shall mean a Bid Proposal which conforms to and complies with requirements of the Bid and Contract Documents.

15. Responsible Bidder.

15.1. Bidder Capacity. Factors affecting the Bidder's capacity to perform and complete the Work will be assessed, including: (i) Bidder's access to labor, materials and other resources necessary to complete the Work; (ii) Bidder's ability to complete the Work within the time established for completion of the Work, or portions thereof; and (iii) Bidder's ability to complete warranty obligations.

15.2. Bidder Character, Integrity. Factors reflecting the character and integrity of the Bidder, including: (i) other public agency finding/determination, within the past five (5) years, that the Bidder is not responsible; (ii) currently debarred from bidding public works projects or debarment from bidding within past five (5) years; and (iii) false claims liability within the past five (5) years under local, state or federal laws.

15.3. Bidder Financial Capability. Factors considered include: (i) sufficiency of the Bidder's financial resources; (ii) whether the Bidder is current in payment of debts and performance of other financial obligations; and (iii) bankruptcy or insolvency proceedings have been instituted within the past five (5) years.

15.4. Bidder Prior Performance. The Bidder's prior performance on prior public works contracts, including without limitation: (i) cost overruns; (ii) compliance with general conditions and other contractual requirements, including schedule development, schedule updates and coordination of labor, material/equipment procurements and subcontractors; (iii) completion

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within allocated time; (iv) submittal of unsubstantiated, unsupported or excessive cost proposals, claims or contract adjustment requests; (iv) completion of a project by a surety; (vi) owner's exercise of default remedies; and (vii) finding or determination by any public agency that the Bidder is not a responsible bidder.

15.5. Safety. Factors include: (i) findings of serious or willful safety violations of safety laws, regulations or requirements by any local, state or federal agency within the past five (5) years; (ii) adequacy and implementation of safety plans, programs for on-site and off-site construction and construction related activities; and (iii) Workers Compensation Insurance EMR rating exceeding 1.25.

15.6. Bonding and Insurance Capacity. The apparent low bidder with cash or cashier's check as bid bond is required to submit a pre-qualification letter from an acceptable surety or cashier's check as performance bond within fourteen (14) calendar days of the bid opening.

15.7. Other. Bidder must have (i) the legal qualifications to contract with the District; and (ii) supplied all information requested by the District in connection with the inquiry concerning responsibility.

16. Subcontractors.

16.1. Designation of Subcontractors; Subcontractors List. Each Bidder shall submit a list of its proposed Subcontractors for the proposed Work as required by the Subletting and Subcontracting Fair Practices Act (California Public Contract Code §§ 4100 et seq.) on the form furnished. The failure of any Bid Proposal to include all information required by the Subcontractors List will result in rejection of the Bid Proposal for non-responsiveness.

16.2. All of the listed subcontractors are required to be registered as a public works contractor with the Department of Industrial Relations pursuant to the Labor Code.

16.3. An inadvertent error in listing the California contractor license number on the Designated Subcontractors List shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the correct contractor's license number is submitted to the MCOE within 24 hours after the bid opening and the corrected number corresponds with the submitted name and location for that subcontractor.

16.4. An inadvertent error listing an unregistered subcontractor shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive provided that any of the following apply:

16.4.1. The subcontractor is registered prior to the bid opening.

16.4.2. The subcontractor is registered and has paid the penalty registration fee within 24 hours after the bid opening.

16.4.3. The subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.

16.5. Work of Subcontractors. All Bidders are referred to the Contract Documents and the notation therein that all Contract Documents are intended to be complementary and that the organization or arrangements of the Specifications and Drawings shall not limit the extent of the Work of the Contract Documents. Accordingly, all Bidders are encouraged to disseminate all of the Specifications, Drawings and other Contract Documents to all persons or entities submitting sub-bids to the Bidder. The omission of any portion or item of Work from the Bid Proposal or from the sub-bidders' sub-bids which is/are necessary to produce the intended results and/or which are reasonably inerrable from the Contract Documents is not a basis for adjustment of the Contract Price or the Contract Time.

16.6. Subcontractor Bonds. Pursuant to California Public Contract Code §4108, if a Bidder requires a bond or bonds of its Subcontractor(s), whether the expense of procuring such bond or bonds are to be borne by the Bidder or the Subcontractor(s), such requirements

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shall be specified in the Bidder's written or published request for sub-bids. Failure of the Bidder to comply with these requirements shall preclude the Bidder from imposing bonding requirements upon its Subcontractor(s) or rejection of a Subcontractor's bid under California Public Contract Code §4108(b).

17. Workers' Compensation Insurance. Pursuant to California Labor Code § 3700, the successful Bidder shall secure Workers' Compensation Insurance for its employees engaged in the Work of the Contract. The successful Bidder shall execute and deliver to the District the form of Workers Compensation Certification included in the Contract Documents concurrently with such Bidder's delivery of the executed Agreement to the District.
18. Bid Security Return. The Bid Security of the Bidders submitting the three lowest priced Bid Proposals, the number being solely at the discretion of the District, will be held by the District for ten (10) days after the period for which Bid Proposals must be held open (which is set forth in the Call for Bids) or until posting by the successful Bidder(s) of the bonds, certificates of insurance required and return of executed copies of the Agreement, whichever first occurs, at which time the Bid Security of such other Bidders will be returned to them.
19. Forfeiture of Bid Security. If the Bidder awarded the Contract fails or refuses to execute the Agreement within Five (5) calendar days from the date of receiving notification that it is the Bidder to whom the Contract has been awarded, the District may declare the Bidder's Bid Security forfeited as damages caused by the failure of the Bidder to enter into the Contract and may thereupon award the Contract for the Work to the responsible Bidder submitting the next lowest Bid Proposal or may call for new bids, in its sole and exclusive discretion.
20. Contractors' License. No Bid Proposal will be considered from a Bidder who, at the time Bid Proposals are opened, is not licensed to perform the Work of the Contract Documents, in accordance with the Contractors' License Law, California Business & Professions Code §§7000 et seq. This requirement is not a mere formality and will not be waived by the District or its Board of Trustees. The required California Contractors' License classification(s) for the Work is set forth in the Call for Bids.
21. Non-Discriminatory Employment Practices. It is the policy of the District that 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, marital status or other legally protected classification. All Bidders agree to comply with the District's non-discrimination policy and all applicable Federal and California anti-discrimination laws including but not limited to the California Fair Employment & Housing Act beginning with California Government Code §§ 12940 et seq. and California Labor Code § 1735. In addition, all Bidders agree to require like compliance by any Subcontractor employed by them on the Work of the Contract.
22. Bidder's Qualifications. Each Bidder shall submit with its Bid Proposal the form of Statement of Bidder's Qualifications, which is included within the Contract Documents. All information required by Statement of Bidder's Qualifications shall be completely and fully provided. Any Bid Proposal not accompanied by the Statement of Bidder's Qualifications completed with all information required and bearing the signature of the Bidder's duly authorized representative under penalty of perjury will render the Bid Proposal non-responsive and rejected. If the District determines that any information provided by a Bidder in the Statement of Bidder's Qualifications is false or misleading or is incomplete so as to be false or misleading, the District may reject the Bid Proposal submitted by such Bidder as being non-responsive. If any response to the "Essential Requirements" section of the Statement of Qualifications is a "not qualified" response, the Bidder's Bid Proposal will be rejected for failure of the Bidder to meet minimum qualifications for the Work.

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23. Substitution of Specified Materials/Equipment. Pursuant to Public Contract Code §3400(a), the District will consider requests of Bidders for the District to consent to substitutions of specified materials/equipment ("Substitution Request") only during the bidding process. The District will not consider or consent to a Substitution Request thereafter.
    23.1. Latest Date/Time for Submittal of Substitution Request. The latest date/time for a Bidder to submit a Substitution Request is the latest date/time for Bidders to submit a Pre-Bid Inquiry, as set forth in the Call for Bids. The District will not consider or respond to a Substitution Request thereafter.
    23.2. Submittal Requirements. Notwithstanding a Bidder's timely submission of a Substitution Request, the District will not consider or respond to a Substitution Request unless all of the following are complied with by the Bidder: (i) the Substitution Request is submitted on a completed form of Submittal Substitution Form (Document 00 60 02), along with at least the following: (i) technical data establishing the equivalency of the proposed substitution with the specified materials/equipment, including without limitation drawings, performance specifications, samples, test reports, and other similar items; (ii) statement by the Contractor that the proposed substitution is in full compliance with the requirements of the Contract Documents and the Laws and that incorporation of the proposed substitution in lieu of the specified materials/equipment will not delay completion of the Work or extend the Contract Time; (iii) list of Subcontractors affected by the Substitution Request; and (iv) if the proposed substitution requires re-design or removal of any Work to accommodate the proposed substitution, drawings and engineering calculations prepared by a California licensed architect or registered engineer for the portions of the Work requiring re-design or removal. Notwithstanding submittal of the foregoing, if requested by the District or Architect, the Bidder submitting a Substitution Request shall submit such additional substantiating data as requested by the District or the Architect.
    23.3. Specified Materials/Equipment. Where multiple manufacturers of specified materials/equipment are identified or there are multiple materials/equipment specified in the Contract Documents, the first named manufacturer or the first named material/equipment is the basis of the design of the Work; use of any other manufacturer or material/equipment is deemed a substitution which can be furnished and installed by the successful Bidder only if the District consents thereto in accordance with these provisions.
    23.4. District Review and Notice of Consent. Timely submitted Substitution Requests will be reviewed by the District and Architect to determine the equivalency of the proposed substitution with the specified materials/equipment. The District's decision to grant, deny or condition consent to substitute specified materials/equipment is final and not subject to further review or appeal. If the District consents to or conditionally consents to substitution of specified materials/equipment, the District will issue an Addendum identifying the specified materials/equipment and the alternative materials/equipment consent to or conditionally consented to by the District.
    23.5. Bidder Responsibilities. If the District consents to or conditionally consents to substituted materials/equipment for those originally specified (Accepted Substitution) and a Bidder elects to incorporate any Accepted Substitution into its Bid Proposal, the Bidder shall be responsible for identifying in the Subcontractors List the Subcontractor(s) necessary to complete installation of the Accepted Substitution.
24. Job Walk. The District will conduct a Job Walk at the time(s) and place(s) designated in the Call for Bids. The District may, in its sole and exclusive discretion, elect to conduct one or more Job Walk(s) in addition to that set forth in the Call for Bids, in which event the District shall notify all Bidders who have theretofore obtained the Contract Documents pursuant to the Call for Bids of any such

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additional Job Walk. If the District elects to conduct any Job Walk in addition to that set forth in the Call for Bids, the District shall, in its notice of any such additional Job Walk(s), indicate whether Bidders' attendance at such additional Job Walk(s) is/are mandatory. If attendance at the Job Walk is indicated in the Call for Bids as being mandatory, the failure of any Bidder to have its authorized representative present at the entirety of the Job Walk will render the Bid Proposal of such Bidder to be non-responsive. Where the Job Walk is mandatory, a Bidder may have more than one authorized representative and/or representatives of its Subcontractors present at the Job Walk; provided, however that attendance by representatives of the Bidder's Subcontractors without attendance by a representative of the Bidder shall not be sufficient to meet the Bidder's obligations hereunder and will render the Bid Proposal of such Bidder to be non-responsive. The District will reject the Bid Proposal of a Bidder who obtains the Bid and Contract Documents after the date of the Mandatory Job Walks set forth in the Call for Bids unless a Job Walk is requested by such Bidder and a Job Walk is conducted by the District in accordance with the following provisions. The District may, in its sole and exclusive discretion, conduct such requested Job Walk taking into consideration factors such as the time remaining prior to the scheduled opening of Bid Proposals. Any such requested Job Walk will be conducted only upon the requesting Bidder's agreement to reimburse the District for the actual and/or reasonable costs for the District's staff and its agents and representatives in arranging for and conducting such additional Job Walk.

25. Public Records. Bid Proposals and other documents responding to the Call for Bids become the exclusive property of the District upon submittal to the District. At such time as the District issues the Notice of Intent to award the Contract pursuant to these Instructions for Bidders, all Bid Proposals and other documents submitted in response to the Call for Bids become a matter of public record and shall be thereupon be considered public records, except for information contained in such Bid Proposals deemed to be Trade Secrets (as defined in California Civil Code § 3426.1) and information provided in response to the Statement of Qualifications. A Bidder that indiscriminately marks all or most of its Bid Proposal as exempt from disclosure as a public record, whether by the notations of "Trade Secret," "Confidential," "Proprietary," or other similar notations, may result in, or render, the Bid Proposal non-responsive and rejected. The District is not liable or responsible for the disclosure of such records, including those exempt from disclosure if disclosure is deemed required by law, by an order of Court, or which occurs through inadvertence, mistake or negligence on the part of the District or its officers, employees or agents. At such time as Bid Proposals are deemed a matter of public record, pursuant to the above, any Bidder or other party shall be afforded access for inspection and/or copying of such Bid Proposals, by request made to the District in conformity with the California Access to Public Records Act, California Government Code §§6250, et. seq. If the District is required to defend or otherwise respond to any action or proceeding wherein request is made for the disclosure of the contents of any portion of a Bid Proposal deemed exempt from disclosure hereunder, the Bidder submitting the materials sought by such action or proceeding agrees to defend, indemnify and hold harmless the District in any action or proceeding from and against any liability, including without limitation attorneys' fees arising therefrom. The party submitting materials sought by any other party shall be solely responsible for the cost and defense in any action or proceeding seeking to compel disclosure of such materials; the District's sole involvement in any such action shall be that of a stakeholder, retaining the requested materials until otherwise ordered by a court of competent jurisdiction.
26. Drug Free Workplace Certificate. In accordance with California Government Code §§ 8350 et seq., the Drug Free Workplace Act of 1990, the successful Bidder will be required to execute a Drug Free Workplace Certificate concurrently with execution of the Agreement. The successful Bidder will be

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required to implement and take the affirmative measures outlined in the Drug Free Workplace Certificate and in California Government Code §§8350 et seq. Failure of the successful Bidder to comply with the measures outlined in the Drug Free Workplace Certificate and in California Government Code §§ 8350 et seq. may result in penalties, including without limitation, the termination of the Agreement, the suspension of any payment of the Contract Price otherwise due under the Contract Documents and/or debarment of the successful Bidder.

27. Notice of Intent to Award Contract. Following the public opening and reading of Bid Proposals, the District will issue a Notice of Intent to Award the Contract, identifying the Bidder to whom the District intends to award the Contract and the date/time/place of the District's Board of Trustees meeting at which award of the Contract will be considered.
28. Bid Protest.
    - 28.1. Submittal of Bid Protest. Any Bid protest by any Bidder regarding any other Bid must be submitted in writing to the District, before 5:00 p.m. of the FIFTH (5TH) business day following Bid opening.
        - 28.1.1. Only a Bidder who has submitted a Bid, and who could be awarded the Contract if the bid protest is upheld, is eligible to submit a Bid protest. Subcontractors are not eligible to submit Bid protests. A Bidder may not rely on the bid protest submitted by another Bidder.
        - 28.1.2. A Bid protest must contain a complete statement of any and all bases for the protest and all supporting documentation. Materials submitted after the Bid protest deadline will not be considered.
        - 28.1.3. The protest must refer to the specific portions of all documents that form the basis for the protest.
            - 28.1.3.1. Without limitation to any other basis for protest, an inadvertent error in listing the California contractor's license number on the Designated Subcontractors List shall not be grounds for filing a Bid protest or grounds for considering the Bid nonresponsive if the correct contractor's license number is submitted to the District within 24 hours after the bid opening and the corrected number corresponds with the submitted name and location for that subcontractor.
            - 28.1.3.2. Without limitation to any other basis for protest, an inadvertent error listing an unregistered subcontractor shall not be grounds for filing a Bid protest or grounds for considering the bid nonresponsive provided that any of the following apply:
            - 28.1.3.3. The Subcontractor is registered prior to the Bid opening.
            - 28.1.3.4. The Subcontractor is registered and has paid the penalty registration fee within 24 hours after the Bid opening.
            - 28.1.3.5. The subcontractor is replaced by another registered Subcontractor pursuant to Public Contract Code section 4107.
        - 28.1.4. The protest must include the name, address and telephone number of the person representing the protesting party.
        - 28.1.5. The party filing the protest must concurrently transmit a copy of the protest and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders or proposers who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
        - 28.1.6. The procedure and time limits set forth in this paragraph are mandatory and are each Bidder's sole and exclusive remedy in the event of Bid protest. Failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings.

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28.2. Any Bidder submitting a Bid Proposal to the District may file a protest of the District's intent to award the Contract provided that all of the following are complied with: (i) the bid protest is in writing; (ii) the bid protest is filed and received by the District's Vice-President, Administrative Services not more than five (5) calendar days after the bid opening; and (iii) the written bid protest sets forth, in detail, all grounds for the bid protest, including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the bid protest; any matters not set forth in the written bid protest shall be deemed waived. All factual contentions must be supported by competent, admissible and creditable evidence. Any bid protest not conforming to the foregoing shall be rejected by the District as invalid.

28.3. District Review and Disposition of Bid Protest. Provided that a bid protest is filed in strict conformity with the foregoing, the District's Vice-President, Administrative Services or such individual(s) as may be designated by him/her ("Designee") will review and evaluate the basis of the bid protest. The District's Vice-President, Administrative Services or Designee shall provide the Bidder submitting the bid protest with a written statement concurring with or denying the bid protest (Bid Protest Response). The Bid Protest Response is deemed the final action of the District and not subject to appeal or reconsideration by any other employee or officer of the District or the Board of Trustees of the District. The issuance of the Bid Protest Response by the District's Vice-President, Administrative Services or the Designee is an express condition precedent to the institution of any legal or equitable proceedings relative to the bidding process, the District's intent to award the Contract, the District's disposition of any bid protest or the District's decision to reject all Bid Proposals. If any such legal or equitable proceedings are instituted and the District is named as a party thereto, the prevailing party(ies) shall recover from the other party(ies), as costs, all attorneys' fees and costs incurred in connection with any such proceeding, including any appeal arising therefrom. Each Bidder shall acknowledge in the Bid Proposal that the foregoing is a binding attorneys' fee agreement pursuant to Civil Code §1717 and shall be enforceable against the Bidder and the District.

[END OF SECTION]

BID PROPOSAL

Project: Pacific Grove Adult School & Co-op Preschool Site Improvements

Bidder Name	_____	
Bidder Representative(s)	_____ Name and Title _____ Name and Title	
Bidder Representative(s) Contact Information	Email Address(es) _____ _____	Phone/Fax (_____) _____ Telephone (_____) _____ Fax
Bidder Mailing Address	_____ Address _____ City/State/Zip Code	
California Contractors' License	_____ Number _____ Classification(s) and Expiration Date	

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1. Base Bid Proposal.

1.1. Base Bid Proposal Amount. The undersigned Bidder proposes and agrees to perform the Contract including, without limitation, providing and furnishing any and all of the labor, materials, tools, equipment and services necessary to perform all obligations under the Contract Documents and to complete the Work required for the sum of:

		,				,				.		

_____ Dollars
(Bid Proposal Amount in Words)

1.2. Per Diem Compensable Delay Rate. The undersigned Bidder proposes a daily rate of compensation for general overhead and administrative costs/expenses associated with or arising out of Compensable Delays, if any.

		,				.		

_____ Dollars
(Proposed Per Diem Compensation Delay Rate in Words)

1.3. Thirty Day Multiplier to Per Diem Compensable Delay Rate. The foregoing proposed per diem compensable delay rate (paragraph 1.2) multiplied by thirty (30) days is the sum of:

		,				.		

_____ Dollars
(Proposed Per Diem Compensation Delay Rate x 30 in Words)

1.4. Total Bid Amount **(Basis of Award)**. The Total Bid Amount is the sum of the Base Bid Proposal Amount (Paragraph 1.1) and the Per Diem Compensable Delay Rate with the thirty (30) day multiplier (Paragraph 1.3), which is:

		,				,				.		

_____ Dollars
(Total Bid Amount in Words)

1.5. Acknowledgment of Bid Addenda. The Bidder confirms that this Bid Proposal incorporates and is inclusive of, all items or other matters contained in Bid Addenda, if any, issued by or on behalf of the District.

_____ Addenda Nos. _____ received, acknowledged
(initial) and incorporated into this Bid Proposal.

1.6. Alternate Bid Items. The Bidder's proposed pricing for each Alternate Bid Item, if any, is set forth in the accompanying form of Alternate Bid Items Proposal. If the District has included Alternate Bid Items for pricing by Bidders, failure of a Bidder to propose pricing for each Alternate Bid Item set forth in the accompanying Alternate Bid Items Proposal will result in the Bid Proposal being deemed non-responsive and rejected.

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2. Documents Accompanying Bid Proposal. The Bidder has submitted with this Bid Proposal the following: (i) Bid Security; (ii) Subcontractors List; (iii) Statement of Qualifications; (iv) Non-Collusion Affidavit; (v) Drug-Free Workplace Certification; and (vi) Certificate of Workers Compensation. The Bidder acknowledges that if this Bid Proposal and the foregoing documents are not fully in compliance with applicable requirements set forth in the Call for Bids, the Instructions for Bidders and in each of the foregoing documents, the Bid Proposal may be rejected as non-responsive.

3. Award of Contract. If the Bidder submitting this Bid Proposal is awarded the Contract, the undersigned will execute and deliver to the District the Agreement in the form attached hereto within Seven (7) calendar days after notification of award of the Contract. Concurrently with delivery of the executed Agreement to the District, the Bidder awarded the Contract shall deliver to the District: (i) Certificates of Insurance evidencing all insurance coverages required under the Contract Documents; (ii) Performance Bond; (iii) Labor and Material Payment Bond; (iv) Certificate of Workers' Compensation Insurance; (v) Drug-Free Workplace Certificate; and (vi) Criminal Records Check Certification. Failure of the Bidder awarded the Contract to strictly comply with the preceding may result in the District's rescinding award of the Contract and/or forfeiture of the Bidder's Bid Security. In such event, the District may, in its sole and exclusive discretion elect to award the Contract to the responsible Bidder submitting the next lowest priced Bid Proposal or to reject all Bid Proposals.

4. Contractors' License. The Bidder certifies that: (i) it is possesses a valid and in good standing Contractors' License, in the necessary class(es), for performing the Work as set for in the Call for Bids; (ii) that such license shall be in full force and effect throughout the duration of the performance of the Work; and (iii) that all Subcontractors providing or performing any portion of the Work are properly licensed to perform their respective portions of the Work at the time of submitting this Bid Proposal and will remain so properly licensed at all times during their performance of the Work.

5. Agreement to Bidding Requirements and Attorneys' Fees. The undersigned Bidder acknowledges and confirms its receipt, review and agreement with the contractual requirements set forth in this Bid Proposal and the Contract Documents. By executing this Bid Proposal herein below, the Bidder expressly acknowledges and agrees that if the Bidder institutes any legal or equitable proceedings in connection with this Bid Proposal and the District is named as a party thereto, the prevailing party(ies) shall recover from the other party(ies), as costs, all attorneys' fees and costs incurred in connection with any such proceeding, including any appeal arising therefrom. This provision shall constitute a binding attorneys' fee agreement in accordance with and pursuant to California Civil Code §1717 which shall be enforceable against the Bidder and the District. This attorneys' fee provision shall be solely limited to legal or equitable proceedings arising out of a bid protest or the bidding process and shall not extend to or have any force and effect on the Contract for the Work or to modify the terms of the Contract Documents for the Work.

6. Acknowledgment and Confirmation. By submitting a Bid, bidders are acknowledging that they have fully examined the bid requirements, clearly understand the scope of work, logistical requirements and have had any bid questions sufficiently answered. Bidders must complete the tasks listed below as a condition of bidding. Submission of a Bid shall constitute the Bidder's express representation to District that Bidder has fully completed the following.

    6.1. Bidder has visited the site, if required, and has examined to the extent necessary to understand the Work, the project and work sites, location, and conditions, including as-built conditions, and all local conditions. Understands and has knowledge of applicable federal, state and local laws, and regulations that in any manner may affect site mobilization, cost,

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progress, performance, or timely completion of the Work or that relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by bidder and safety precautions and programs incident thereto;

6.2. Bidder has conducted or obtained and has understood all examinations, investigations, explorations, tests, reports, and studies that pertain to the subsurface conditions, as-built conditions, underground utilities, and all other physical conditions at or adjoining the Work Site or otherwise that may affect the site mobilization, cost, progress, performance, or timely completion of the Work, as Bidder considers necessary for the performance of the Work at the Contract Sum, within the Contract Time, and in accordance with the other terms and conditions of Contract Documents, including specifically the provisions of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies, or similar information or data are or will be required by the Bidder for such purposes;

6.3. The Bidder has full knowledge of the results of all such observations, examinations, investigations, explorations, tests, reports, and studies as related to the terms and conditions of the Contract Documents;

6.4. The Bidder has given the District prompt written notice of all perceived conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and the actual conditions, and the written resolution(s) thereof by the District is/are acceptable to the Bidder;

6.5. Bidder has made a complete disclosure in writing to the District of all facts bearing upon any possible interest, direct or indirect, that the Bidder believes any representative of the District or other officer, or employee of the District presently has or will have in this Contract or in the performance thereof or in any portion of the profits thereof;

6.6. The Bidder must, prior to bidding, perform the work, investigations, research, and analysis required by this document and that Bidder represented in its Bid Form and Proposal and the Contract that it performed prior to bidding. The Contractor under this Contract is charged with all information and knowledge that a reasonable bidder would ascertain from having performed this required work, investigation, research, and analysis. Bid prices must include entire cost of all work “incidental” to completion of the Work.

6.7. Conditions Shown on the Contract Documents: Information as to underground conditions, as-built conditions, or other conditions or obstructions, indicated in the Contract Documents, e.g., on Drawings or in Specifications, has been obtained with reasonable care, and has been recorded in good faith. However, the District only warrants, and the Contractor may only rely on the accuracy of limited types of information.

6.8. As to above-ground conditions or as-built conditions shown or indicated in the Contract Documents, there is no warranty, express or implied, or any representation express or implied, that such information is correctly shown or indicated. This information is verifiable by independent investigation and the Contractor is required to make such verification as a condition to bidding. In submitting its Bid, Contractor shall rely on the results of its own independent investigation. In submitting its Bid, Contractor shall not rely on District-supplied information regarding above-ground conditions or as built conditions.

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6.9. As to any subsurface condition shown or indicated in the Contract Documents, Contractor may rely only upon the general accuracy of actual reported depths, actual reported character of materials, actual reported soil types, actual reported water conditions, or actual obstructions shown or indicated. The District is not responsible for the completeness of such information for bidding or construction; nor is the District responsible in any way for any conclusions or opinions that the Contractor has drawn from such information; nor is the District responsible for subsurface conditions that are not specifically shown (for example, District is not responsible for soil conditions in areas adjoining areas where a subsurface condition is shown).

6.10. Conditions Shown in Reports and Drawings Supplied for Informational Purposes: Reference is made to the document entitled Geotechnical Data, and the document entitled Existing Conditions, for identification of:

6.11. Subsurface Conditions: Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that have been utilized by Architect in preparing the Contract Documents; and

6.12. Physical Conditions: Those drawings of physical conditions in or relating to existing surface or subsurface structures at or adjoining to the Site that has been utilized by Architect in preparing the Contract Documents.

6.13. These reports and drawings are not Contract Documents and, except for any “technical” data regarding subsurface conditions specifically identified in Geotechnical Data and Existing Conditions, and underground facilities data, the Contractor may not in any manner rely on the information in these reports and drawings. Subject to the foregoing, the Contractor must make its own independent investigation of all conditions affecting the Work and must not rely solely on information provided by District.

By: _____
(Signature of Bidder’s Authorized Officer
or Representative)

_____
(Typed or Printed Name)

Title: _____

[END OF SECTION]

SUBCONTRACTORS LIST

Project ("the Work")	**Name**
Bidder Name	_____
Bidder's Representative Signature	_____ (Signature) _____ (Typed or Printed Name)

DUPLICATE THIS PAGE AS NECESSARY FOR LISTING ADDITIONAL SUBCONTRACTORS

Licensed Name of Subcontractor	Address of Office, Mill or Shop (City and State)	Portion of Work	CSLB License Number	DIR Number

[END OF SECTION]

STATEMENT OF QUALIFICATIONS

Each Bidder must complete and submit this Qualifications Statement with the Bidder's Bid Proposal. The Qualifications Statement must be executed under penalty of perjury by an authorized employee or officer of the Bidder. All portions of the Qualifications Statement must be completed failure to do so will render the Bid Proposal non-responsive and rejected. If a Bidder's response to any Essential Requirement results in a "Not Qualified" response, the Bid Proposal of such a Bidder will be rejected for failure of the Bidder to meet Essential Requirements for the Project.

Bidder Name: _____

1. Bidder Information

1.1. Contact Information.

Mailing Address	_____ Street Address _____ City, State, Zip Code
Physical Location (if different from mailing address)	_____ Street Address _____ City, State, Zip Code
Telephone/Fax	(_____) _____ Telephone (_____) _____ Fax

1.2. Bidder Contacts.

Name	_____
Contact Information	(_____)_____ Telephone (_____)_____ Fax _____ Email

1.3. California Contractors' License.

License Number(s)	_____
License Classification(s)	_____
RMO/RME	_____
Expiration Date(s)	_____

1.4. Bidder Form of Entity.

- ☐ Corporation
- ☐ General Partnership
- ☐ Limited Partnership
- ☐ Limited Liability Company
- ☐ Limited Liability Partnership
- ☐ Joint Venture
- ☐ Sole Proprietorship

1.5. If answer to 1.4 is Corporation

Date of Incorporation	_____
State of Incorporation	_____
President's Name	_____
Vice President's Name	_____
Secretary's Name	_____
Treasurer's Name	_____

1.6. If answer to 1.4 is Individual or Partnership

Date of Organization	_____
General or Limited Partnership	_____
Name and address of all partners:	_____
	_____
	_____
	_____

1.7. If answer to 1.4 is other than a Corporation or Partnership

Describe Organization:	_____
Name and title of all principals:	_____
	_____
	_____
	_____

1.8. Number of years as a vendor of the product/services required in this project? _____

[CONTINUED NEXT PAGE]

2. Insurance and Bonding.

Commercial General Liability Insurance	Insurer: _____ Policy No.: _____ Broker: _____ Coverage Limits: Per Occurrence: _____ Dollars ($_____) Aggregate: _____ Dollars ($_____)
Bid, Performance and Labor & Materials Payment Bond	Surety: _____ Surety Broker: _____ _____ (Surety Broker Contact Name) _____ (Street Address) _____ (City, State & Zip Code) (_____) _____ (_____) _____ Telephone Fax _____ (Email address) Bonding Capacity: Maximum Per Project: _____ Dollars ($_____) Maximum All Projects _____ Dollars ($_____)
Workers Compensation Insurance	Insurer: _____ Policy No. _____ Broker: _____ Current EMR _____

3. Revenue. Complete the following for the Bidder's construction operations; if any portion of the revenue disclosed is generated by non-construction operations or activities, the Bidder must identify the portion of revenue attributed to construction operations and generally describe business activities of the Bidder that generates non-construction operations related revenue.

Calendar Year/ Fiscal Year	Annual Gross Revenue	Average Dollar Value of all Contracts	Dollar Value of Largest Contract

[CONTINUED NEXT PAGE]

4. References.

Community College or K-12 School District Owner References		
District Name	Address	Contact Person & Telephone No.

Architect References (Architect references must have been the Architect of Record for Community College or K-12 School District Projects)		
Firm Name	Address	Contact Person & Telephone No.

DSA Project Inspector (Project Inspector references must have been the Project Inspector for Community College or K-12 School District Projects)		
Firm Name/Inspector Name	Address	Address Contact Person & Telephone No.

5. Essential Requirements. A Bidder will not be deemed qualified and if the response to any of the following results in a "not qualified" response; the Bid Proposal of such a Bidder will be rejected for failure of the Bidder to meet Essential Requirements for the Project.

5.1. Bidder possesses a valid and currently in good standing California Contractors' license of the trade category(ies) for the Project as set forth in the Notice to Contractors.

☐ Yes ☐ No (Not Qualified)

5.2. Bidder has a current commercial general liability insurance policy with coverage limits which meet or exceed the policy limits required for the Project.

☐ Yes ☐ No (Not Qualified)

5.3. Bidder has a current workers' compensation insurance policy as required by the Labor Code or is legally self-insured pursuant to Labor Code §3700.

☐ Yes ☐ No (Not Qualified)

☐ Bidder is exempt from this requirement, because it has no employees

[CONTINUED NEXT PAGE]

5.4. The Bidder's current per project bonding capacity is at least One Million Dollars ($1,000,000.00).
☐ Yes ☐ No (Not Qualified)

5.5. The Bidder's current aggregate bonding capacity for all projects is at least Two Million Dollars ($2,000,000.00).
☐ Yes ☐ No (Not Qualified)

5.6. Bidder is ineligible or debarred from submitting bid proposals for public works projects or public works contracts pursuant Labor Code §1777.1 or Labor Code §1777.7?
☐ Yes (Not Qualified) ☐ No

5.7. Within the past five (5) years a public agency has determined that the Bidder, or any predecessor to the Bidder, is not a "responsible" bidder for a public works project or a public works contract?
☐ Yes (Not Qualified) ☐ No

5.8. Within the past seven (7) years, the Bidder or any, or any predecessor to the Bidder, has agreed with any public agency, in writing or verbally, not to submit bid proposals, proposals, quotes or other responses to any procurement of the public agency for construction, construction management or facilities maintenance/improvements services?
☐ Yes (Not Qualified) ☐ No

5.9. During the past five (5) years, the Bidder or any predecessor to the Bidder, or any of the equity owners of the Bidder been convicted of a federal or state crime involving fraud, theft, or any other act of dishonesty.
☐ Yes (Not Qualified) ☐ No

5.10. During the past five (5) years a Surety has completed any project or the Bidder's obligations under a construction contract.
☐ Yes (Not Qualified) ☐ No

5.11. During the past five (5) years the Bidder been declared in default under a construction contract to which the Bidder was a party.
☐ Yes (Not Qualified) ☐ No

5.12. The Bidder's Worker's Compensation Insurance ***prior five (5) year average*** Experience Modification Rating ("EMR") rating over the past five (5) years is more than 1.25.
☐ Yes (Not Qualified) ☐ No

5.13. The Bidder's Worker's Compensation Insurance ***current*** average Experience Modification Rating ("EMR") rating is more than 1.25.
____ Yes (Not Qualified) ☐ No

5.14. CAL OSHA or OSHA has cited and assessed penalties against the Bidder for "serious," "willful" or "repeat" violations of its safety or health regulations in the past five (5) years?
☐ Yes (Not Qualified) ☐ No

6. Performance/Experience. A Bidder must receive a minimum of 50 out of a possible 80 points in this section to be deemed "Qualified". The Bid Proposal of a Bidder who is not deemed "Qualified" will be rejected for non-responsiveness.

[CONTINUED NEXT PAGE]

6.1. Within the past two (2) years has your organization performed work on public works projects where the value of your work was at least Five Hundred Thousand Dollars ($500,000.00)?

☐ Yes ☐ No

If yes, number of such projects: _____

Yes 1-5 Projects:	3 points
Yes 6-10 Projects:	5 points
Yes 10 or more Projects	10 points
No	0 points

6.2. Has a complaint ever been filed against your organization's California Contractors' License with the California Contractors' State License Board?

☐ Yes ☐ No

Yes:	0 points
No:	10 points

6.3. Has your organization ever asked to be relieved of or refused to sign a contract for construction services awarded to it?

☐ Yes ☐ No

Yes:	0 points
No:	5 points

6.4. Has your organization ever failed to complete a construction contract?

☐ Yes ☐ No

Yes:	0 points
No:	10 points

6.5. Has your organization ever failed to complete a public works construction contract within the authorized time?

☐ Yes ☐ No

Yes:	0 points
No:	10 points

6.6. Has your organization ever been assessed and paid liquidated damages under a construction contract with either a public or private owner?

☐ Yes ☐ No

Yes:	0 points
No:	10 points

6.7. Has your organization or any principal of your organization ever been subject to a fine, penalty or other assessment for violating any federal, state or local law, rule or regulation relating to a construction project?

☐ Yes ☐ No

Yes:	0 points
No:	5 points

6.8. Has any insurance carrier, for any policy of insurance, refused to renew an insurance policy for your organization?

☐ Yes ☐ No

If yes, on how many occasions? _____

No occasions - 10 points
1 occasion - 3 points
More than 1 occasion - 0 points

[CONTINUED NEXT PAGE]

6.9. During the past five (5) years, has a surety declined to issue a surety bond for your organization in connection with a construction project?

☐ Yes ☐ No

If yes, on how many occasions? _____

No occasions 10 points
1 occasion 3 points
More than 1 occasion 0 points

7. Safety. Bidder must receive a minimum of 25 points out of a possible 35 points in this section.

7.1. Has CAL OSHA cited and assessed penalties against your firm for any "serious," "willful" or "repeat" violations of its safety or health regulations in the past five (5) years?

☐ Yes ☐ No

1 or less occasion - 5 points
2 occasions - 3 points
More than 2 occasions - 0 points

7.2. Has the Federal Occupational Safety and Health Administration ("OSHA") cited and assessed penalties against your firm in the past five (5) years?

☐ Yes ☐ No

1 or less occasion - 5 points
2 occasions - 3 points
More than 2 occasions - 0 points

7.3. Has the EPA, any Air Quality Management District or any Regional Water Quality Control Board cited and assessed penalties against either your firm or the owner of a project on which your firm was the contractor in the past five years?

☐ Yes ☐ No

1 or less occasion - 5 points
2 occasions - 3 points
More than 2 occasions - 0 points

7.4. How often do you require documented safety meetings to be held for construction employees and field supervisors during the course of a project?

_____

Once a week or more often - 5 points
Any other answer - 0 points

7.5. List your firm's Workers' Compensation Insurance Experience Modification Rate (EMR) for each of the past three (3) premium years: (Note: An Experience Modification Rate is issued to your firm annually by your workers' compensation insurance carrier).

Current year: _____
Previous year: _____
Year prior to previous year: _____

Three-year average EMR of .95 or less - 5 points
Three-year average EMR of more than .95 but no more than 1.1 - 3 points
Three-year average EMR or more than 1.1and less than 1.25- 0 points

[CONTINUED NEXT PAGE]

7.6. Has there been more than one occasion during the last five (5) years on which your firm was required to pay either back wages or penalties for your own firm's failure to comply with California's prevailing wage laws? (Note: This question refers only to your own firm's violation of prevailing wage laws, not to violations of the prevailing wage laws by a subcontractor to your firm.)

☐ Yes ☐ No

2 or less occasions - 5 points
3 occasions - 3 points
More than 3 occasions - 0 points

7.7. At any time during the last five (5) years, has your firm been found to have violated any provision of California apprenticeship laws or regulations, or the laws pertaining to use of apprentices on public works?

☐ Yes ☐ No

If yes, provide the date(s) of such findings, and attach copies of the Department's final decision(s): _____

2 or less occasions - 5 points
3 occasions - 3 points
More than 3 occasions - 0 points

8. Legal/Administrative Proceedings and Surety. If the response to any of the following questions is a "yes" complete and accurate details must be attached; failure to attach such details will render the Bid Proposal of the Bidder to be non-responsive and rejected. Responses to the following will be used to evaluate Bidder responsibility.

8.1. Have legal, arbitration or administrative proceedings been brought by construction project owner against the Bidder or any of the principals, officers or equity owners of the Bidder within the past ten (10) years which arise out of or are related to any construction project?

☐ Yes ☐ No

If "yes", on a separate attachment, include the following details: (i) name of party initiating proceedings against the Bidder; (ii) contact name, address, phone and email address of party initiating proceedings; (iii) circumstances resulting in the initiation of proceedings; (iv) amount or other relief demanded; and (v) outcome of proceedings.

8.2. Has the Bidder brought any legal, arbitration or administrative proceedings against the owner of a construction project within the past ten (10) years which arise out of or are related to the construction project, excluding claims for personal injury?

☐ Yes ☐ No

If "yes," on a separate attachment, include the following details: (i) name of owner; (ii) contact name, address, phone and email address of contact person for owner; (iii) circumstances resulting in the initiation of proceedings; (iv) amount or other relief demand; and (v) outcome of proceedings.

8.3. Has the Bidder brought any legal, arbitration or administrative proceedings against the architect or design professional for a construction project within the past ten (10) years which arise out of or are related to the construction project?

☐ Yes ☐ No

If "yes", on a separate attachment, include the following details: (i) name of architect; (ii) contact name, address, phone and email address of contact person for architect or design professional; (iii) circumstances resulting in the initiation of proceedings; (iv) amount or other relief demand; and (v) outcome of proceedings.

[CONTINUED NEXT PAGE]

8.4. Has the Bidder brought any legal, arbitration or administrative proceedings against the construction/project manager for a construction project within the past ten (10) years which arise out of or are related to the construction project?

☐ Yes ☐ No

If "yes", on a separate attachment, include the following details: (i) name of construction/project manager; (ii) contact name, address, phone and email address of contact person for construction/project manager; (iii) circumstances resulting in the initiation of proceedings; (iv) amount or other relief demand; and (v) outcome of proceedings.

8.5. At any time during the past five (5) years, has any surety company made any payments on behalf the Bidder to satisfy any claims made against a bid, performance or payment bond issued to the Bidder, in connection with a construction project, either public or private?

☐ Yes ☐ No

If "yes", on a separate attachment set forth: (i) the amount of each such claim; (ii) the name and telephone number of the claimant; (iii) the date of the claim; (iv) the grounds for the claim; (v) the present status of the claim; (vi) the date of resolution of such claim if resolved; (vii) the method by which such was resolved if resolved; (viii) the nature of the resolution; and (ix) the amount, if any, at which the claim was resolved.

8.6. During the past five (5) years, has a surety declined to issue a surety bond for your organization in connection with a construction project?

☐ Yes ☐ No

If "yes" on a separate attachment provide details of the denial of bond coverage and the name of the company or companies which denied coverage.

8.7. At any time during the past five (5) years, has any surety company made any payments on behalf the Bidder to satisfy any claims made against a bid, performance or payment bond issued to the Bidder, in connection with a construction project, either public or private?

☐ Yes ☐ No

If "yes", on a separate attachment set forth: (i) the amount of each such claim; (ii) the name and telephone number of the claimant; (iii) the date of the claim; (iv) the grounds for the claim; (v) the present status of the claim; (vi) the date of resolution of such claim if resolved; (vii) the method by which such was resolved if resolved; (viii) the nature of the resolution; and (ix) the amount, if any, at which the claim was resolved.

8.8. In the last five years has any insurance carrier, for any policy of insurance, refused to renew the insurance policy for your firm?

☐ Yes ☐ No

[CONTINUED NEXT PAGE]

8.9. Within the past five (5) years, has the Bidder been required to pay either back wages or penalties for the Bidder's failure to comply with California prevailing wage laws? This question refers only to the Bidder's violation of prevailing wage laws, not to violations of the prevailing wage laws by a subcontractor.

☐ Yes ☐ No

If "yes," on a separate attachment: (i) describe each instance of prevailing wage rate violation; (ii) identify the project on which a prevailing wage rate violation occurred; (iii) the public agency owner of the project; (iv) the number of employees affected by each prevailing wage rate violation; and (v) amount of back wages and penalties the Bidder was required to pay.

8.10. Within the past five (5) years, has there been more than one occasion in which the Bidder was penalized or required to pay back wages for failure to comply with the Federal Davis-Bacon prevailing wage requirements?

☐ Yes ☐ No

If "yes," on a separate attachment: (i) describe each instance of prevailing wage rate violation; (ii) identify the project on which a prevailing wage rate violation occurred; (iii) the number of employees affected by each prevailing wage rate violation; and (iv) amount of back wages and penalties the Bidder was required to pay.

8.11. Within the past five (5) years, has the Bidder been found to have violated any provision of California apprenticeship laws or regulations, or the laws pertaining to use of apprentices on public works projects?

☐ Yes ☐ No

If "yes", provide the date(s) of such findings, and attach copies of the Apprenticeship Counsel's final decision(s).

9. Project Experience.

9.1. Similar Completed Projects. Provide the following for three (3) projects the Bidder has completed within the past five (5) years similar in size, scope, function and construction value as the Work:

Project Name	
Project Owner; Contact Information	
Function/Use of Project	
Original Contract Duration	
Actual Project Completion Duration	
Original Contract Price	
Final Adjusted Contract Price	

[CONTINUED NEXT PAGE]

9.2. Projects In Progress. On a separate attachment, identify all projects the Bidder currently has in progress, including the following information:

Project Name	
Project Owner; Contact Information	
Function/Use of Project	
Original Contract Duration	
Actual Project Completion Duration	
Original Contract Price	
Current Adjusted Contract Price	

10. Accuracy and Authority. The undersigned is duly authorized to execute this Qualifications Statement under penalty of perjury on behalf of the above-identified Bidder. The undersigned warrants and represents that he/she has personal knowledge of each of the responses to this Qualifications Statement and/or that he/she has conducted all necessary and appropriate inquiries to determine the truth, completeness and accuracy of responses to this Qualifications Statement. The undersigned declares and certifies that the responses to this Qualifications Statement are complete and accurate; there are no omissions of material fact or information that render any response to be false or misleading and there are no misstatements of fact in any of the responses. The above-identified Bidder acknowledges and agrees that if the District determines that any response herein is false or misleading or contains misstatements of fact so as to be false or misleading, the Bidder's Bid Proposal may be rejected by the District for non-responsiveness.

Executed this___ day of _____ 20__ at_____.
(City and State)

I declare under penalty of perjury under California law that the foregoing is true and correct.

By: _____
(Signature of Bidder's Authorized Officer or Representative)

_____
(Typed or Printed Name)

Title: _____

[END OF SECTION 004513]

NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA
COUNTY OF _____

I, _____, being first duly sworn, deposes and says that I am
(Typed or Printed Name)
the _____ of _____, the party submitting
(Title) (Bidder Name)
the foregoing Bid Proposal ("the Bidder"). In connection with the foregoing Bid Proposal, the undersigned declares, states and certifies that:

1. The Bid Proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization or corporation.

2. The Bid Proposal is genuine and not collusive or sham.

3. The Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any other bidder or anyone else to put in sham bid, or to refrain from bidding.

4. The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price, or that of any other bidder, or to fix any overhead, profit or cost element of the bid price or that of any other bidder, or to secure any advantage against the public body awarding the contract or of anyone interested in the proposed contract.

5. All statements contained in the Bid Proposal and related documents are true.

6. The bidder has not, directly or indirectly, submitted the bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any person, corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Executed this ____ day of _____, 20__ at _____.
(City, County and State)

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

_____ _____
Signature (Address)

_____ _____
Name Printed or Typed (City, County and State)

(_____) _____
(Area Code and Telephone Number)

[END OF SECTION]

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

I,_____ the _____of
(Name) (Title)
_____, declare, state and certify that:
(Contractor Name)

1. I am aware that California Labor Code § 3700(a) and (b) provides:

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

   (a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.

   (b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or one employer in a group of employers, 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 his or her employees."

2. I am aware that the provisions of California Labor Code §3700 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 provisions before commencing the performance of this Contract.

_____
(Contractor Name)

By:_____
(Signature)

_____
(Typed or printed name)

[END OF SECTION]

DRUG-FREE WORKPLACE CERTIFICATION

I, _____, am the _____ of
(Print Name) (Title)

_____
(Contractor Name)

I declare, state and certify to all of the following:

1. I am aware of the provisions and requirements of California Government Code §§8350 et seq., the Drug Free Workplace Act of 1990.

2. I am authorized to certify, and do certify, on behalf of Contractor that a drug free workplace will be provided by Contractor by doing all of the following:

   A. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited in Contractor's workplace and specifying actions which will be taken against employees for violation of the prohibition;

   B. Establishing a drug-free awareness program to inform employees about all of the following:

      i. The dangers of drug abuse in the workplace;

      ii. Contractor's policy of maintaining a drug-free workplace;

      iii. The availability of drug counseling, rehabilitation and employee-assistance programs; and

      iv. The penalties that may be imposed upon employees for drug abuse violations;

   C. Requiring that each employee engaged in the performance of the Contract be given a copy of the statement required by subdivision (A), above, and that as a condition of employment by Contractor in connection with the Work of the Contract, the employee agrees to abide by the terms of the statement.

   D. Contractor agrees to fulfill and discharge all of Contractor's obligations under the terms and requirements of California Government Code §8355 by, inter alia, publishing a statement notifying employees concerning: (i) the prohibition of any controlled substance in the workplace, (ii) establishing a drug-free awareness program, and (iii) requiring that each employee engaged in the performance of the Work of the Contract be given a copy of the statement required by California Government Code §8355(a) and requiring that the employee agree to abide by the terms of that statement.

[CONTINUED NEXT PAGE]

3. Contractor and I understand that if the District determines that Contractor has either: (i) made a false certification herein, or (ii) violated this certification by failing to carry out and to implement the requirements of California Government Code §§8355, the Contract awarded herein is subject to termination, suspension of payments, or both. Contractor and I further understand that, should Contractor violate the terms of the Drug-Free Workplace Act of 1990, Contractor may be subject to debarment in accordance with the provisions of California Government Code §§8350, et seq.

4. Contractor and I acknowledge that Contractor and I are aware of the provisions of California Government Code §§8350, et seq. and hereby certify that Contractor and I will adhere to, fulfill, satisfy and discharge all provisions of and obligations under the Drug-Free Workplace Act of 1990.

I declare under penalty of perjury under the laws of the State of California that all of the foregoing is true and correct.

Executed at _____ this ____day of
(City and State)
_____, 20____.

_____
(Signature)

_____
(Printed or Typed Name)

[END OF SECTION]

CRIMINAL RECORDS CHECK CERTIFICATION

(Vendor Fingerprinting Requirements)

VENDOR CERTIFICATION

With respect to the Agreement dated _____20_____ by and between Pacific Grove Unified School District ("DISTRICT") and _____("VENDOR") for the provision of services, CONTRACTOR hereby certifies to DISTRICT's governing board that it has completed the criminal background check requirements of Education Code section 45125.1 and that none of its employees that may come in contact with DISTRICT pupils have been convicted of a violent felony listed in Penal Code section 667.5(c) or a serious felony listed in Penal Code section 1192.7(c).

_____ _____
Contractor's Representative Date

VENDOR EXEMPTION

Pursuant to Education Code section 45125.1, the Pacific Grove Unified School District ("DISTRICT") has determined that
_____("VENDOR") is exempt from the criminal background check certification requirements for the agreement dated_____ , 20_____, by and between DISTRICT and VENDOR ("Agreement") because:

[ ] VENDOR's employees will have limited contact with DISTRICT students during the course of the Agreement; or
[ ] Emergency or exceptional circumstances exist.

_____ _____
District Official Date

[END OF SECTION]

AGREEMENT

THIS AGREEMENT is entered into December 17, 2026 in the City of Pacific Grove, County of Monterey, State of California, by and between **PACIFIC GROVE UNIFIED SCHOOL DISTRICT**, a California Unified School District hereinafter "DISTRICT" and _____ ("CONTRACTOR").

WITNESSETH, that the DISTRICT and the CONTRACTOR in consideration of the mutual covenants contained herein agree as follows:

The Work. Within the Contract Time and for the Contract Price, subject to adjustments thereto pursuant to the Contract Documents, CONTRACTOR shall perform and provide all necessary labor, materials, tools, equipment, utilities, services and transportation to complete in a workmanlike manner all of the Work required in connection with the work of improvement commonly referred to as **Pacific Grove Adult School & Co-op Preschool Site Improvements.**

1. CONTRACTOR shall complete all Work covered by the Contract Documents, including without limitation, the Drawings and Specifications prepared by the Architect and other Contract Documents enumerated in Article 5 below, along with all modifications and addenda thereto issued in accordance with the Contract Documents.

2. Contract Time. CONTRACTOR shall achieve Substantial Completion the Work within the Contract Time, which is One Hundred and Forty (140) calendar days after the date established in the Notice to Proceed issued by or on behalf of the DISTRICT for commencement of the Work.

3. Contract Price. The DISTRICT shall pay the CONTRACTOR as full consideration for the CONTRACTOR's full, complete and faithful performance of the CONTRACTOR'S obligations under the Contract Documents, subject to adjustments of the Contract Price in accordance with the Contract Documents, the Contract Price of _____ Dollars ($_____). The DISTRICT's payment of the Contract Price shall be in accordance with the Contract Documents. The Contract Price is based upon the CONTRACTOR's Base Bid Proposal and the following Alternate Bid Items, if any: _____.

4. Liquidated Damages. CONTRACTOR shall be subject to assessment of Liquidated Damages set forth in the Special Conditions if CONTRACTOR: (i) fails to submit each Submittal required by the Contract Documents in accordance with the Submittal Schedule incorporated into the CONTRACTOR's Construction Schedule; or (ii) fails to achieve Substantial Completion of the Work within the Contract Time, subject to adjustments thereto in accordance with the Contract Documents; or (iii) fails to complete all Punchlist items within the time established pursuant to the Contract Documents.

5. Independent Contractor. CONTRACTOR is, and shall at all times be deemed to be, an independent contractor and not an agent or employee of the DISTRICT.

[CONTINUED NEXT PAGE]

6. State Audit. Pursuant to and in accordance with the provisions of California Government Code section 8546.7, or any amendments thereto, all books, records, and files of DISTRICT or CONTRACTOR connected with the performance of the Agreement involving the expenditure of public funds in excess of Ten Thousand Dollars ($10,000), including, but not limited to, the administration thereof, shall be subject to the examination and audit of the State Auditor of the State of California, at the request of DISTRICT or as part of any audit of DISTRICT, for a period of three (3) years after final payment is made under the Agreement. CONTRACTOR shall preserve and cause to be preserved such books, records, and files for the audit period,

7. Tax Identification Number. No later than the Effective Date of this Agreement, CONTRACTOR shall furnish to DISTRICT its Federal Tax Identification Number or Social Security Number, whichever is applicable, and a completed and signed W-9 Form.

8. Criminal Records Check Certification. If any portion of the work under the Agreement is to be performed at an operating school, CONTRACTOR shall be required to comply with the applicable requirements of Education Code section 45125.2 with respect to fingerprinting of employees who may have contact with DISTRICT's pupils and shall complete the Criminal Records Check Certification form provided by the DISTRICT.

9. Amendment; Assignment. This Agreement may only be amended with the mutual written consent of both parties. Neither party may assign its rights or obligations under this Agreement to another party.

10. Required Provisions. Each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to be inserted herein and the Agreement shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not interested, or is not correctly inserted, upon application of either party, the Agreement shall forthwith be physically amended to make such insertion or correction.

11. Department of Industrial Relations (DIR) Registration. If any portion of the work or services to be performed by CONTRACTOR under this contract constitutes a "public work" as defined in California Labor Code section 1720(a), and payment will be made by DISTRICT in whole or in part out of public funds, prior to issuing this Contract, CONTRACTOR shall be required to be registered with the Department of Industrial Relations ("DIR") pursuant to Labor Code section 1725.5 and such work or services constituting a public work shall be subject to compliance monitoring and enforcement by DIR.

12. The Contract Documents. The documents forming a part of the Contract Documents consist of but not limited to the following:

[CONTINUED NEXT PAGE]

00 01 07	Signature/Seals Page
00 11 13	Notice Calling for Bids, including Bid Addenda Nos. _____
00 21 13	Instructions for Bidders
00 42 13	Bid Proposal
00 45 10	Subcontractors List
00 45 13	Statement of Qualifications
00 45 19	Non-Collusion Affidavit
00 45 26	Certificate of Workers Compensation
00 45 27	Drug-Free Workplace Certification

00 45 47	Criminal Records Check Certification
00 52 13	Agreement
00 60 00	Project Forms
00 61 10	Bid Bond
00 61 13.13	Performance Bond
00 61 13.16	Labor and Material Payment Bond
00 72 13	General Conditions
00 73 13	Special Conditions
DSA	Approved Drawings Dated: 09/18/26
DSA	Technical Specifications Dated: 09/18/26

13. Authority to Execute. The individual(s) executing this Agreement on behalf of the CONTRACTOR is/are duly and fully authorized to execute this Agreement on behalf of CONTRACTOR and to bind the CONTRACTOR to each and every term, condition and covenant of the Contract Documents.

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 2600, SACRAMENTO, CALIFORNIA 95826

IN WITNESS WHEREOF, this Agreement has been duly executed by the DISTRICT and the CONTRACTOR as of the date set forth above.

"DISTRICT"
PACIFIC GROVE UNIFIED SCHOOL DISTRICT

By _____
Josh Jorn
Title Assistant Superintendent, CBO

"CONTRACTOR"

By: _____
Title: _____

EXHIBITS

Exhibit 1 List of Drawings

Exhibit 2 Submittal Substitution Request

Exhibit 3 Application for Payment

Exhibit 4 Proposal Request

Exhibit 5 Cost Proposal

Exhibit 6 Field Order

Exhibit 7 Change Order

Exhibit 8 Guarantee

EXHIBIT 1
LIST OF DRAWINGS

Pacific Grove Adult School & Co-op Preschool Site Improvements

1.	A0.0	Cover Sheet
2.	A0.10	Fire Life Safety Plan
3.	A0.11	Access + Cal Green Compliance Plan
4.	C0.1	Notes, Legend & Index
5.	C1.1	Demolition Plan
6.	C2.1	Grading & Drainage Plan
7.	C2.2	Grading & Drainage Plan
8.	C2.3	Grading & Drainage Plan
9.	C3.1	Underground Utilities Plan
10.	C4.1	Horizontal Control Plan
11.	C5.1	Erosion Control Plan
12.	C6.01	Details
13.	C6.02	Details
14.	C6.03	Details
15.	L1.1	Irrigation Plan
16.	L1.2	Irrigation Plan
17.	L1.3	Irrigation Plan
18.	L2.1	Planting Plan
19.	L2.2	Planting Plan
20.	L3.1	Irrigation Details
21.	L4.1	Planting Details
22.	A1.01	Demo Site Plan
23.	A1.11	Campus Site Plan
24.	A1.21	Site Details
25.	A1.22	Site Details
26.	A1.23	Site Details
27.	E001	Electrical Symbols, Abbreviations, Codes, Light Fixture Schedule, Standards, Notes & Sheet Index
28.	E002	California Title 24 Energy Code Compliance (Exterior)
29.	E200	Electrical Demolition Site Plan & Demolition Notes
30.	E201	Electrical Site Plan & Details
31.	E701	Electrical Specifications

[END OF EXHIBIT]

EXHIBIT 2
SUBMITTAL SUBSTITUTION REQUEST

Submittal Number: _____

SUBMITTAL *(Refer to the Submittal List, Section 013300)*

Specification Section	**Article/Paragraph**	**Description**
_____	_____	_____
		_____

The following supporting information is attached:

❑	Product Data	❑	Shop Drawings	❑	Schedules (Contract Time)
❑	Certified Test Results	❑	Calculations	❑	Color Selection Charts
❑	Product/Material Samples	❑	Manufacturer's Recommendations		
❑	Other: _____				

Total Number of Copies Submitted *(Refer to Section 013323)*

1	PDF via email
1	Total Number of Copies Submitted.

Specified Item: Yes: ❑ No: ❑ (complete *Request for Substitution Information* below)

As the Contractor for this Project, we have thoroughly checked this submittal and ascertained that this submittal complies in detail with the Contract Documents (as required in Section 013300, 1.06). Prior to submission, we have reviewed, marked-up as appropriate, and stamped this submittal. The submittal clearly shows that we have clearly reviewed this submittal for conformance with the requirements of the Contract Documents and for coordination with other Sections. We have determined and verified; field measurements, field construction criteria, catalog numbers and similar data, conformance with Contract Documents.

_____ _____
Contractor Date

[CONTINUED NEXT PAGE]

REQUEST FOR SUBSTITUTION

Proposed Substitution: _____

_____

Manufacturer: _____

Product (model, pattern, etc.):_____

State the reason for the Proposed Substitution:

_____

_____

_____

- ☐ The specified item is unavailable (certified letter from manufacturer/supplier is attached).
- ☐ Significant Time Reduction. Estimated Calendar Day Reduction: _____ Calendar Days.
- ☐ Significant Cost Reduction. Estimated Reduction in Contract Sum: $ _____.
- ☐ Significant improvement in quality without a change in Contract sum.

Provide comparison information and supporting data substantiating the request per Section 012500, 1.01, C.

EFFECTS OF PROPOSED SUBSTITUTION: Answer the following questions and attach explanations.

Does substitution affect dimensions indicated on Drawings?

☐NO ☐YES, explain:

Does substitution affect Work of other Sections?

☐NO ☐YES, explain:

Does substitution require modifications to design, changes to Drawings, or revisions to specifications to be incorporated into the Project?

☐NO ☐YES, explain:

Attach list of at least 3 projects where proposed substitution has been used within past 12 months; include name, address, and telephone number of Owner and Architect.

[CONTINUED NEXT PAGE]

CONTRACTOR'S / BIDDER'S REPRESENTATION
Undersigned accepts responsibility for coordination of proposed substitution and accepts all additional costs resulting from the incorporation of proposed substitution into the Project per Section 012500.

SUBMITTED BY:

_____

_____

For Architect's use:
❑ Accepted ❑ Not Accepted
❑ No Action Required
❑ Submission: Incomplete
❑ Too Late
Reviewed by/date: _____
Comments: _____

Subcontractor's signature and date: _____

[END OF EXHIBIT]

EXHIBIT 3
APPLICATION AND CERTIFICATE FOR PAYMENT

OWNER: Pacific Grove Unified School District 433 Hillcrest Ave. Pacific Grove, CA 93950	PROJECT: DSA NO.:	PAYMENT APPLICATION NO: PERIOD TO: CONTRACT DATE: NOTICE TO PROCEED:
CONTRACTOR:	ARCHITECT:	

Contract Time: _____	Calendar Days	Completion Date:	
Days by Change Order: _____	Calendar Days		
Total Contract Days: _____	Calendar Days	Revised Completion Date:	
Elapsed Time: _____	Calendar Days		

Estimated Percent Complete: (Time) Estimated Percent Complete: (Money)

Application is made for payment as shown below, in connection with the Continuation Sheet (AIAG703) attached:

A. Contract Work:

1. Original Contract Sum …….. $
2. Total Contract Work Completed & Stored to Date…… $
   (Column G Subtotal on attached Continuation Sheet)
3. Retention: 5% of Line 2…… $
4. Amount Earned Less Retention…… $
   (Line 2 less line 3)
5. Less Previous Certificates for Payment…….. $
   (Line 4 from prior certificate)
6. Current Payment Due for Contract Work……. **SUBTOTAL $ _____**

B. Change Order Work:

Change Order Summary	Additions	Deletions
Changes approved in previous months		
Changes approved this month		
Change Order No.		
Change Order No.		
Net by Change Order (Enter on Line 7)		

7. Net Change Order Work …… $
8. Total Change Work Completed to Date ……..... $
   (Column G subtotal on attached Continuation Sheet)
9. Retention: 5% of Line 8 …… …… $
10. Amount Earned Less Retention …… $
    (Line 8 less Line 9)
11. Less Previous Certificate for Payment …… $
    (Line 10 from prior certificate)
12. Current Payment Due for Change Work …… **SUBTOTAL $_____**

[CONTINUED NEXT PAGE]

C. Summary:

13. Original Contract Sum (Line 1) ……	$	
14. Net Change by Change Orders (Line 7) ……...	$	
15. Contract Sum to Date ……...	$	
16. Total Amount Completed to Date ……... (Column G Total on an attached Continuation Sheet)	$	
17. Retention: 5% of Line 16 ……...	$	
18. Total Earned Less Retention ……..	$	
19. Less previous certificate for payment ……..... (Line 18 from prior certificate)	$	
20. Total Payment Due this Application …….		**$ _____**

The undersigned Contractor hereby represents and warrants to the District that all Work, for which Certificates For Payment have previously been issued and payment received from the District, is free and clear of all claims, stop notices, security interests, and encumbrances in favor of Contractor, any Subcontractor, and any other persons or firms entitled to make claims by reason of having provided labor, materials, or equipment related to the Work.

_____ By:_____
(Contractor) (Name)

_____
(Title)

Approved for Payment:

Inspector:

_____Date_____
Signature

Architect:

_____Date_____
Signature

Construction Manager:

_____Date_____
Signature

District:

_____Date_____
Signature

[CONTINUED NEXT PAGE]

CONTRACTOR
CONTINUATION SHEET (AIA FORMAT FORM G703)
PAY APP# ____ THROUGH _____

PGUSD
PROJECT:
DSA PROJECT NO.: _____

A ITEM NO.	B CSI DESCRIPTION	C SCHEDULED VALUE	D PREVIOUS APPS	E THIS APPLICATION WORK	F MATERIAL	G TOTAL % COMPLETE	H BALANCE TO FINISH	I 10% RETAIN

(COST BREAKDOWN PURSUANT TO GENERAL CONDITIONS ARTICLE 8.2)

CONTRACT SUBTOTAL

CHANGE ORDERS:

CHANGE ORDER SUBTOTAL

TOTAL

[END OF EXHIBIT]

EXHIBIT 4
PROPOSAL REQUEST

To Contractor: Company name/address Proposal Request No. _____

Date Issued:

Attn:

DSA File Number: _____

Project: PGUSD
PGAS Site Improvements

Application Number: _____

Copy to: Josh Jorn, PGUSD
Inspector of Record

The following change is being considered for the Project. Please provide a Cost Proposal for any changes in Contract Sum and/or Contract Time to perform the work described below in accordance with Article 9 of the General Conditions. Cost Proposal shall be submitted on the Owner's form, reference Exhibit 3 of the Contract Documents.

THIS IS NOT A CHANGE ORDER OR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED HEREIN.

Description of Work Requested

Subject:

Contract Reference:

The Owner requests your cost proposal in time and money to

Attachments:

Ausonio, Inc.

_____
Project Manager

[END OF EXHIBIT]

EXHIBIT 5
COST PROPOSAL
(Reference Article 9 of the General Conditions)

Change Request / Cost Proposal #: _____
Date Submitted: _____
DSA File Number:
Application Number**:**

Project: PGUSD, **PGAS Site Improvements**

Scope of Change:

Adjustment of the Contract Time: *(Include justification based upon the Contract Schedule)*

Adjustment of the Contract Sum :*(Total Additional Cost from Cost Proposal Breakdown, line 17, column 4)*

Instructions:

1. Complete this form by providing (a) all information required above, (b) the amount and justification based upon the Contract Schedule for any proposed adjustment of Contract Time, (c) the proposed adjustment of Contract Sum, and (d) the attached Cost Proposal Breakdown.
2. Attach detailed cost breakdowns for all materials, wages and salaries, and Fringe Benefits and Payroll Taxes.
3. The Contractor Fee shall be computed on the Cost of Extra Work only; and shall constitute full compensation for all costs and expenses related to the subject change and not enumerated in the Cost Proposal Breakdown, including overhead and profit.
4. The mark-up for all overhead (including home and field office overhead), general conditions costs and profit, shall not exceed the percentage of allowable direct actual costs for performance of the Change as set forth below. Contractor Fee shall be computed as follows:
   (a) For the portion of any Change performed by Subcontractors of any tier, the percentage mark-up on allowable actual direct labor and materials costs incurred by Subcontractors of any tier shall be Twelve Percent (12%).
   (b) For the portion of any Change performed by a Subcontractor of any tier, the Contractor may add an amount equal to Five Percent (5%) of the allowable actual direct labor and materials costs of Subcontractors performing the Change.
   (c) For the portion of any Change performed by the Contractor's own forces, the mark-up on the allowable actual direct labor and materials costs of such portion of a Change shall be Fifteen Percent (15%).

[CONTINUED NEXT PAGE]

PREPARED BY:	REVIEWED AND RECOMMENDED BY:
_____	_____
(Contractor)	(District's Representative)
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Date: _____

[CONTINUED NEXT PAGE]

Change Request / Cost Proposal #: _____

COST PROPOSAL BREAKDOWN

		(1) Contractor	(2) 1st Tier Subs	(3) 2nd & Lower Tier Subs	(4) Total
ACTUAL COSTS	Straight Time Wages – Labor				
	Overtime Wages – Labor				
	Straight. Time Wages/Salaries - Supervisory Personnel				
	Over Time Wages/Salaries - Supervisory Personnel				
	Fringe Benefits and Payroll Taxes				
	Materials				
	Sales Taxes				
	Rental Charges				
	Royalties				
	Permits				
	Utilities				
	Subtotal Cost of Extra Work (Sum of lines 1-11)				
OVER-HEAD, GENERAL CONDITIONS& PROFIT	Contractor Fee (15% of line 12, col. 1.)				
	Subcontractor Fee (12% of line 12, col. 2 and col. 3.)				
	Contractor Fee for Subcontractor and Sub-Subcontractor work (5% line 12 col. 3.)				
	Total Subcontractor and Sub-Subcontractor Work (Sum of line 12, col.2 and 3)				
	Contractor Fee for Subcontractor and Sub-Subcontractor Work. (5% of the Total Subcontractor and Sub-Subcontractor Work)				
SUBTOTAL	SUBTOTAL ADDITIONAL COST (sum of lines 12 and 13a-13d)				
	Insurance				
	Bonds				
TOTAL	TOTAL ADDITIONAL COST (sum of lines 14 -16)				

[END OF EXHIBIT]

EXHIBIT 6
FIELD ORDER

Field Order Number: _____
Date: _____

PGUSD,
PGAS Site Improvements

FIELD ORDER

This form to be used only for emergency instructions to the Contractor where time required for preparation and execution of a formal Change Order would result in delay or stoppage of the work. This Field Order is issued as per the requirements described in Article 9 of the General Conditions. A Change Order will supersede this Field Order. The Change Order will include the scope of the change in the Work and any actual adjustments of the Contract sum and the Contract time

To The Contractor: (Contractor)

Reference:

Subject:

You are hereby authorized and instructed to effect the following modifications in your Contract for the above project:

Estimated Adjustment to Contract Sum: $_____

Estimated Adjustment to Contract Time: _____ calendar days

To be used where agreed cost or credit cannot be immediately determined. The final agreed amount shall not be more than the maximum cost nor less than the minimum credit noted above.

_____
District's Representative Date

_____
Contractor Date

_____
District Date

[END OF EXHIBIT]

EXHIBIT 7
CHANGE ORDER

Change Order Number: _____
Date: _____

Project: PGUSD, **PGAS Site Improvements**

DSA File Number:

Application Number:

To Contractor:

Description of Change: You are hereby authorized to make changes in the Work as described in the following detail sheets and summaries.

Summary of Contract Sum:

Original Contract Sum	…….	$
Prior Adjustments:	…….	$
Contract Sum Prior to this Change:	…….	$
Adjustments for this Change:	……	$
Revised Contract Sum:	……	$

Summary of Contract Time:

Original Contract Time	……..calendar days	date
Prior Adjustments:	……calendar days	date
Contract Time Prior to this Change:	……..calendar days	date
Adjustments for this Change:	……..calendar days	date
Revised Contract Time:	……....calendar days	date

The Contractor waives any claim for further adjustments of the Contract sum and Contract time related to items contained in the Change Order. This Change Order is complete accord and satisfaction for all items included in this Change Order. Also refer to Article 9 of the General Conditions.

The foregoing adjustment of the Contract Price and the Contract Time for the changes noted in this Change Order (the "Changes") represents the full and complete adjustment of the Contract Price and the Contract Time due the Contractor for providing and completing such Changes, including without limitation: (i) all costs (whether direct or indirect) for labor, equipment, materials, tools, supplies and/or services; (ii) all general and administrative overhead costs (including without limitation, home office, field office and Site general conditions costs) and profit; and (iii) all impacts, delays, disruptions, interferences, or hindrances in providing and completing the Changes. The Contractor waives all rights, including without limitation those arising under Civil Code Section 1542, for any other adjustment of the Contract Price or the Contract Time on account of this Change Order or the performance and completion of the Changes.

[CONTINUED NEXT PAGE]

Accepted by the Contractor,

Name:_____ By:_____
Date

Reviewed and Recommended for Approval
Construction Manager.

Name:_____ By:_____
Date

Reviewed and Recommended for Approval
Architect of Record

Name:_____ By:_____
Date

District Approval
Josh Jorn By:_____
Assistant Superintendent, CBO Date

Attachments:

Distribution:

[END OF EXHIBIT]

EXHIBIT 8
GUARANTEE

District: **PACIFIC GROVE UNIFIED SCHOOL DISTRICT**

Project Name: **PGUSD, PGAS Site Improvements**

Contractor Name: _____

The Contractor hereby warrants and guarantees to the District that all work, materials, equipment and workmanship provided, furnished or installed by or on behalf of Contractor in connection with the above-referenced Project (the "Work") have been provided, furnished and installed in strict conformity with the Contract Documents for the Work, including without limitation, the Drawings and the Specifications. Contractor further warrants and guarantees that all work, materials, equipment and workmanship as provided, furnished and/or installed are fit for use as specified and fulfill all applicable requirements of the Contract Documents including without limitation, the Drawings and the Specifications. Contractor shall, at its sole cost and expense, repair, correct and/or replace any or all of the work, materials, equipment and/or workmanship of the Work, together with any other items which may be affected by any such repairs, corrections or replacement, that may be unfit for use as specified or defective within a period of one (1) year from the date of the District's Final Acceptance of the Work, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of the Contractor's failure and/or refusal to comply with the provisions of this Guarantee, within the period of time set forth in the Contract Documents after the District's issuance of the Notice to the Contractor of any defect(s) in the Work, materials, equipment or workmanship, Contractor authorizes the District, without further notice to Contractor, to repair, correct and/or replace any such defective item at the expense of the Contractor. The Contractor shall reimburse the District for all costs, expenses or fees incurred by the District in providing or performing such repairs, corrections or replacements within ten (10) days of the District's presentation of a demand to the Contractor for the same.

The provisions of this Guarantee and the provisions of the Contract Documents for the Work relating to the Contractor's Guarantee(s) and warranty(ies) relating to the Work shall be binding upon the Contractor's Performance Bond Surety and all successors or assigns of Contractor and/or Contractor's Performance Bond Surety.

The provisions of this Guarantee are in addition to, and not in lieu of, any provisions of the Contract Documents for the Work relating to the Contractor's guarantee(s) and warranty(ies) or any guarantee(s) or warranty(ies) provided by any material supplier or manufacturer of any equipment, materials or other items forming a part of, or incorporated into the Work, or any other guarantee or warranty obligation of the Contractor, prescribed, implied or imposed by law.

The undersigned individual executing this Guarantee on behalf of Contractor warrants and represents that he/she is duly authorized to execute this Guarantee on behalf of Contractor and to bind Contractor to each and every provision hereof.

Dated: _____ By: _____
(Signature)

_____
(Typewritten or Handwritten Name)

cc: _____
(Performance Bond Surety)

_____ _____
(Address) (Title)

[END OF SECTION]

BID BOND

KNOW ALL MEN BY THESE PRESENTS that we, _____, as Surety and _____, as Principal, are jointly and severally, along with their respective heirs, executors, administrators, successors and assigns, held and firmly bound unto **PACIFIC GROVE UNIFIED SCHOOL DISTRICT** ("the Obligee") for payment of the penal sum hereof in lawful money of the United States, as more particularly set forth herein.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the Principal has submitted the accompanying Bid Proposal to the Obligee for the Work commonly described as: **Pacific Grove Adult School & Co-op Preschool Site Improvements.**

WHEREAS, subject to the terms of this Bond, the Surety and the Principal are jointly and severally firmly bound unto the Obligee in the penal sum equal to Ten Percent (10%) of the maximum amount of the Bid Proposal submitted by the Principal to the Obligee, inclusive of amounts proposed for additive Alternate Bid Items, if any.

NOW THEREFORE, if the Principal shall not withdraw said Bid Proposal within the period specified therein after the opening of the same, or, if no period be specified, for sixty (60) days after opening of said Bid Proposal; and if the Principal is awarded the Contract, and shall within the period specified therefore, or if no period be specified, within five (5) days after the prescribed forms are presented to him for signature, enter into a written contract with the Obligee, in accordance with the Bid Proposal as accepted and give such bond(s) with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such Contract and for the payment for labor and materials used for the performance of the Contract, or in the event of the withdrawal of said Bid Proposal within the period specified for the holding open of the Bid Proposal or the failure of the Principal to enter into such Contract and give such bonds within the time specified, if the Principal shall pay the Obligee the difference between the amount specified in said Bid Proposal and the amount for which the Obligee may procure the required Work and/or supplies, if the latter amount be in excess of the former, together with all costs incurred by the Obligee in again calling for Bids, then the above obligation shall be void and of no effect, otherwise to remain in full 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, the Work to be performed there under, the Drawings or the Specifications accompanying the same, or any other portion of the Contract Documents shall in no way affect its obligations 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, the Call for Bids, the Work, the Drawings or the Specifications, or any other portion of the Contract Documents.

In the event suit or other proceeding is brought upon this Bond by the Obligee, the Surety and Principal shall be jointly and severally liable for payment to the Obligee all costs, expenses and fees incurred by the Obligee in connection therewith, including without limitation, attorneys fees.

[CONTINUED NEXT PAGE]

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument this _____ day of _____, 20___ by their duly authorized agents or representatives.

_____
(Bidder/Principal Name)

By: _____
(Signature)

_____
(Typed or Printed Name)

Title: _____

_____
(Surety Name)

By: _____
(Signature of Attorney-In-Fact for Surety)

_____
(Typed or Printed Name of Attorney-In-Fact)

(Attach: (i) Attorney-In-Fact Certification; (ii) Notary Public Acknowledgment of Authorizing Signature on Attorney-Fact Certification; and (iii) Notary Public Acknowledgement of Attorney-In-Fact's Signature.)

Contact name, address, telephone number and email address for notices to the Surety

_____
(Contact Name)

_____
(Street Address)

_____
(City, State & Zip Code)

(_____) _____ (_____) _____
Telephone Fax

_____
(Email address)

[END OF SECTION]

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS that we, _____, as Surety and _____, as Principal, are jointly and severally, along with their respective heirs, executors, administrators, successors and assigns, held and firmly bound unto **PACIFIC GROVE UNIFIED SCHOOL DISTRICT** ("the Obligee") for payment of the penal sum the penal sum of _____ Dollars ($_____) in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the Obligee, by resolution of its Board of Trustees has awarded to the Principal a Contract for the Work described as: **Pacific Grove Adult School & Co-op Preschool Site Improvements**.

WHEREAS, the Principal, has entered into an agreement with the Obligee for performance of the Work; the Agreement and all other Contract Documents set forth therein are incorporated herein and made a part hereof by this reference.

WHEREAS, by the terms of the Contract Documents, the Principal is required to furnish a bond ensuring the Principal's prompt, full and faithful performance of the Work of the Contract Documents.

NOW THEREFORE, if the Principal shall promptly, fully and faithfully perform each and all of the obligations and things to be done and performed by the Principal in strict accordance with the terms of the Contract Documents as they may be modified or amended from time to time; and if the Principal shall indemnify and save harmless the Obligee and all of its officers, agents and employees from any and all losses, liability and damages, claims, judgments, liens, costs, and fees of every description, which may be incurred by the Obligee by reason of the failure or default on the part of the Principal in the performance of any or all of the terms or the obligations of the Contract Documents, including all modifications, and amendments, thereto, and any warranties or guarantees required thereunder; then this obligation shall be void; otherwise, it shall be, and remain, in full force and effect.

The Surety, for value received, hereby stipulates and agrees that no change, adjustment of the Contract Time, adjustment of the Contract Price, alterations, deletions, additions, or any other modifications to the terms of the Contract Documents, the Work to be performed thereunder, or to the Specifications or the Drawings shall limit, restrict or otherwise impair Surety's obligations or Obligee's rights hereunder; Surety hereby waives notice from the Obligee of any such changes, adjustments of Contract Time, adjustments of Contract Price, alterations, deletions, additions or other modifications to the Contract Documents, the Work to be performed under the Contract Documents, or the Drawings or the Specifications.

In the event of the Obligee's termination of the Contract due to the Principal's breach or default of the Principal's obligations thereunder, within twenty (20) days after written notice from the Obligee to the Surety of the Principal's breach or default of the Contract Documents and Obligee's termination of the Contract, the Surety shall notify Obligee in writing of Surety's assumption of obligations hereunder by its election to either remedy the default or breach of the Principal or to take charge of the Work of the Contract Documents and complete the Work at its own expense ("the Notice of Election"); provided, however, that the procedure by which the Surety undertakes to discharge its obligations under this

Bond shall be subject to the advance written approval of the Obligee, which approval shall not be unreasonably withheld, limited or restricted. The insolvency of the Principal or the Principal's denial of

[CONTINUED NEXT PAGE]

a failure of performance or default under the Contract Documents shall not by itself, without the Surety's prompt, diligent inquiry and investigation of such denial, be justification for Surety's failure to give the Notice of Election or for its failure to promptly remedy the failure of performance or default of the Principal or to complete the Work.

In the event the Surety fails to issue its Notice of Election to Obligee within the time provided for hereinabove, the Obligee may thereafter cause the cure or remedy of the Principal's failure of performance or default or to complete the Work. The Principal and the Surety shall be jointly and severally liable to the Obligee for all damages and costs sustained by the Obligee as a result of the Principal's failure of performance under the Contract Documents or default in its performance of obligations thereunder, including without limitation the costs of cure or completion of the Work exceeding the then remaining balance of the Contract Price; provided that the Surety's liability hereunder for the costs of performance, damages and other costs sustained by the Obligee upon the Principal's failure of performance or default under the Contract Documents shall be limited to the penal sum hereof, which shall be deemed to include the costs or value of any Changes to the Work which increases the Contract Price.

In the event that suit or other proceeding is brought upon this Bond by the Obligee, the Surety and Principal shall be jointly and severally liable for payment to the Obligee of all costs, expenses and fees incurred by the Obligee therewith, including without limitation, attorneys' fees.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument this _____day of _____, 20____ by their duly authorized agent or representative

_____
(Contractor-Principal Name)

By: _____
(Signature)

_____
(Typed or Printed Name)

Title: _____

(Attach Notary Public Acknowledgement of Principal's Signature)

_____
(Surety Name)

By: _____
(Signature of Attorney-In-Fact for Surety)

_____
(Typed or Printed Name of Attorney-In-Fact)

(Attach: (i) Attorney-In-Fact Certification; (ii) Notary Public Acknowledgment of Authorizing Signature on Attorney-Fact Certification; and (iii) Notary Public Acknowledgement of Attorney-In-Fact's Signature.)

Contact name, address, telephone number and email address for notices to the Surety

_____
(Contact Name)

_____
(Street Address)

_____
(City, State & Zip Code)

(_____) _____ (_____) _____
Telephone Fax

_____
(Email address)

[END OF SECTION]

LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS that we, _____, as Surety and _____, as Principal, are jointly and severally, along with their respective heirs, executors, administrators, successors and assigns, held and firmly bound unto **PACIFIC GROVE UNIFIED SCHOOL DISTRICT** ("the Obligee") for payment of the penal sum the penal sum of _____ Dollars ($_____) in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the Obligee, by resolution of its Board of Trustees has awarded to the Principal a Contract for the Work described as: **Pacific Grove Adult School & Co-op Preschool Site Improvements.**

WHEREAS, the Principal, has entered into an Agreement with the Obligee for performance of the Work, the Agreement and all other Contract Documents set forth therein are incorporated herein by this reference and made a part hereof.

WHEREAS, by the terms of the Contract Documents, the Principal is required to furnish a bond for the prompt, full and faithful payment to any Claimant, as hereinafter defined, for all labor materials or services used, or reasonably required for use, in the performance of the Work.

NOW THEREFORE, if the Principal shall promptly, fully and faithfully make payment: (i) to any Claimant for all labor, materials or services used or reasonably required for use in the performance of the Work; (ii) of amounts due under the Unemployment Insurance Code for work or labor performed under the Contract; and (iii) of amounts required to be deducted, withheld and paid to the Employment Development Department from wages of the employees of the Principal and its Subcontractors under Section 13020 of the Unemployment Insurance Code with respect to work and labor under the Contract then this obligation shall be void; otherwise, it shall be, and remain, in full force and effect.

The term "Claimant" shall refer to any person, corporation, partnership, proprietorship or other entity including without limitation, all persons and entities described in California Civil Code §1900, providing or furnishing labor, materials or services used or reasonably required for use in the performance of the Work under the Contract Documents, without regard for whether such labor, materials or services were sold, leased or rented. This Bond shall inure to the benefit of all Claimants so as to give them, or their assigns and successors, a right of action upon this Bond.

In the event that suit is brought on this Bond by any Claimant for amounts due such Claimant for labor, materials or services provided or furnished by such Claimant, the Surety shall pay for the same and reasonable attorneys' fees pursuant to California Civil Code §9554.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, deletion, addition, or any other modification to the terms of the Contract Documents, the Work to be performed thereunder, the Specifications or the Drawings, or any other portion of the Contract Documents, shall in any way limit, restrict or otherwise affect its obligations under this Bond; the Surety hereby waives notice from the Obligee of any such change, extension of time, alteration,

[CONTINUED NEXT PAGE]

deletion, addition or other modification to the Contract Documents, the Work to be performed under the Contract Documents, the Drawings or the Specifications of any other portion of the Contract Documents.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument this _____ day of _____, 20__ by their duly authorized agent or representative.

_____
(Contractor-Principal Name)

By: _____
(Signature)

_____
(Typed or Printed Name)

Title: _____

(Attach Notary Public Acknowledgement of Principal's Signature)

_____
(Surety Name)

By: _____
(Signature of Attorney-In-Fact for Surety)

_____
(Typed or Printed Name of Attorney-In-Fact)

(Attach: (i) Attorney-In-Fact Certification; (ii) Notary Public Acknowledgment of Authorizing Signature on Attorney-Fact Certification; and (iii) Notary Public Acknowledgement of Attorney-In-Fact's Signature)

Contact name, address, telephone number and email address for notices to the Surety

_____
(Contact Name)

_____
(Street Address)

_____
(City, State & Zip Code)

(_____) _____ (_____) _____
Telephone Fax

_____
(Email address)

[END OF SECTION]

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SECTION 007213
GENERAL CONDITIONS

ARTICLE 1. DEFINITIONS; GENERAL

1.1 Addendum/Addenda. "Addendum" or "Addenda" are written documents furnished by the District through the Construction Manager and/or the District's Project Manager before award of the contract, interpreting or modifying plans and specifications or answering questions of intended bidders, and shall be incorporated in and are a part of the Contract Documents.

1.2 Architect. The Architect is the person or entity identified as such in the Agreement; references to the "Architect" include the Architect's authorized representative. The "Architect" is the architectural firm engages as an agent by the District to perform the services set forth in the Contract Documents. The Architect is designated by the Board of Trustees as the District's agent to perform all functions delegated to the Architect by the Contract Documents.

1.3 Architect's Supplemental Instructions (ASI). "Architect's Supplemental Instructions" are supplemental drawings or instructions, which may be issued as necessary from time to time to make clear or define in greater detail the intent of the Contract Drawings and Specifications where no change in Contract Sum or Contract Time is anticipated.

1.4 Bid. "Bid" shall mean the offer of the bidder to do the work, when submitted on the prescribed bid form, properly executed, at the designated time and location. Synonymous with proposal.

1.5 Board of Trustees. "Board of Trustees" shall mean the duly elected officials constituting the Board of Trustees of the Pacific Grove Unified School District.

1.6 Change Order. "Change Order" shall mean a written order to the Contractor, issued after execution of the Contract, authorizing a change in the Work and/or an adjustment in the Trade Contract Sum and/or the Contract Time.

1.7 Conditional Notice of Intent to Award. The "Conditional Notice of Intent to Award" is the document issued following Board of Trustees Approval of bids. This document authorized the Contractor to begin preparing and submitting shop drawings and other required submittals as described in Article 4.7.

1.8 Construction Equipment. "Construction Equipment" is equipment utilized for the performance of any portion of the Work, but which is not incorporated into the Work.

1.9 Construction Manager. The firm Ausonio, Inc./Brailsford & Dunlavey has been designated by the District and the Contract Documents to provide Construction Management Services for the Project. Unless directed differently by the District, the Construction Manager shall have the authority to act on behalf of the District.

1.10 Construction Procedures. Contractors shall thoroughly review the administrative procedures which are described in detail in these General Conditions, and elsewhere in the Project Manual. Prior to the start of construction, the District and Construction Manager shall convene a meeting (Preconstruction Meeting) to review these procedures, as well as reviewing other administrative procedures which may be specific to the Project.

1.11 Contract Documents. The Contract Documents consist of the Agreement between the District and the Contractor, Conditions of the Contract (whether General, Special, Supplemental or otherwise), Drawings, Specifications, including addenda thereto issued prior to execution of the Agreement and any other documents listed in the Agreement. The Contract Documents shall include modifications issued after execution of the Agreement. The Contract Documents form the Contract for Construction. The "Contract Documents shall include the Advertisement for Bid, Project Directory, Notice to Bidders, the General Instructions for Bidders, the Bid Proposal Form, Addenda, the Agreement for Construction, the Performance Bond, the Labor and Material Payment Bond, the Insurance

Requirements, the Sample Contract Agreements, these General Conditions for Contractors, contract drawings and plans, all duly issued Addenda, Interpretations, and Change Orders, Supplemental Drawings, the Contractor's Guarantee and Bond, the Subcontractor Listing, Preliminary Contract Schedule, and the Construction Schedule in its most recently updated and accepted version. Synonymous with agreement and purchase order.

1.12 Contract Document Terms. The term "provide" means "provide complete in place" or to "furnish and install" such item. Unless otherwise provided in the Contract Documents, the terms "approved;" "directed;" "satisfactory;" "accepted;" "acceptable;" "proper;" "required;" "necessary" and "equal" shall mean as approved, directed, satisfactory, accepted, acceptable, proper, required, necessary and equal, in the opinion of the Architect. The term "typical" as used in the Drawings shall require the installation or furnishing of such item(s) of the Work designated as "typical" in all other areas similarly marked as "typical;" Work in such other areas shall conform to that shown as "typical" or as reasonably inferable there from.

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

1.14 Contract Time. "Contract Time" shall mean the period specified for completion of the Work, as set forth in the Agreement for Construction and adjusted by any Change Order issued pursuant to the Contract Documents.

1.15 Contractor. "The Contractor," shall mean the person or persons, partnership, or corporation, who has entered into the Agreement for Construction of the Work with the District. The Contractor is required by law to be holding and maintain a valid California Contractor's license and who has contracted with the District to perform work or render services as a prime contractor in or about the construction of the work as described in the Contract Documents. References to "Contractor" include the Contractor's authorized representative.

1.16 Contractor's Superintendent. The Contractor's Superintendent is the individual employed by the Contractor whose principal responsibility shall be the supervision and coordination of the Work; the Contractor's Superintendent shall not perform routine construction labor.

1.17 Date of Commencement. "Date of Commencement" is the date established in the Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the Agreement for Construction or such other date as may be established therein.

1.18 Date of Completion. The "Date of Completion" is the date certified by the Owner and Architect when construction of the Work is 100% complete including acceptance by the Architect of all punch list corrections and completion and acceptance by the District of all closeout documents.

1.19 Day. Unless otherwise expressly defined, a "day" shall mean a calendar day of 24 hours, including each and every day of the year.

1.20 Defective or Non-Conforming Work. Defective or non-conforming Work is any Work which is unsatisfactory, faulty or deficient by: (a) not conforming to the requirements of the Contract Documents; (b) not conforming to the standards of workmanship of the applicable trade or industry; (c) not being in compliance with the requirements of any inspection, reference, standard, test, or approval required by the Contract Documents; or (d) damage occurring prior to Final Completion of all of the Work.

1.21 Delivery. The term "delivery" used in conjunction with any equipment, materials or other items to be incorporated into the Work shall mean the unloading and storage in a protected condition pending incorporation into the Work.

1.22 District. The "District" refers to **The Pacific Grove Unified School District** and unless otherwise stated, includes the District's authorized representatives, including the District's Project Manager, if a Project Manager is designated, the District's Board of Trustees and the District's officers, employees, agents and representatives. The District is designated as "Owner" in the Contract Documents.

1.23 Division of State Architect ("DSA"). The DSA is the California Division of the State Architect including without limitation the DSA's Office of Construction Services, Office of Design Services and the Office of Regulatory Services; references to the DSA in the Contract Documents shall mean the DSA, its offices and its authorized employees and agents. The authority of the DSA over the Work and the performance thereof shall be as set forth in the Contract Documents and Title 24 of the California Code of Regulations.

1.24 District's Inspector. The "District Inspector" shall mean the person or persons employed or engaged as (an) independent contractor(s) by the District to inspect the performance of the Work by the Contractor for compliance with the Contract Documents. The District Inspector is hereby designated as an agent of the District for such

purpose and no other. The District Inspector is supervised by, and reports to, the District. The authority of the District Inspector to monitor the work shall be strictly limited to that authority specified herein and in Title 24, California Administrative Code, and no additional authority has been granted nor shall be inferred. The Architect may be designated as the District Inspector, in which case the Architect shall perform the function and have the authority of both positions.

1.25 Drawings (Plans) and Specifications. The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing generally, the design, location and dimensions of the Work and may include without limitation, plans, elevations, sections, details, schedules or diagrams. The Drawings (sometimes hereinafter referred to as "drawings" or "plans") are the plans and working drawings, which show the location, character, dimensions and details of the Work to be performed, and all supplemental drawings issued by the District. Once approved, all such drawings are incorporated into and become a part of the Contact Documents. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, criteria and workmanship for the Work and related services. The Drawings and Specifications are intended to delineate and describe the Work and its component parts so as to permit skilled and competent contractors to bid upon the Work and prosecute the same to completion.

1.26 Equal (as in "or equal"). "Equal" shall mean a system, product or material which is of the same quality, appearance, and utility in all respects to that shown or specified but produced by a manufacturer not listed in the specification, in the opinion of the Architect. The Contractor bears the burden of proof of equality. Equal shall also require no additional approval processing by the Division of the State Architect (DSA). See also: Substitution.

1.27 Field Clarifications. A written or graphic document consisting of supplementary details, instructions or information issued on behalf of the District which clarifies or supplements the Contract Documents and which becomes a part of the Contract Documents upon issuance. Field Clarifications do not constitute an adjustment of the Contract Time or the Contract Price, unless a Change Order relating to a Field Clarification is authorized and issued under the Contract Documents. Also called "Letter of Instruction."

1.28 Field Order (FO). A "Field Order" is the name given to a document issued by the District through the Construction Manager authorizing work to proceed on a change in anticipation of approval and issuance by the District or Construction Manager of a Change Order.

1.29 Intent and Correlation of Contract Documents.

1.29.1 Work of the Contract Documents. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable therefrom as being necessary to produce the intended results. Organization of the Specifications into divisions, sections or articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Where any portion of the Contract Documents are silent and information appears elsewhere in the Contract Documents, such other portions of the Contract Documents shall control.

1.29.2 Technical Terms. Unless otherwise stated in the Contract Documents, words or terms which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.29.3 Conflict in Contract Documents. Conflicts, inconsistencies or ambiguities in the Contract Documents shall be resolved by the Architect in accordance with Article 3.9 of the General Conditions; where conflicts or inconsistencies arise between the Drawings and the Specifications, in resolving such conflicts or inconsistencies, the Architect will be governed generally by the following standards: the Drawings are intended to describe matters relating to placement, type, quantity and the like; the Specifications are intended to describe matters relating to quality, materials, compositions, manufacturers and the like. If conflicts exist between portions of the Contract Documents regarding the quality of any item, product, equipment or materials, unless otherwise directed or authorized by the District, the Contractor shall provide the item, product, equipment or material of the highest or more stringent quality.

1.30 Interpretations. "Interpretations" are all clarifications, additional instructions, and explanations issued by the Architect pursuant to Article 3 hereof, after award of the contract.

1.31 Materials / Equipment. "Materials" is a generic term which shall include all building materials, articles, supplies, and equipment delivered to the project for incorporation in the Work. "Materials" includes everything incorporated

into the Work except labor, unless otherwise noted. “Equipment” shall mean all pre-manufactured or partially preassembled products or components, assembled or partially assembled before delivery to the site.

1.32 Material Supplier. A Material Supplier is any person or entity who only furnishes materials, equipment or supplies for the Work without fabricating, installing or consuming them in the Work.

1.33 Notice to Proceed. The Notice to Proceed is the written notice issued by or on behalf of the District to the Contractor authorizing the Contractor to proceed with commencement of the Work and which establishes the date for commencement of the Contract Time. The Notice to Proceed is given to the Contractor following execution of the Agreement for Construction and receipt of all required preconstruction submittals as itemized in the Formal Notice of Intent to Award.

1.34 Request for Proposal (RFP). A "Request for Proposal" is the name given to a document issued by the District through the Construction Manager requesting pricing information for a described scope of work. Also called "Proposal Request."

1.35 Product Data. "Product Data" shall mean 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.

1.36 Progress Reports; Verified Reports. Progress Reports, if required, are written reports prepared by the Contractor and periodically submitted to the District in the form and content as required by the Contract Documents. Verified Reports are periodic written reports prepared by the Contractor and submitted to the DSA; Verified Reports shall be in such form and content as required by the applicable provisions of Title 24 of the California Code of Regulations. A material obligation of the Contractor is the preparation of complete and accurate Progress Reports, if required, and Verified Reports as well as the timely submission of the same.

1.37 The Project. The Project is the total construction of which the Work performed by the Contractor under the Contract Documents which may be the whole or a part of the Project and which may include construction by the District or by separate contractors.

1.38 Project Manager; District's Project Manager. The Project Manager, if any, is the individual or entity designated as such in the Special Conditions. The Project Manager shall be authorized and empowered to act on behalf of the District. In the event that a Project Manager is not designated in the Special Conditions, the District reserves the right to designate a Project Manager at any time during Contractor's performance of the Work. The District reserves the right to remove or replace the Project Manager during Contractor's performance of the Work. The designation of a Project Manager, if one has not been designated in the Special Conditions, or the removal or replacement of the designated Project Manager shall not result in adjustment of the Contract Price or the Contract Time or otherwise affect, limit or restrict Contractor's obligations hereunder.

1.39 Record Drawings. The Record Drawings are a set of the Drawings marked by the Contractor during the performance of the Work to indicate completely and accurately the actual as-built condition of the Work. The Record Drawings shall be sufficient for a capable and qualified drafter to modify the Drawings to reflect and indicate the Work actually in place at Final Completion of the Work.

1.40 Reference to Codes. Unless otherwise noted, all references to statutes are to the laws of the State of California as codified in the various specified codes.

1.41 Samples. "Samples shall mean drawings, diagrams, schedules, and other data specifically prepared by the Contractor or any subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

1.42 Shop Drawings; Samples; Product Data ("Submittals"). Shop Drawings are diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-Subcontractor, manufacturer, Material Supplier, or distributor to illustrate some portion of the Work. Samples are physical examples of materials, equipment or workmanship forming a part of, or to be incorporated into the Work. Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work. Shop Drawings, Samples and Product Data prepared or furnished by the Contractor or any of its Subcontractors or Material Suppliers are collectively referred to as "Submittals"

1.43 **Site.** The Site is the physical area designated in the Contract Documents for Contractor's performance, construction and installation of the Work.

1.44 **Special Conditions; Supplemental Conditions.** If made a part of the Contract Documents, Special Conditions and Supplemental Conditions are special or supplemental provisions, not otherwise provided for in the Agreement or the General Conditions.

1.45 **Special Provisions.** The "Special Provisions" are specified clauses setting forth conditions or requirements peculiar to the Work, and supplementary to the General Conditions and Technical Specifications.

1.46 **Specifications.** "Specifications" include the special provisions, general conditions, general requirements, and technical specifications applicable to the Work, all duly executed and issued addenda and interpretations, and all modifications approved by the District pursuant to a change order.

1.47 **Subcontractors; Sub-Subcontractors.** "Subcontractor" shall mean each person or firm who is required by law to be and who is licensed to and will perform work, labor, or render services to the Contractor in or about the construction of the Work, or who, under subcontract to the Contractor, fabricates and installs a portion of the work or improvement. A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work. "Subcontractor" does not include a separate contractor to the District or subcontractors of any separate contractor. A Sub-Subcontractor is a person or entity of any tier, who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. "Subcontractor" shall include all persons or firms within the authority of the Subletting and Subcontracting Fair Practices Act, Chapter 2 of Division 5, Tile 1 of the Public Contract Code, commencing with Section 4100.

1.48 **Substitution.** "Substitution" shall mean a system, process, product or material similar in form or function and equal in quality and performance to that shown or specified, but differing in some essential element, e.g., chemical composition, mechanism of action, surface finish, dimensions, durability, electrical or mechanical or plumbing requirements. See also: Equal.

1.49 **Surety.** The Surety is the person or entity that executes, as surety, the Contractor's Labor and Material Payment Bond and/or Performance Bond

1.50 **The Work.** The "Work" shall mean the scope of work defined for each trade package. The "Work" is the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment or services provided or to be provided by the Contractor to fulfill the Contractor's obligations under the Contract Documents. The Work may constitute the whole or a part of the Project.

ARTICLE 2. DISTRICT

2.1 Information Required of District.

2.1.1 **Surveys; Site Information.** Information, if any, concerning physical characteristics of the Site, including without limitation, surveys, soils reports, and utility locations, to be provided by the District are set forth in the Contract Documents. Information not provided by the District or necessary information in addition to that provided by the District concerning physical characteristics of the Site which is required shall be obtained by Contractor without adjustment to the Contract Price or the Contract Time.

2.1.2 **Permits; Fees.** Except as otherwise provided in the Contract Documents, the District shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities which relate to the Work of the Contractor under the Contract Documents. If permits and fees are designated as the responsibility of the Contractor under the Contract Documents, the Contractor shall be solely responsible for obtaining the same; the cost of such permits or fees and any costs incurred by the Contractor in obtaining such permits shall be included within the Contract Price.

2.1.3 **Drawings and Specifications.** Except as otherwise provided for in the Contract Documents, the District shall furnish the Contractor, free of charge, the number of copies of the Drawings and the

Specifications as set forth in the Special Conditions. All of the Drawings and the Specifications provided by the District to the Contractor remain the property of the District; the Contractor shall not use the Drawings or the Specifications in connection with any other work of improvement other than the Work of the Project.

2.1.4 Furnishing of Information. Information or services to be provided by the District under the Contract Documents shall be furnished by the District with reasonable promptness to avoid delay in the orderly progress of the Work. Information about existing conditions furnished by the District under the Contract Documents is obtained from sources believed to be reliable, but the District neither guarantees nor warrants that such information is complete and accurate. The Contractor shall verify all information provided by the District. To the extent that the Contract Documents depict existing conditions on or about the Site, or the Work involves the renovation, removal or remodeling of existing improvements, or the Work involves any tie-in or other connection with any existing improvements, the conditions and/or existing improvements depicted in the Contract Documents are as they are believed to exist.

2.2 District's Right to Stop the Work. In addition to the District's right to suspend the Work or terminate the Contract pursuant to the Contract Documents, the District, may, by written order, direct the Contractor to stop the Work, or any portion thereof, until the cause for such stop work order has been eliminated if the Contractor: (i) fails to correct Work which is not in conformity and in accordance with the requirements of the Contract Documents, or (ii) otherwise fails to carry out the Work in conformity and accordance with the Contract Documents. The right of the District to stop the Work hereunder shall not be deemed a duty on the part of the District to exercise such right for the benefit of the Contractor or any other person or entity, nor shall the District's exercise of such right waive or limit the exercise of any other right or remedy of the District under the Contract Documents or at law.

2.3 District's Right to Carry out the Work. If the Contractor defaults or neglects to carry out the work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the District to commence and continue correction of such default or neglect with diligence and promptness, the District may after such seven-day period give the Contractor a second written notice to correct such deficiencies within a second seven-day period. If the Contractor within such second seven-day period after receipt of such second notice fails to commence and continue to correct any deficiencies, the District may, without prejudice to other remedies the District may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Construction Manager's and Architect's and their respective consultants' additional services and expenses made necessary by such default, neglect or failure. Such action by the District and amounts charged to the Contractor are both subject to prior approval of the Architect, after consultation with the Construction Manager. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the District.

2.4 Partial Occupancy or Use.

2.4.1 District's Right to Partial Occupancy. The District may occupy or use any completed or partially completed portion of the Work, provided that: (i) the District has obtained the consent of, or is otherwise authorized by, public authorities with jurisdiction thereof, to so occupy or use such portion of the Work and (ii) the District and the Contractor have accepted, in writing, the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, utilities, damage to the Work, insurance and the period for correction of the Work and commencement of warranties required by the Contract Documents for such portion of the Work partially used or occupied by the District. If the Contractor and the District are unable to agree upon the matters set forth in (ii) above, the District may nevertheless use or occupy any portion of the Work, with the responsibility for such matters subject to resolution in accordance with the Contract Documents. Immediately prior to such partial occupancy or use of the Work, or portions thereof, the District, the District's Inspector, the Contractor and the Architect shall jointly inspect the portions of the Work to be occupied or to be used to determine and record the condition of the Work. Repairs, replacements or other corrective action noted in such inspection shall be promptly performed and completed by the Contractor so that the portion of the Work to be occupied or used by the District is in conformity with the requirements of the Contract Documents and the District's occupancy or use thereof is not

impaired. The District's use or occupancy of the Work or portions thereof pursuant to the preceding shall not be deemed "completion" of the Work as that term is used in Public Contract Code §7107.

2.4.2 No Acceptance of Defective or Nonconforming Work. Unless otherwise expressly agreed upon by the District and the Contractor, the District's partial occupancy or use of the Work or any portion thereof, shall not constitute the District's acceptance of the Work not complying with the requirements of the Contract Documents or which is otherwise defective. The District's Inspector/Inspector of Record (IOR). In addition to the authority and rights of the District's Inspector as provided for elsewhere in the Contract Documents, all of the Work shall be performed under the observation of the District's Inspector. The District's Inspector shall have access to all parts of the Work at any time, wherever located and whether partially or completely fabricated, manufactured, furnished or installed. The performance of the duties of the District's Inspector under the Contract Documents shall not relieve or limit the Contractor's performance of its obligations under the Contract Documents.

ARTICLE 3. ARCHITECT AND CONSTRUCTION MANAGER

3.1 Administration of the Contract.

3.1.1 Role of the Architect and Construction Manager. The Architect and Construction Manager will provide administration of the Contract as described in the Contract Documents, and will be one of the District's representatives during construction until the time that Final Payment is due the Contractor under the Contract Documents. The Architect and Construction Manager will advise and consult with the District, the District's Project Manager~~,~~ and the District's Inspector with respect to the administration of the Contract and the Work. The Architect is authorized to act on behalf of the District to the extent provided for in the Contract Documents; and shall have the responsibilities and powers established by law, including Title 24 of the California Code of Regulations. The Architect is authorized to stop the Work whereas deemed necessary in the sole discretion of the Architect to ensure that the Work is completed in accordance with the Contract Documents.

3.1.2 Architect's Periodic Site Inspections. The Architect will visit the Site at intervals appropriate to the stage of construction to observe the progress and quality of work. The architect shall not be responsible for sequences or procedures, or for safety precautions and programs in connection with the Work, these being solely the Contractor's responsibility. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

3.2 Contractor responsible for Construction, Means, Methods and Sequences. The Architect/ will not have control over of charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, these being solely the Contractor's responsibility. The Architect will not have control over or charge of and will not be responsible for acts or omission of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

3.3 Review of Applications for Payment. In accordance with Article 8 hereof, the Architect and Construction Manager will review the Contractor's Applications for Progress Payments and for Final Payment, evaluate the extent of Work performed and the amount properly due the Contractor on such Application for Payment.

3.4 Rejection of Work. The Architect is authorized to reject Work which is defective or does not conform to the requirements of the Contract Documents. Whenever the Architect considers it necessary or advisable, for implementation of the Contract Documents, the Architect will have authority to require additional inspections or testing of the Work, whether or not such Work is fabricated, installed or completed. Neither this authority of the Architect nor a decision made in good faith by the Architect to exercise or not to exercise such authority shall give rise to a duty or responsibility of the at to the Contractor, Subcontractors, Material Suppliers, their agents or employees, or other persons performing portions of the Work.

3.5 Submittals.

3.5.1 Architect's Review. The Architect will review and approve or take other appropriate action upon the Contractor's Submittals, but only for the limited purpose of checking for general conformance with information given and the design concept expressed in the Contract Documents. Review of Submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's Submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect's review of Submittals shall not constitute approval of safety measures, programs or precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item in a Submittal shall not indicate approval of an assembly of which the item is a component with the Submittal(s) required and relating to such assembly have been reviewed by the Architect.

3.5.2 Time for Architect's Review. The Architect's review of Submittals will be conducted promptly so as not to delay or hinder the progress of the Work or the activities of the Contractor, the District or the District's separate contractors while allowing sufficient time, in the Architect's reasonable professional judgment, to permit adequate review of Submittals. The foregoing notwithstanding, the Architect's review and return of Submittals will conform with the time limits and other conditions, if any, set forth in the Specifications or the Submittal Schedule if the Submittal Schedule is required by other provisions of the Contract Documents.

3.6 Changes to the Work; Change Orders. The Architect will prepare Change Orders and may authorize minor Changes in the Work which do not result in adjustment of the Contract Time or the Contract Price.

3.7 Completion. The Architect and Construction Manager will conduct observations to determine the date or dates of Substantial Completion and the date of Final Completion, will receive and forward to the District, for the District's review and records, written warranties and related documents required by the Contract Documents and assembled by the Contractor, and will verify that the Contractor has complied with all requirements of the Contract Documents and is entitled to receipt of Final Payment.

3.8 Interpretation of Contract Documents. The Architect will interpret and decide matters concerning the requirements of the Contract Documents on written request of either the District or the Contractor. The Architect's response to such requests will be made with reasonable promptness and within the time limits agreed upon, if any. If no agreement is reached establishing the time for the Architect's review and response to requests under Article 3.9, the Architect shall be afforded a fifteen (15) day period after receipt of such request to review and respond thereto. Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both the District and the Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith. The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

3.9 Request for Information. If the Contractor encounters any condition which the Contractor believes, in good faith and with reasonable basis, is the result of an ambiguity, conflict, error or omission in the Contract Documents (collectively "the Conditions"), it shall be affirmative obligation of the Contractor to timely notify the Construction Manager, in writing, of the Conditions encountered and to request information from the Architect necessary to address and resolve any such Conditions before proceeding with any portion of the Work affected or which may be affected by such Conditions. If the Contractor fails to timely notify the Construction Manager in writing of any Conditions encountered and the Contractor proceeds to perform any portion of the Work containing or affected by such Conditions the Contractor shall bear all costs associated with or required to correct, remove, or otherwise remedy any portion of the Work affected thereby without adjustment of the Contract Time or the Contract Price. In requesting information of the Construction Manager to address and resolve any Conditions, the Contractor shall act with promptness in submitting any such written request so as to allow the Architect a reasonable period of time to review, evaluate and respond to any such request, taking into account the then current status of the progress and completion of the Work and the actual or potential impact of any such Conditions upon the completion of

the Work within the Contract Time. The Contract Time shall not be subject to adjustment in the event that the Contractor shall fail to timely request information from the Architect. The Architect's responses to any such Contractor request for information shall conform with the standards and time frame set forth in Article 3.8 of these General Conditions. The foregoing provisions notwithstanding, in the event that the Architect reasonably determines that any of Contractor's request(s) for information: (i) does not reflect adequate or competent supervision or coordination by the Contractor or any Subcontractor; or (ii) does not reflect the Contractor's adequate or competent knowledge of the requirements of the Work or the Contract Documents; or (iii) is not justified for any other reason, Contractor shall be liable to the District for all costs incurred by the District associated with the processing, reviewing, evaluating and responding to any such request for information, including without limitation, fees of the Architect and any other consultant to the Architect or the District. In responding to any of Contractor's request(s) for information, the Architect shall, in the response, indicate if the Architect has made the determination pursuant to the preceding sentence and, if so, the amount of costs to be borne by the Contractor for the processing, review, evaluation and response to the request for information. Thereafter, the District is authorized to deduct such amount from any portion of the Contract Price then or thereafter due the Contractor.

3.10 Communications; Construction Manager's Role. All communications regarding the Work, the performance thereof or the Contract Documents shall be in writing; verbal communications shall be reduced to writing. Communications between the Contractor, Architect and the District shall be through the Construction Manager. All communications of the Contractor regarding the Work, the Contract Documents or any portions thereof shall be transmitted to the Construction Manager. Communications from Subcontractor or Material Suppliers shall be transmitted to the Contractor for transmittal to the Construction Manager. All written communications between the Contractor and any Subcontractor, Material Supplier or others directly or indirectly engaged by the Contractor to perform or provide any portion of the Work shall be available to the District, the Construction Manager and the Architect for review, inspection and reproduction as may be requested from time to time. Failure or refusal of the Contractor to permit the District, the Construction Manager or Architect to review, inspect or reproduce such written communications may be deemed a default of Contractor hereunder.

3.11 Termination of Architect or Construction Manager; Substitute Architect or Construction Manager. In case of termination of employment of the Architect or Construction Manager, the District shall appoint a substitute whose status under the Contract Documents shall be that of the Architect or Construction Manager, as applicable.

ARTICLE 4. THE CONTRACTOR

4.1 Contractor Review of Contract Documents.

4.1.1 Examination of Contract Documents. The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the District pursuant to the Contract Documents and shall at once report to the Architect any errors, inconsistencies or omissions discovered. If the Contractor performs any Work knowing, or with reasonable diligence should have known that it involves an error, inconsistency or omission in the Contract Documents without prior notice to the Construction Manager of the same, the Contractor shall assume full responsibility for such performance and shall bear all attributable costs for correction of the same.

4.1.2 Field Measurements. Prior to commencement of the Work, or portions thereof, the Contractor shall take field measurements and verify field conditions at the Site and shall carefully compare such field measurements and conditions and other information known to the Contractor with information provided in the Contract Documents. Errors, inconsistencies or omissions discovered shall be reported to the Construction Manager at once.

4.1.3 Dimensions; Layouts and Field Engineering. Unless otherwise expressly provided, dimensions indicated in the Drawings are intended for reference only. The Drawings are intended to be diagrammatic and schematic in nature; the Contractor shall be solely responsible for dimensioning and coordinating the Work of the Contract Documents. All field engineering required for laying out the Work and establishing grades for earthwork operations shall be by the Contractor at its expense. Any field engineering or other engineering to be provided or performed by the Contractor

under the Contract Documents and required or necessary for the proper execution or installation of the Work shall be provided and performed by an engineer duly registered under the laws of the State of California in the engineering discipline for such portion of the Work.

4.1.4 Work in Accordance with Contract Documents. The Contractor shall perform all of the Work in strict conformity with the Contract Documents and approved Submittals.

4.2 Site Investigation; Subsurface Conditions.

4.2.1 Contractor Investigation. The Contractor shall be responsible for, and by executing the Agreement acknowledges, that it has carefully examined the Site and has taken all steps it deems reasonably necessary to ascertain all conditions which may affect the Work, or the cost thereof, including, without limitation, conditions bearing upon transportation, disposal, handling or storage of materials; availability of labor or utilities; access to the Site; and the physical conditions and the character of equipment, materials, labor and services necessary to perform the Work. Any failure of the Contractor to do so will not relieve it from the responsibility for fully and completely performing all Work without adjustment to the Contract Price or the Contract Time. The District assumes no responsibility to the Contractor for any understandings or representations concerning conditions or characteristics of the Site, or the Work, made by any of its officers, employees or agents prior to the execution of the Agreement, unless such understandings or representations are expressly set forth in the Agreement.

4.2.2 Subsurface Data. By executing the Agreement, the Contractor acknowledges that it has examined the boring data and other subsurface data available and satisfied itself as to the character, quality and quantity of surface and subsurface materials, including without limitation, obstacles which may be encountered in performance of the Work, insofar as this information is reasonably ascertainable from an inspection of the Site, review of available subsurface data and analysis of information furnished by the District under the Contract Documents. Subsurface data or other soils investigation report provided by the District hereunder are not a part of the Contract Documents. Information contained in such data or report regarding subsurface conditions, elevations of existing grades, or below grade elevations are approximate only and is neither guaranteed or warranted by the District to be complete and accurate. The Contractor shall examine all boring and other subsurface data to make its own independent interpretation of the subsurface conditions and acknowledges that its bid is based upon its own opinion of the conditions which may be encountered. The District assumes no responsibility for any conclusions or interpretations made by Contractor on the basis of available subsurface data or other information furnished by District under the Contract Documents.

4.2.3 Subsurface Conditions. If the Work under the Contract Documents involves digging trenches or other excavations that extend deeper than four feet below the surface, the Contractor shall promptly and before the following conditions are disturbed, notify the District's Inspector, in writing, of any: (i) material that the Contractor believes may be material that is hazardous waste, as defined in California Health and Safety Code §25117, that is required to be removed to a Class I or Class II or Class III disposal site in accordance with provisions of existing law; ii) subsurface or latentphysical conditions at the site differing from those indicated; or (iii) unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in the Work or the character provided for in the Contract Documents. If upon notice to the District of the conditions described above and upon the District's investigation thereof, the District determines that the conditions so materially differ or involve such hazardous materials which require an adjustment to the Contract Price or the Contract Time, the District shall issue a Change Order in accordance with Article 9 hereof. In accordance with California Public Contract Code §7104, any dispute arising between the Contractor and the District as to any of the conditions listed in (i), (ii) or (iii) above, shall not excuse the Contractor from the completion of the Work within the Contract Time and the Contractor shall proceed with all Work to be performed under the Contract Documents. The District reserves the right to terminate the Contract pursuant to Article 15.2 hereof should the District determine not to proceed because of any condition described in (i), (ii) or (iii) above.

4.3 Supervision and Construction Procedures.

4.3.1 Supervision of the Work. The Contractor shall supervise and direct performance of 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 and procedures and for coordinating all portions of the Work under the Contract Documents, unless Contract Documents give other specific instructions concerning these matters. The Contractor shall be responsible for inspection of completed or partially completed portions of Work to determine that such portions are in proper condition to receive subsequent Work.

4.3.2 Responsibility for the Work. The Contractor shall be responsible to the District for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and all other persons performing any portion of the Work under a contract with the Contractor. The Contractor shall not be relieved of the obligation to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager, District's Inspector or 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.

4.3.3 Surveys. The Contractor shall prepare or cause to be prepared (except where noted otherwise) all detailed surveys necessary for performance of the Work, including without limitation, slope stakes, points, lines and elevations. The Contractor shall be responsible for the establishment, location, maintenance and preservation of benchmarks, reference points and stakes for the Work. The cost of any surveys and the establishment, location, maintenance and preservation of benchmarks, reference points and stakes shall be included within the Contract Price. The Contractor shall be solely responsible for all loss or costs resulting from the loss, destruction, disturbance or damage of benchmarks, reference points or stakes.

4.3.4 Construction Utilities. The District will furnish and pay the costs of utility services for the Work as set forth in the Special Conditions; all other utilities necessary to complete the Work and to completely perform all of the Contractors' obligations shall be obtained by the Contractor without adjustment of the Contract Price. The Contractor shall furnish and install necessary or appropriate temporary distributions of utilities, including utilities furnished by the District. The Contractor, upon completion of the Work, shall remove any such temporary distributions. The costs of all such utility services, including the installation and removal of temporary distributions thereof, shall be borne by the Contractor and included in the Contract Price

4.3.5 Existing Utilities; Removal, Relocation and Protection. In accordance with California Government Code §4215, the District shall assume the responsibility for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the Site which are not identified in the Drawings, Specifications or other Contract Documents. Contractor shall be compensated for the costs of locating, repairing damage not due to the Contractor's failure to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Drawings, Specifications and other Contract Documents with reasonable accuracy and for equipment on the Site necessarily idled during such work. Contractor shall not be assessed Liquidated Damages for delay in completion of the Work when such delay is caused by the failure of the District or the District of the utility to provide for removal or relocation of such utility facilities. Nothing in this Article 4.3.5 shall be deemed to require the District to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Site can be inferred from the presence of other visible facilities, such as buildings, meters and junction boxes, on or adjacent to the Site. If the Contractor encounters utility facilities not identified by the District in the Drawings, Specifications, or other Contract Documents, the Contractor shall immediately notify, in writing, the District, the District's inspector, the Architect, the Construction Manager and the utility owner. In the event that such utility facilities are owned by a public utility, 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.

4.3.6 Conferences and Meetings. A material obligation of the Contractor under the Contract Documents is the attendance by the Contractor's supervisory personnel for the Work and the Contractor's management personnel as required by the Contract Documents or as requested by the District.

The Contractor's personnel participating in conferences and meetings relating to the Work shall be authorized to act on behalf of the Contractor and to bind the Contractor. The Contractor is solely responsible for arranging for the attendance by Subcontractors and Material Suppliers at meetings and conferences relating to the Work as necessary, appropriate or as requested by the District.

4.3.6.1 Pre-Construction Conference. The Contractor's representatives (and representatives of Subcontractors as requested by the District) shall attend a Pre-Construction Conference at such time and place as designated by the District. The Pre-Construction Conference will generally address requirements of the Work and Contract Documents and establish construction procedures. Subject matters of the Pre-Construction Conference will include as appropriate: (a) administrative matters, including an overview of the respective responsibilities of the District, Architect, Construction Manager, Contractor, Subcontractor, Project Inspector and others performing any part of the Work or services relating to the Work; (b) Submittals; (c) Changes and Change Order submission; (d) employment practices, including Certified Payroll preparation and submission, prevailing wage rate responsibilities of the Contractor and Subcontractors, compliance with apprenticeship standards and other matters described in the LCP; (e) Progress Schedule development and maintenance; (f) development of Schedule of Values and payment procedures; (g) communication procedures, including the handling of Request for Information; (h) emergency and safety procedures; (i) Site visitor policies; (j) conduct of Contractor / Subcontractor personnel at the Site; and (k) punch list/close-out procedures.

4.3.6.2 Progress Meetings. Progress meetings will be conducted on regular intervals (weekly unless otherwise expressly indicated elsewhere in the Contract Documents). The Contractor's representatives and representatives of Subcontractors (as requested by the District) shall attend Progress Meetings. Progress Meetings will be chaired by the Architect or the Construction Manager and will generally include as agenda items: Site safety, field issues, coordination of Work, construction progress and impacts to timely completion, if any. The purposes of the Progress Meetings include: a formal and regular forum for discussion of the status and progress of the Work by all Project participants, a review of progress or resolution of previously raised issues and action items assigned to the Project participants, and reviews of the Progress Schedule and Submittals.

4.3.6.3 Special Meetings. As deemed necessary or appropriate by the District, Special Meetings will be conducted with the participation of the Contractor, Subcontractors and other Project participants as requested by the District.

4.3.6.4 Minutes of Meetings. Following conclusion of the Pre-Construction Conference, Progress Meetings and Special Meetings, the Architect or the Construction Manager will prepare and distribute minutes reflecting the items addressed and actions taken at a meeting or conference. Unless the Contractor notifies the Architect and the Construction Manager in writing of objections or corrections to minutes prepared hereunder within five (5) days of the date of distribution of the minutes, the minutes as distributed shall constitute the official record of the meeting or conference. No objections or corrections of any Subcontractor or Material Supplier shall be submitted directly to the Architect or the Construction Manager; such objections or corrections shall be submitted to the Architect and the Construction Manager through the Contractor. If the Contractor timely interposes objections or notes corrections, the resolution of such matters shall be addressed at the next scheduled Progress Meeting.

4.4 Labor and Materials.

4.4.1 Payment for Labor, Materials and Services. Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, Construction Equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated in the Work.

4.4.2 Employee Discipline. The Contractor shall enforce strict discipline and good order among the Contractor's employees, the employees of any Subcontractor or Sub-subcontractor, and all other persons performing any part of the Work at the Site. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. The Contractor shall dismiss from its employ and direct any Subcontractor or Sub-subcontractor to dismiss from their employment any person deemed by the District to be unfit or incompetent to perform Work and thereafter, the Contractor shall not employ nor permit the employment of such person for performance of any part of the Work without the prior written consent of the District, which consent may be withheld in the reasonable discretion of the District.

4.4.3 Contractor's Superintendent. The Contractor shall employ a competent superintendent, who is able to clearly communicate to the satisfaction of the District's Representative and all necessary assistants who shall be in attendance at the Site at all times during performance of the Work. The Contractor's communications relating to the Work or the Contract Documents shall be through the Contractor's superintendent. The superintendent shall represent the Contractor and communications given to the superintendent shall be binding as if given to the Contractor. The Contractor shall dismiss the superintendent or any of his/her assistants if they are deemed, in the sole reasonable judgment of the District, to be unfit, incompetent or incapable of performing the functions assigned to them. In such event, the District shall have the right to approve of the replacement superintendent or assistant.

4.4.4 Prohibition on Harassment.

4.4.4.1 District's Policy Prohibiting Harassment. The District is committed to providing a campus and workplace free of sexual harassment and harassment based on factors such as race, color religion, national origin, ancestry, age, medical condition, marital status, disability or veteran status. Harassment includes without limitation, verbal, physical or visual conduct which creates an intimidating, offensive or hostile environment such as racial slurs, ethnic jokes, posting of offensive statements, posters or cartoons or similar conduct. Sexual harassment includes without limitation the solicitation of sexual favors, unwelcome sexual advances, or other verbal, visual or physical conduct of a sexual nature.

4.4.4.2 Contractor's Adoption of Anti-Harassment Policy. Contractor shall adopt and implement all appropriate and necessary policies prohibiting any form of discrimination in the workplace, including without **limitation** harassment on the basis of any classification protected under local, state or federal law, regulation or policy. Contractor shall take all reasonable steps to prevent harassment from occurring, including without limitation affirmatively raising the subject of harassment among its employees, expressing strong disapproval of any form of harassment, developing appropriate sanctions, informing employees of their right to raise and how to raise the issue of harassment and informing complainants of the outcome of an investigation into a harassment claim. Contractor shall require that any Subcontractor or Sub-subcontractor performing any portion of the Work to adopt and implement policies in conformity with this Article 4.4.4.

4.4.4.3 Prohibition on Harassment at the Site. Contractor shall not permit any person, whether employed by Contractor, a Subcontractor, Sub-subcontractor, or any other person or entity, performing any Work at or about the Site to engage in any prohibited form of harassment. Any such person engaging in a prohibited form of harassment directed to any individual performing or providing any portion of the Work at or about the Site shall be subject to appropriate sanctions in accordance with the anti-harassment policy adopted and implemented pursuant to Article 4.4.4.2 above. Any person, performing or providing Work on or about the Site engaging in a prohibited form of harassment directed to any student, faculty member or staff of the District or directed to any other person on or about the Site shall be subject to immediate removal and shall be prohibited thereafter from providing or performing any portion of the Work. Upon the District's receipt of any notice or complaint that any person employed directly or indirectly by Contractor in performing or providing the Work has engaged in a prohibited form of harassment, the District will promptly undertake an investigation of such notice or complaint. In the event that the District, after such

investigation, reasonably determines that a prohibited form of harassment has occurred, the District shall promptly notify the Contractor of the same and direct that the person engaging in such conduct be immediately removed from the Site. Unless the District's determination that a prohibited form of harassment has occurred is grossly negligent or without reasonable cause, District shall have no liability for directing the removal of any person determined to have engaged in a prohibited form of harassment nor shall the Contract Price or the Contract Time be adjusted on account thereof. Contractor and the Surety shall defend, indemnify and hold harmless the District and its employees, officers, board of trustees, agents, and representatives from any and all claims, liabilities, judgments, awards, actions or causes of actions, including without limitation, attorneys' fees, which arise out of, or pertain in any manner to: (i) the assertion by any person dismissed from performing or providing work at the direction of the District pursuant to this Article 4.4.4.3; or (ii) the assertion by any person that any person directly or indirectly under the employment or direction of the Contractor has engaged in a prohibited form of harassment directed to or affecting such person. The obligations of the Contractor and the Surety under the preceding sentence are in addition to, and not in lieu of, any other obligation of defense, indemnity and hold harmless whether arising under the Contract Documents, at law or otherwise; these obligations survive completion of the Work or the termination of the Contract.

4.4.4.4 Notwithstanding the provisions of the above paragraph, Contractor agrees to assume all risk and to indemnify and hold harmless the District from and against any and all claims, demands, defense costs, liability, expense, or damages of any kind or nature arising out of or in connection with damage to or loss of any property belonging to Contractor or Contractor’s employees, contractors, representatives, patrons, guests, or invitees.

4.4.4.5 Contractor further agrees to indemnify District for damage to or loss of District property arising out of or in connection with Contractor’s work associated with this Agreement or arising out of any act or omission of Contractor or any of Contractor’s employees, agents, contractors, representatives, patrons, guests, or invitees, excepting such damage or loss arising out of the negligence of the District. Right of general supervision by the District shall not make the Contractor an agent of the District, and the liability of the Contractor for all damages to persons or to public or private property arising from the Contractor's execution of the work shall not be lessened because of such general supervision.

4.5 Taxes. The Contractor shall pay, without adjustment of the Contract Price, all sales, consumer, use and other taxes for the Work or portions thereof provided by the Contractor under the Contract Documents.

4.6 Permits, Fees and Notices; Compliance with Laws.

4.6.1 Basis Standard. The Contractor shall conduct the Work so that all laws and ordinances for the protection of the public and the workers shall be obeyed fully both by the Contractor and by all subcontractors on the site. The Contractor shall comply with the requirements of the California State Licensing Board and have a valid contractor’s license, which is to be active as to the date of the receipt of bids and maintained in “Good Standing” from the receipt of bids throughout the Project to completion. The class of license required is as indicated in the Table of Contents, Notice to Bidders, and Bid Proposal Forms sections.

4.6.2 Permits. The District will pay all fees required by the Division of the State Architect, Department of General Services, and State of California, as well as any and all necessary approvals, easements, assessments, and charges required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities, including any required building, electrical, plumbing, mechanical, or grading permits. The Contractor is to be responsible for coordinating and obtaining those required permits. The District will reimburse the Contractor for utility connection fees, encroachment permits, utility service charges other than temporary utility charges unless otherwise indicated, necessary for the completion of the Work. All other fees and permits shall be at the expense of the Contractor. Proper documentation of fee, permit, and utility service charges shall be submitted to the District along with the Contractor’s request for reimbursement for utility connection fees, if any. No mark-up shall be allowed the Contractor on these reimbursable charges. The Contractor shall give

all notices and comply with all laws, ordinances, rules, regulations or orders of any public authority bearing on the performance of the Work.

4.6.3 Compliance with Laws and Regulations. The Contractor shall keep itself fully informed of and shall observe and comply with, and shall cause any and all persons, firms, or corporations employed by it or under it to observe and comply with all federal and state laws, and county or municipal ordinances, regulations, orders, and decrees which in any manner affect those engaged or employed on the Work, or the materials used in the Work, or in any way affect the conduct of the Work

4.6.4 Notice of Variation From Laws. If the Contractor knows, or has reason to believe, that any portion of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, regulations or rules, the Contractor shall promptly notify the Construction Manager and the District's Inspector, in writing, of the same. If the Contractor performs Work knowing, or with reasonable diligence should have known, it to be contrary to laws, statutes, ordinances, building codes, rules or regulations applicable to the Work without such notice to the Construction Manager and the District's Inspector, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs arising or associated there from, including without limitation, the removal, replacement or correction of the same.

4.7 Submittals.

4.7.1 Purpose of Submittals. Shop Drawings, Product Data, Samples and similar submittals (collectively “Submittals”) are not Contract Documents. The purpose for submission of Submittals is to demonstrate, for those portions of the Work for which Submittals are required, the manner in which the Contractor proposes to provide or incorporate such item of the Work in conformity with the information given and the design concept expressed in the Contract Documents.

4.7.2 Contractor's Submittals.

4.7.2.1 Prompt Submittals. The Contractor shall review, approve and submit to the Construction Manager or such other person or entity designated by the District, the number of copies of Submittals required by the Contract Documents. All Submittals required by the Contract Documents shall be prepared, assembled and submitted by the Contractor to the Construction Manager within the time frames set forth in the Submittal Schedule incorporated and made a part of the Approved Construction Schedule prepared and submitted by the Contractor pursuant to Article 7 of these General Conditions. Contractor’s submission of Submittals in conformity with the Submittal Schedule is a material obligation of the Contractor. In the event of Contractor’s failure or refusal to deliver Submittals to the Construction Manager in accordance with the Submittal Schedule, the Contractor shall be subject to per diem assessments in the amount set forth in the Special Conditions for each day of delayed submission for any Submittal beyond the date set forth in the Submittal Schedule for Contractor’s submission of such Submittal. Contractor and District acknowledge and agree that if Contractor shall fail to deliver Submittals in accordance with the Submittal Schedule, the District will incur costs and expenses not contemplated by the Contract Documents, the exact amount of which are difficult to ascertain and fix. Contractor and the District acknowledge and agree that the per diem assessment for delayed submission of Submittals set forth in the Special Conditions represents a reasonable estimate of costs and expenses the District will incur as a result of delayed submission of Submittals and that the same is not a penalty. Notwithstanding Contractor's submission of all required Submittals in accordance with the Submittal Schedule, in the event that the District or the Architect reasonably determines that all or any portion of such Submittals fail to comply with the requirements of Articles 4.7.2.2, 4.7.2.3 and 4.7.2.4 of these General Conditions and/or such Submittals are not otherwise complete and accurate so as to require re-submission, Contractor shall bear all costs associated with the review and approval of resubmitted Submittals, including without limitation Architect’s fees incurred in connection therewith; provided that such costs are in addition to, and not in lieu of, any per diem assessments imposed under this Article 4.7.2.1 for Contractor's delayed submission of Submittals. In the event of the District's imposition of the per diem assessments due to the Contractor's delayed submission of Submittals or in the event of the District's

assessment of costs and expenses incurred to review incomplete or inaccurate Submittals, the District may deduct the same from any portion the Contract Price then or thereafter due the Contractor. Submittals not required by the Contract Documents or which do not otherwise conform with the requirements of the Contract Documents may be returned without action. No adjustment to the Contract Time or the Contract Price shall be granted to the Contractor on account of its failure to make timely submission of any Submittal.

4.7.2.2 Approval of Subcontractor Submittals. All Submittals prepared by Subcontractors, of any tier, Material Suppliers, manufacturers or distributors shall bear the written approval of the Contractor thereto prior to submission to the Construction Manager for review. Any Submittal not bearing the Contractor's written approval shall be subject to return to the Contractor for re-submittal in conformity herewith, with the same being deemed to not have been submitted. Any delay, impact or cost associated therewith shall be the sole and exclusive responsibility of the Contractor without adjustment to the Contract Time or the Contract Price.

4.7.2.3 Verification of Submittal Information. By approving and submission of Submittals, the Contractor represents to the District and Architect that the Contractor has determined and verified materials, field measurements, field construction criteria, catalog numbers and similar data related thereto and has checked and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents.

4.7.2.4 Information Included in Submittals. All Submittals shall be accompanied by a written transmittal or other writing by the Contractor providing an identification of the portion of the Drawings or the Specifications pertaining to the Submittal, with each Submittal numbered consecutively for ease of reference along with the following information: (i) date of submission; (ii) project name; (iii) name of submitting Subcontractor; and (iv) if applicable, the revision number. The foregoing information is in addition to, and not in lieu of, any other information required for the Architect’s review, evaluation and approval of the Contractor's Submittals.

4.7.2.5 Contractor Responsibility for Deviations. The Contractor shall not be relieved of responsibility for correcting deviations from the requirements of the Contract Documents by the Architect’s review of Submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submission of the Submittal and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Submittals by the Architect’s review thereof.

4.7.2.6 No Performance of Work Without Architect Review. The Contractor shall perform no portion of the Work requiring the Architect’s review of Submittals until the Architect has completed its review and returned the Submittal to the Contractor indicating “No Exception Taken” to such Submittal. The Contractor shall not perform any portion of the Work forming a part of a Submittal or which is affected by a related Submittal until the entirety of the Submittal or other related Submittal has been fully processed. Such Work shall be in accordance with the final action taken by the Architect in review of Submittals and other applicable portions of the Contract Documents.

4.7.3 Architect Review of Submittals. The purpose of the Architect’s review of Submittals and the time for the Architect’s return of Submittals to the Contractor shall be as set forth elsewhere in the Contract Documents. If the Architect returns a Submittal as rejected or requiring correction(s) with re-submission, the Contractor, so as not to delay the progress of the Work, shall promptly thereafter resubmit a Submittal conforming with the requirements of the Contract Documents; the resubmitted Submittal shall indicate the portions thereof modified in accordance with the Architect’s direction. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Architect shall be entitled to rely upon the accuracy and completeness of such calculations and certifications accompanying Submittals. The Architect’s review of the Submittals is for the limited purposes described in the Contract Documents. The following notations or notations of a similar nature noted on a reviewed Submittal will require the

Contractor action noted below.

Architect Notation	Contractor Action
No Exceptions Taken	No formal revision required.
Make Corrections Noted	Make revision noted; re-submission of revised Submittal not required.
Revise and Re-Submit	Revise Submittal in accordance with notations and re-submit for subsequent review.
Rejected; Re-Submit	Prepare new alternative Submittal and resubmit for review.

4.7.4 Deferred Approval Items. If any portion of the Work is designated in the Contract Documents as a "Deferred Approval" item, Contractor shall be solely and exclusively responsible for: (i) the design, engineering and specifying the materials/equipment forming any part of the Deferred Approval Item; (ii) integrating and/or coordinating the Deferred Approval Item with other portions of the Work; (iii) preparation of Submittals for such item(s) in a timely manner so as not to delay or hinder the completion of the Work within the Contract Time; and (iv) timely obtaining DSA approval thereof.

4.8 Materials and Equipment.

4.8.1 Specified Materials, Equipment. References in the Contract Documents to any specific article, device, equipment, product, material, fixture, patented process, form, method or type of construction, by name, make, trade name, or catalog number, with or without the words "or equal" shall be deemed to establish a minimum standard of quality or performance, and shall not be construed as limiting competition.

4.8.2 Approval of Substitutions or Alternatives. Pursuant to Public Contract Code §3400(a), the District has limited the time for consideration and evaluation of proposed alternatives or substitutions to materials/equipment specified in the Contract Documents to the bid phase only. Accordingly, the District will not consider or approve of substitutions or alternatives to materials/equipment specified in the Contract Documents after time allotted for submittal of proposed materials/equipment substitutions during the bid phase.

4.8.3 Placement of Material and Equipment Orders. Contractor shall, after award of the Contract, promptly and timely place all orders for materials and/or equipment necessary for completion of the Work so that delivery of the same shall be made without delay or interruption to the timely completion of the Work. Contractor shall require that any Subcontractor or Sub-Subcontractor performing any portion of the Work similarly place orders for all materials and/or equipment to be furnished by any such Subcontractor or Sub-Subcontractor in a prompt and timely manner so that delivery of the same shall be made without delay or interruption to the timely completion of the Work. Upon request of the District or the Architect, the Contractor shall furnish reasonably satisfactory written evidence of the placement of orders for materials and/or equipment necessary for completion of the Work, including without limitation, orders for materials and/or equipment to be provided, furnished or installed by any Subcontractor or Sub-Subcontractor.

4.8.4 District's Right to Place Orders for Materials and/or Equipment. Notwithstanding any other provision of the Contract Documents, in the event that the Contractor shall, upon request of the District or the Architect, fail or refuse, for any reason, to provide reasonably satisfactory written evidence of the placement of orders for materials and/or equipment necessary for completion of the Work, or should the District determine, in its sole and reasonable discretion, that any orders for materials and/or equipment have not been placed in a manner so that such materials and/or equipment will be delivered to the Site so the Work can be completed without delay or interruption, the District shall have the right, but not the obligation, to place such orders on behalf of the Contractor. If the District exercises the right to place orders for materials and/or equipment pursuant to the foregoing, the District's conduct shall not be deemed to be an exercise, by the District, of any control over the means, methods, techniques, sequences or procedures for completion of the Work, all of which remain the responsibility and obligation of the Contractor. Notwithstanding the right of

the District to place orders for materials and/or equipment pursuant to the foregoing, the election of the District to exercise, or not to exercise, such right shall not relieve the Contractor from any of Contractor's obligations under the Contract Documents, including without limitation, completion of the Work within the Contract Time and for the Contract Price. If the District exercises the right hereunder to place orders for materials and/or equipment on behalf of Contractor pursuant to the foregoing, Contractor shall reimburse the District for all costs and fees incurred by the District in placing such orders; such costs and fees may be deducted by the District from the Contract Price then or thereafter due the Contractor.

4.9 Safety.

4.9.1 Safety Programs. The Contractor shall be solely responsible for initiating, maintaining and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract, or otherwise required by the type or nature of the Work. The Contractor's safety program shall include all actions and programs necessary for compliance with California or federally statutorily mandated workplace safety programs, including without limitation, compliance with the California Drug Free Workplace Act of 1990 (California Government Code §8350 et seq.). Without limiting or relieving the Contractor of its obligations hereunder, the Contractor shall require that its Subcontractors similarly initiate and maintain all appropriate or required safety programs. With regards to safety each Contractor is defined as the “controlling employer” for purposes of the Multi-Employer Worksite Rules of the California Occupational Safety and Health Administration (California Code of Regulations §§336.10). Contractor must submit to the districts representative a copy of the contractors current/updated IIPP, and a site specific safety plan.

4.9.2 Safety Precautions. The Contractor shall be solely responsible for initiating and maintaining reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (i) employees on the Work and other persons who may be affected thereby; (ii) the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and (iii) other property or items at the site of the Work, or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

4.9.3 Safety Signs, Barricades. The Contractor shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Districts and users of adjacent sites and utilities.

4.9.4 Safety Notices. The Contractor shall give or post all notices required by applicable law and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

4.9.5 Safety Coordinator. The Contractor shall designate a responsible member of the Contractor's organization at the Site whose duty shall be the prevention of accidents and the implementation and maintenance safety precautions and programs. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the District's Inspector and the Architect.

4.9.6 Emergencies. In an emergency affecting safety of persons or property, the Contractor shall act, to prevent threatened damage, injury or loss.

4.9.7 Hazardous Materials.

4.9.7.1 General. In the event that the Contractor, any Subcontractor or anyone employed directly or indirectly by them shall use, at the Site, or incorporate into the Work, any material or substance deemed to be hazardous or toxic under any law, rule, ordinance, regulation or interpretation thereof (collectively "Hazardous Materials"), the Contractor shall comply with all laws, rules, ordinances or regulations applicable thereto and shall exercise all necessary

safety precautions relating to the use, storage or disposal thereof.

4.9.7.2 Prohibition on Use of Asbestos Construction Building Materials ("ACBMs"). Notwithstanding any provision of the Drawings or the Specifications to the contrary, it is the intent of the District that ACBMs not be used or incorporated into any portion of the Work. In the event that any portion of the Work depicted in the Drawings or the Specifications shall require materials or products which the Contractor knows, or should have known with reasonably diligent investigation, to contain ACBMs, Contractor shall promptly notify the Architect and the District's Inspector of the same so that an appropriate alternative can be made in a timely manner so as not to delay the progress of the Work. Contractor warrants to the District that there are no materials or products used or incorporated into the Work which contain ACBMs. Whether before or after completion of the Work, if it is discovered that any product or material forming a part of the Work or incorporated into the Work contains ACBMs, the Contractor shall at its sole cost and expense remove such product or material in accordance with any laws, rules, procedures and regulations applicable to the handling, removal and disposal of ACBMs and to replace such product or material with non-ACBM products or materials and to return the affected portion(s) of the Work to the finish condition depicted in the Drawings and Specifications relating to such portion(s) of the Work. Contractor's obligations under the preceding sentence shall survive the termination of the Contract, the warranty period provided under the Contract Documents, the Contractor's completion of the Work or the District's acceptance of the Work.

In the event that the Contractor shall fail or refuse, for any reason, to commence the removal and replacement of any material or product containing ACBMs forming a part of, or incorporated into the Work, within ten (10) days of the date of the District's written notice to the Contractor of the existence of ACBM materials or products in the Work, the District may thereafter proceed to cause the removal and replacement of such materials or products in any manner which the District determines to be reasonably necessary and appropriate; all costs, expenses and fees, including without limitation fees and costs of consultants and attorneys, incurred by the District in connection with such removal and replacement shall be the responsibility of the Contractor and the Contractor's Performance Bond Surety.

4.9.7.3 Disposal of Hazardous Materials. Contractor shall be solely and exclusively responsible for the disposal of any Hazardous Materials on or about the Contractor's obligations hereunder shall include without limitation, the transportation and disposal of any Hazardous Materials in strict conformity with any and all applicable laws, regulations, orders, procedures or ordinances.

4.10 Maintenance of Documents.

4.10.1 Documents at Site. The Contractor shall maintain at the Site: (i) one record copy of the Drawings, Specifications and all addenda thereto; (ii) Change Orders approved by the District and all other modifications to the Contract Documents; (iii) Submittals reviewed by the Architect; (iv) Record Drawings; (v) Safety Data Sheets (“SDS”) accompanying any materials, equipment or products delivered or stored at the Site or incorporated into the Work; and (vi) all building and other codes or regulations applicable to the Work, including without limitation, Title 24, Part 2 of the California Code of Regulations. During performance of the Work, all documents maintained by Contractor at the Site shall be available to the District, the District’s Project Manager, the Construction Manager, the Architect, the District’s Inspector and DSA for review, inspection or reproduction. Upon completion of the Work, all documents maintained at the Site by the Contractor pursuant to the foregoing shall be assembled and transmitted to the Architect for delivery to the District.

Maintenance of Record Drawings. During its performance of the Work, the Contractor shall maintain Record Drawings consisting of a set of the Drawings which are marked to indicate all field changes made to adapt the Work depicted in the Drawings to field conditions, changes resulting from Change Orders and all concealed or buried installations, including without limitation, piping, conduit and utility services. All buried or concealed items of Work shall be completely and

accurately marked and located on the Record Drawings. The Record Drawings shall be clean and all changes, corrections and dimensions shall be marked in a neat and legible manner in a contrasting color. Record Drawings relating to the Structural, Mechanical, Electrical and Plumbing portions of the Work shall indicate without limitation, circuiting, wiring sizes, equipment/member sizing and shall depict the entirety of the as built conditions of such portions of the Work. The Contractor shall continuously maintain the Record Drawings during the performance of the Work. At any time during the Contractor's performance of the Work, upon the request of the District, the District's Inspector or the Architect, the Contractor shall make the Record Drawings maintained here under available for the District's review and inspection. The District's review and inspection of the Record Drawings during the Contractor's performance of the Work shall be only for the purpose of generally verifying that Contractor is continuously maintaining the Record Drawings in a complete and accurate manner; any such inspection or review shall not be deemed to be the District's approval or verification of the completeness or accuracy thereof. The failure or refusal of the Contractor to continuously maintain complete and accurate Record Drawings or to make available the Record Drawings for inspection and review by the District may be deemed by the District to be Contractor's default of a material obligation hereunder. Without waiving, restricting or limiting any other right or remedy of the District for the Contractor's failure or refusal to continuously maintain the Record Drawings, the District may, upon reasonably determining that the Contractor has not, or is not, continuously maintaining the Record Drawings in a complete and accurate manner, take appropriate action to cause the continuous maintenance of complete and accurate Record Drawings, in which event all fees and costs incurred or associated with such action shall be charged to the Contractor and the District may deduct the amount of such fees and costs from any portion of the Contract Price then or thereafter due the Contractor. In accordance with Article 8.4.2 of these General Conditions, prior to receipt of the Final Payment, Contractor shall deliver the Record Drawings to the Architect Construction Manager.

4.11 Use of Site. The Contractor shall confine operations at the Site to areas permitted by law, ordinances or permits, subject to any restrictions or limitations set forth in the Contract Documents. The Contractor shall not unreasonably encumber the Site or adjoining areas with materials or equipment. The Contractor shall be solely responsible for providing security at the Site with all such costs included in the Contract Price. The District shall at all times have access to the Site.

4.12 Clean-Up. The Contractor shall at all times keep the Site and all adjoining areas free from the accumulation of any waste material or rubbish caused or generated by performance of the Work. Without limiting the generality of the foregoing, Contractor shall maintain the Site in a "rake-clean" standard on a daily basis. In the event that the Work of the Contract Documents includes painting and/or the installation of floor covering, prior to commencement of any painting operations or the installation of any flooring covering, the area and adjoining areas of the Site where paint is to be applied or floor covering is to be installed shall be in a "broom-clean" condition. Prior to completion of the Work, Contractor shall remove from the Site all rubbish, waste material, excess excavated material, tools, Construction Equipment, machinery, surplus material and any other items which are not the property of the District under the Contract Documents. Upon completion of the Work, the Site and all adjoining areas shall be left in a neat and broom clean condition satisfactory to District. The District's Inspector, the District’s Project Manager or the Construction Manager shall be authorized to direct the Contractor's clean-up obligations hereunder. If the Contractor fails to clean up as provided for in the Contract Documents, the District may do so, and all costs incurred in connection therewith shall be charged to the Contractor; the District may deduct such costs from any portion of the Contract Price then or thereafter due the Contractor.

4.13 Access to the Work. The Contractor shall provide the DSA, the District, the District’s Project Manager, the Construction Manager, the District's Inspector, the Architect and the Architect's consultant(s) with access to the Work, whether in place, preparation and progress and wherever located.

4.14 Facilities and Information for the District's Inspector.

4.14.1 Information to District's Inspector. The Contractor shall furnish the District's Inspector access to the Work for obtaining such information as may be necessary to keep the District's Inspector fully informed respecting the progress, quality and character of the Work and materials, equipment or other items incorporated therein.

4.14.2 Facilities for District's Inspector. The Contractor is not responsible to provide, without adjustment of the Contract Price, for use by the District's Inspector, the District, the District's Project Manager and Construction Manager the facilities, equipment, furnishings and services set forth in the Special Conditions. If the Contractor does not provide the facilities, furnishings, equipment and services set forth in the Special Conditions, or fails to pay timely any charges or fees arising out of the use of the same, the District may, as applicable, procure facilities, furnishings, equipment and services required by the Contract Documents or pay outstanding charges. Contractor shall reimburse the District for all costs, including the District's administrative costs, incurred by the District pursuant to the preceding sentence; in lieu of the Contractor's reimbursement and at the sole and exclusive discretion of the District, such costs may be deducted by the District from any portion of the Contract Price or thereafter due the Contractor.

4.15 Patents and Royalties. The Contractor and the Surety shall defend, indemnify and hold harmless the District and its agents, employees and officers from any claim, demand or legal proceeding arising out of or pertaining, in any manner, to any actual or claimed infringement of patent rights in connection with performance of the Work under the Contract Documents.

4.16 Cutting and Patching. The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make the component parts thereof fit together properly. The Contractor shall not damage or endanger any portion of the Work, or the fully or partially completed construction of the District or separate contractors by cutting, patching, excavation or other alteration. The Contractor shall not cut, patch or otherwise alter the construction by the District or separate contractor without the prior written consent of the District or separate contractor thereto, which consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold consent to the request of the District or separate contractor to cut, patch or otherwise alter the Work.

4.17 Encountering of Hazardous Materials. In the event the Contractor encounters Hazardous Materials at the Site which have not been rendered harmless or for which there is no provision in the Contract Documents for containment, removal, abatement or handling of such Hazardous Materials, the Contractor shall immediately stop the Work in the affected area, but shall diligently proceed with the Work in all other unaffected areas. Upon encountering such Hazardous Materials, the Contractor shall immediately notify the District's Inspector and the Architect, in writing, of such condition. The Contractor shall proceed with the Work in such affected area only after such Hazardous Materials have been rendered harmless, contained, removed or abated. In the event such Hazardous Materials are encountered, the Contractor shall be entitled to an adjustment of the Contract Time to the extent that the Work is stopped and Substantial Completion of the Work is affected thereby. In no event shall there be an adjustment to the Contract Price solely on account of the Contractor encountering such Hazardous Materials.

4.18 Wage Rates; Employment of Labor.

4.18.1 Determination of Prevailing Rates. Pursuant to the provisions of Division 2, Part 7, Chapter 1, Article 2 of the California Labor Code at §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 prevailing rate for holiday and overtime work in the locality in which the Work is to be performed. Holidays shall be as defined in the collective bargaining agreement applicable to each particular craft, classification or type of worker employed under the Contract. Per diem wages include employer payments for health and welfare, pensions, vacation, travel time and subsistence pay as provided in California Labor Code §1773.8, apprenticeship or other training programs authorized by California Labor Code §3093, and similar purposes when the term "per diem wages" is used herein. Holiday and overtime work, when permitted by law, shall be paid for at the rate of at least one and one-half (12) times the above specified rate of per diem wages, unless otherwise specified. The Contractor shall post, at appropriate and conspicuous locations on the Site, a schedule showing all determined general prevailing wage rates.

4.18.2 Payment of Prevailing Rates. There shall be paid each worker of the Contractor, or any Subcontractor, of any tier, engaged in the Work, not less than the general prevailing wage rate, regardless of any contractual relationship which may be alleged to exist between the Contractor or any Subcontractor, of any tier, and such worker.

4.18.3 Prevailing Rate Penalty. The Contractor shall, as a penalty, forfeit not more than Fifty Dollars ($50.00) to the District for each calendar day or portion thereof, for each worker paid less than the prevailing rates for such work or craft in which such worker is employed for the Work by the Contractor or by any Subcontractor, of any tier, in connection with the Work. The amount of the penalty for failure to pay applicable prevailing wage rates shall be determined and assessed in accordance with the standards established pursuant to Labor Code §1775(a)(2). The amount of the penalty shall be determined based on consideration of both the following: (i) whether the failure of the Contractor or Subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the Contractor or Subcontractor; and (ii) whether the Contractor or Subcontractor has a prior record of failing to meet its prevailing wage obligations. The penalty may not be less than ten dollars ($10) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, unless the failure of the Contractor or Subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so the error was promptly and voluntarily corrected when brought to the attention of the Contractor or Subcontractor. The penalty may not be less than twenty dollars ($20) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Contractor or Subcontractor has been assessed penalties within the previous three years for failing to meet its prevailing wage obligations on a separate contract, unless those penalties were subsequently withdrawn or overturned. The penalty may not be less than thirty dollars ($30) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Labor Commissioner determined that the violation was willful, as defined in subdivision (c) of Section 1777.1. When the penalty amount due hereunder is collected from the Contractor or Subcontractor, any outstanding wage claim under Chapter 1 (commencing with Section 1720) or Part 7 of Division 2 against that Contractor or Subcontractor shall be satisfied before applying that amount to the penalty imposed on that Contractor or Subcontractor hereunder. The difference between prevailing wage rates and the amount paid to each worker each calendar day, or portion thereof, for which each worker paid less than the prevailing wage rate, shall be paid to each worker by the Contractor or Subcontractor.

4.18.4 Payroll Records. Pursuant to California Labor Code §1776, the Contractor and each Subcontractor, of any tier, shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each person employed for the Work. The payroll records shall be certified and available for inspection at all reasonable hours at the principal office of the Contractor on the following basis: (i) a certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his/her authorized representative on request; (ii) a certified copy of all payroll records shall be made available for inspection or furnished upon request to the District, the Division of Labor Standards Enforcement and the Division of Apprenticeship Standards of the Department of Industrial Relations; (iii) a certified copy of payroll records shall be made available upon request to the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the District, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided, the requesting party shall, prior to being provided the records, reimburse the cost of preparation by the Contractor, Subcontractors 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; (iv) the Contractor shall file a certified copy of the payroll records with the entity that requested such records within ten (10) days after receipt of a written request; (v) 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 in such a manner as to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor or any Subcontractor, of any tier, performing a part of the Work shall not be marked or obliterated. The Contractor shall inform the District of the location of payroll records, including the street address, city and county and shall, within five (5) working days, provide a notice of a change or location and address. In the event of noncompliance with the requirements of this Article 4.18.4, the Contractor shall have ten (10) days in which to comply, subsequent to

receipt of written notice specifying in what respects the Contractor must comply herewith. Should noncompliance still be evident after such 10-day period, the Contractor shall, as a penalty to the District, forfeit Twenty-Five Dollars ($25.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from any portion of the Contract Price then or thereafter due the Contractor. The Contractor is solely responsible for compliance with the foregoing provisions.

4.18.5 Hours of Work.

4.18.5.1 **Limits on Hours of Work.** Pursuant to California Labor Code §1810, eight (8) hours of labor shall constitute a legal day's work. Pursuant to California Labor Code §1811, the time of service of any worker employed at any time by the Contractor or by a Subcontractor, of any tier, upon the Work or upon any part of the Work, is limited and restricted to eight (8) hours during any one calendar day and forty (40) hours during any one calendar week, except as hereafter provided. Notwithstanding the foregoing provisions, Work performed by employees of Contractor or any Subcontractor, of any tier, in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1 1/2) times the basic rate of pay.

4.18.5.2 **Penalty for Excess Hours.** The Contractor shall pay to the District a penalty of Twenty-five Dollars ($25.00) for each worker employed on the Work by the Contractor or any Subcontractor, of any tier, for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and forty (40) hours in any one calendar week, in violation of the provisions of the California Labor Code, unless compensation to the worker so employed by the Contractor is not less than one and one-half (12) times the basic rate of pay for all hours worked in excess of eight (8) hours per day.

4.18.5.3 **Contractor Responsibility.** Any Work performed by workers necessary to be performed after regular working hours or on Sundays or other holidays shall be performed without adjustment to the Contract Price or any other additional expense to the District. The Contractor shall be responsible for costs incurred by the District which arise out of Work performed by the Contractor at times other than regular working hours and regular working days. Upon determination of such costs, the District may deduct such costs from the Contract Price then or thereafter due the Contractor.

4.18.6 Apprentices.

4.18.6.1 **Employment of Apprentices.** Any apprentices employed to perform any of the Work shall be paid the standard wage paid to apprentices under the regulations of the craft or trade for which such apprentice is employed, and such individual shall be employed only for the work of the craft or trade to which such individual is registered. Only apprentices, as defined in California Labor Code §3077 who are in training under apprenticeship standards and written apprenticeship agreements under California Labor Code §3070 et seq. are eligible to be employed for the Work. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which such apprentice is training.

4.18.6.2 **Apprenticeship Certificate.** When the Contractor or any Subcontractor, of any tier, in performing any of the Work employs workers in any Apprenticeable Craft or Trade, the Contractor and such Subcontractor shall apply to the Joint Apprenticeship Committee administering the apprenticeship standards of the craft or trade in the area of the site of the Work for a certificate approving the Contractor or such Subcontractor under the apprenticeship standards for the employment and

training of apprentices in the area or industry affected, provided, however, that the approval as established by the Joint Apprenticeship Committee or Committees shall be subject to the approval of the Administrator of Apprenticeship. The Joint Apprenticeship Committee or Committees, subsequent to approving the Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or such Subcontractor in order to comply with California Labor Code §1777.5. The Contractor and Subcontractors shall submit contract award information to the applicable Joint Apprenticeship Committee that shall include an estimate of journeyman hours to be performed under the Contract, the number of apprentices to be employed, and the approximate dates the apprentices will be employed. There shall be an affirmative duty upon the Joint Apprenticeship Committee or Committees, administering the apprenticeship standards of the crafts or trades in the area of the site of the Work, to ensure equal employment and affirmative action and apprenticeship for women and minorities. Contractors or Subcontractors shall not be required to submit individual applications for approval to local Joint Apprenticeship Committees provided they are already covered by the local apprenticeship standards.

4.18.6.3 **Ratio of Apprentices to Journeymen.** The ratio of Work performed by apprentices to journeymen, who shall be employed in the Work, may be the ratio stipulated in the apprenticeship standards under which the Joint Apprenticeship Committee operates, but in no case shall the ratio be less than one hour of apprentice work for each five hours of labor performed by a journeyman, except as otherwise provided in California Labor Code §1777.5. The minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeymen. Any ratio shall apply during any day or portion of a day when any journeyman, or the higher standard stipulated by the Joint Apprenticeship Committee, is employed at the site of the Work and shall be computed on the basis of the hours worked during the day by journeymen so employed, except for the land surveyor classification. The Contractor shall employ apprentices for the number of hours computed as above before the completion of the Work. The Contractor shall, however, endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the site of the Work. Where an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Division of Apprenticeship Standards, upon application of a Joint Apprenticeship Committee, may order a minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification. The Contractor or any Subcontractor covered by this Article and California Labor Code §1777.5, upon the issuance of the approval certificate, or if it has been previously approved in such craft or trade, shall employ the number of apprentices or the ratio of apprentices to journeymen stipulated in the apprenticeship standards. Upon proper showing by the Contractor that it employs apprentices in such craft or trade in the State of California on all of its contracts on an annual average of not less than one apprentice to each five journeymen, the Division of Apprenticeship Standards may grant a certificate exempting the Contractor from the 1-to-5 ratio as set forth in this Article and California Labor Code §1777.5. This Article shall not apply to contracts of general contractors, or to contracts of specialty contractors not bidding for work through a general or prime contractor, involving less than Thirty Thousand Dollars ($30,000.00) or twenty (20) working days. The term "Apprenticeable Craft or Trade," as used herein shall mean a craft or trade determined as an Apprenticeable occupation in accordance with rules and regulations prescribed by the Apprenticeship Council.

4.18.6.4 **Exemption From Ratios.** The Joint Apprenticeship Committee shall have the discretion to grant a certificate, which shall be subject to the approval of the Administrator of Apprenticeship, exempting the Contractor from the 1-to-5 ratio set forth in this Article when it finds that any one of the following conditions are met:

(i) unemployment for the previous three-month period in such area exceeds an average of fifteen percent (15%) or; (ii) the number of apprentices in training in such area exceeds a ratio of 1-to-5 in relation to journeymen, or; (iii) the Apprenticeable Craft or Trade is replacing at least one-thirtieth (1/30) of its journeymen annually through apprenticeship training, either on a statewide basis or on a local basis, or; (iv) if assignment of an apprentice to any Work performed under the Contract Documents would create a condition which would jeopardize such apprentice's life or the life, safety or property of fellow employees or the public at large, or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyman. When such exemptions from the 1-to-5 ratio between apprentices and journeymen are granted to an organization which represents contractors in a specific trade on a local or statewide basis, the member contractors will not be required to submit individual applications for approval to local Joint Apprenticeship Committees, provided they are already covered by the local apprenticeship standards.

4.18.6.5 **Contributions to Trust Funds.** The Contractor or any Subcontractor, of any tier, who, performs any of the Work by employment of journeymen or apprentices in any Apprenticeable Craft or Trade and who is not contributing to a fund or funds to administer and conduct the apprenticeship program in any such craft or trade in the area of the site of the Work, to which fund or funds other contractors in the area of the site of the Work are contributing, shall contribute to the fund or funds in each craft or trade in which it employs journeymen or apprentices in the same amount or upon the same basis and in the same manner as the other contractors do, but where the trust fund administrators are unable to accept such funds, contractors not signatory to the trust agreement shall pay a like amount to the California Apprenticeship Council. The Division of Labor Standards Enforcement is authorized to enforce the payment of such contributions to such fund(s) as set forth in California Labor Code §227. Such contributions shall not result in an increase in the Contract Price.

4.18.6.6 **Contractor's Compliance.** The responsibility of compliance with this Article for all Apprenticeable Trades or Crafts is solely and exclusively that of the Contractor. All decisions of the Joint Apprenticeship Committee(s) under this Article are subject to the provisions of California Labor Code §3081. In the event the Contractor willfully fails to comply with the provisions of this Article and California Labor Code §1777.5, pursuant to California Labor Code §1777.7, the Contractor shall: (i) be denied the right to bid on any public works contract for a period of one (1) year from the date the determination of non-compliance is made by the Administrator of Apprenticeship; and (ii) forfeit, as a civil penalty, Fifty Dollars ($50.00) for each calendar day **of** noncompliance. Notwithstanding the provisions of California Labor Code §1727, upon receipt of such determination, the District shall withhold such amount from the Contract Price then due or to become due. Any such determination shall be issued after a full investigation, a fair and impartial hearing, and reasonable notice thereof in accordance with reasonable rules and procedures prescribed by the California Apprenticeship Council. Any funds withheld by the District pursuant to this Article shall be deposited in the General Fund or other similar fund of the District. The interpretation and enforcement of California Labor Code §1777.5 and 1777.7 shall be in accordance with the rules and procedures of the California Apprenticeship Council.

4.18.7 **Employment of Independent Contractors.** Pursuant to California Labor Code §1021.5, Contractor shall not willingly and knowingly enter into any agreement with any person, as an independent contractor, to provide any services in connection with the Work where the services provided or to be provided requires that such person hold a valid contractor’s license issued pursuant to California Business and Professions Code §7000 et seq. and such person does not meet the burden of proof of his/her independent contractor status pursuant to California Labor Code

§2750.05. In the event that Contractor shall employ any person in violation of the foregoing, Contractor shall be subject to the civil penalties under California Labor Code §1021.5 and any other penalty provided by law. In addition to the penalties provided under California Labor Code §1021.5, Contractor's violation of this Article 4.18.7 or the provisions of California Labor Code §1021.5 shall be deemed an event of Contractor's default under Article 15.1 of these General Conditions. The Contractor shall require any Subcontractor or Sub-Subcontractor performing or providing any portion of the Work to adhere to and comply with the foregoing provisions.

4.19 Assignment of Antitrust Claims. Pursuant to California Government Code §4551, the Contractor and its Subcontractor(s), of any tier, hereby offers and agrees to assign to the District all rights, title and interest in and to all causes of action they may have under Section 4 of the Clayton Act, (15 U.S.C. §15) or under the Cartwright Act (California Business and Professions Code §16700 et seq.), arising from purchases of goods, services or materials hereunder or any Subcontract. This assignment shall be made and become effective at the time the District tenders Final Payment to the Contractor, without further acknowledgment by the parties. If the District receives, either through judgement or settlement, a monetary recovery in connection with a cause of action assigned under California Government Code §4550 et seq., the assignor thereof 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 Contract Price, less the expenses incurred by the District in obtaining that portion of the recovery. Upon demand in writing by the assignor, the District shall, within one 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 (i) the District has not been injured thereby; or (ii) the District declines to file a court action for the cause of action.

4.20 Limitations Upon Site Activities. Except in the circumstances of an emergency, no construction activities shall be permitted at **or** about the Site except during the District's hours and days set forth in the Special Conditions. Work performed outside of the hours and days noted in the Special Conditions will not result in adjustment of the Contract Time or the Contract Price; unless Work outside of the hours and days noted in the Special Conditions is expressly authorized by the District.

ARTICLE 5. SUBCONTRACTORS

5.1 Subcontracts. Any Work performed for the Contractor by a Subcontractor shall be pursuant to a written agreement between the Contractor and such Subcontractor which specifically incorporates by reference the Contract Documents and which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents, including without limitation, the policies of insurance required under Article 6 of these General Conditions and obligates the Subcontractor to assume toward the Contractor all the obligations and responsibilities of the Contractor which by the Contract Documents the Contractor assumes toward the District and the Architect. The foregoing notwithstanding, no contractual relationship shall exist, or be deemed to exist, between any Subcontractor and the District, unless the Contract is terminated and District, in writing, elects to assume the Subcontract. Each Subcontract for a portion of the Work shall provide that such Subcontract may be assigned to the District if the Contract is terminated by the District pursuant to Article 15.1 hereof, subject to the prior rights of the Surety obligated under a bond relating to the Contract. The Contractor shall provide to the District copies of all executed Subcontracts and Purchase Orders to which Contractor is a party within thirty (30) days after Contractor's execution of the Agreement. During performance of the Work, the Contractor shall, from time to time, as and when requested by the District, the Architect or the Construction Manager provide the District with copies of any and all Subcontracts or Purchase Orders relating to the Work and all modifications thereto. The Contractor's failure or refusal, for any reason, to provide copies of such Subcontracts or Purchase Orders in accordance with the two preceding sentences is Contractor's default of a material term of the Contract Documents.

5.2 Substitution of Listed Subcontractor.

5.2.1 Substitution Process. Any request of the Contractor to substitute a listed Subcontractor will be considered only if such request is in strict conformity with this Article 5.2 and California Public Contract Code §4107. All costs incurred by the District, including without limitation, costs of the District's Inspector, the Architect, the District's Project Manager, the Construction Manager or

attorneys' fees in the review and evaluation of a request to substitute a listed Subcontractor shall be borne by the Contractor; such costs may be deducted by the District from the Contract Price then or thereafter due the Contractor

5.2.2 Responsibilities of Contractor Upon Substitution of Subcontractor. The District's consent to Contractor's substitution of a listed Subcontractor shall not relieve Contractor from its obligation to complete the Work within the Contract Time and for the Contract Price. The substitution of a listed Subcontractor shall not, under any circumstance, result in, or give rise to any to any increase of the Contract Price or the Contract Time on account of such substitution. In the event of the District's consent to the substitution of a listed Subcontractor, the Architect shall determine the extent to which, if any, revised or additional Submittals will be required of the newly substituted Subcontractor. In the event that the Architect determines that revised or additional Submittals are required of the newly substituted Subcontractor, the Architect shall promptly notify the Contractor, in writing, of such requirement. In such event, revised or additional Submittals shall be submitted to Architect not later than thirty (30) days following the date of the Architect's written notice to the Contractor pursuant to the foregoing sentence; provided that if in the reasonable and good faith judgment of the Architect, the progress of the Work or completion of the Work requires submission of additional or revised Submittals by the newly substituted Subcontractor in less than thirty (30) days, the Architect shall so state in its written notice to the Contractor. In the event that the revised or additional Submittals are not submitted by Contractor within thirty (30) days, or such earlier time as determined by the Architect pursuant to the preceding sentence, following the Architect's written notice of the requirement for revised or additional Submittals, Contractor shall be subject to the per diem assessments for late Submittals as set forth in Article 4.7.2.1 of these General Conditions. Any revised or additional Submittals required pursuant to this Article 5.2.2 shall conform with the requirements of Article 4.7 of these General Conditions. Contractor shall reimburse the District for all fees and costs, including without limitation fees of the Architect or any design consultant to the Architect or the District and DSA fees, incurred or associated with the processing, review and evaluation of any revised or additional Submittals required pursuant to this Article 5.2.2; the District may deduct such fees and costs from any portion of the Contract Price then or thereafter due the Contractor. In the event that additional or revised Submittals are required pursuant to this Article 5.2.2, such requirement shall not result in an increase to the Contract Time or the Contract Price.

5.3 Subcontractors' Work. Whenever the Work of a Subcontractor is dependent upon the Work of the Contractor or another Subcontractor, the Contractor shall require the Subcontractor to: (a) coordinate its Work with the dependent Work; (b) provide necessary dependent data and requirements; (c) supply and/or install items to build into the dependent Work of others; (d) make appropriate provisions for dependent Work of others; (e) carefully examine and understand the portions of the Contract Documents (including Drawings, Specifications and Field Clarifications) and Submittals relating to the dependent Work; and (f) examine the existing dependent Work and verify that the dependent Work is in proper condition for the Subcontractor's Work. If the dependent Work is not in a proper condition, the Subcontractor shall notify the Contractor in writing and not proceed with the Subcontractor's Work until the dependent Work has been corrected or replaced and is in a proper condition for the Subcontractor's Work.

ARTICLE 6. INSURANCE; INDEMNITY; BONDS

6.1 Workers' Compensation Insurance; Employer's Liability Insurance. The Contractor shall purchase and maintain Workers' Compensation Insurance as will protect the Contractor from claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Contractor shall purchase and maintain Employer's Liability Insurance covering bodily injury (including death) by accident or disease to any employee which arises out of the employee's employment by Contractor. The Employer's Liability Insurance required of Contractor hereunder may be obtained by Contractor as a separate policy of insurance or as an additional coverage under the Workers' Compensation Insurance required to be obtained and maintained by Contractor hereunder. The limits of liability for the Employer's Liability Insurance required hereunder shall be as set forth in the Special Conditions. In accordance with the provisions of applicable law or regulation including waiver of subrogation by the insurance carrier with District and Construction Manager, the Contractor, and each subcontractor, shall secure the

payment of compensation to its employees. The Contractor shall sign and file with the District the following certificate on the form provided by the District.

I am aware of the provisions of Section 3700 of the Labor Code, 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 provisions before commencing the performance of the work of this contract.

The Contractor shall require each Subcontractor to execute such statement and have such executed statements delivered to the District prior to allowing that Subcontractor to commence Work at the Site, and this clause will be made a part of all Subcontracts issued by Contractor for the Work.

The Contractor shall furnish a certificate of insurance or a certificate of permission to self-insure under the Workers' Compensation and Employers' Liability Insurance statutes of the State of California. Said certificate shall provide that at least thirty (30) days prior written notice shall be served on District and Construction Manager prior to the cancellation or change of such insurance or self-insurance. Said certificate shall also provide that the insurer shall waive all rights of subrogation against the District, Construction Manager, Architect and each of their respective officials, employees and volunteers for losses arising from work performed by the Contractor for the District. Such certificate of insurance shall be delivered to the District and Construction Manager within five (5) days of being notified of the intent to award the contract, and before the District will execute the Agreement for Construction.

6.2 Commercial General Liability and Property Insurance. The Contractor shall purchase and maintain Commercial General Liability and Property Insurance covering the types of claims set forth below which may arise out of or result from Contractor's operations under the Contract Documents and for which the Contractor may be legally responsible: (i) claims for damages because of bodily injury, sickness or disease or death of any person other than the Contractor's employees; (ii) claims for damages insured by usual personal injury liability coverage which are sustained (a) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (b) by another person; (iii) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; (iv) claims for damages because of bodily injury, death of a person or property damages arising out of ownership, maintenance or use of a motor vehicle; (v) contractual liability insurance applicable to the Contractor's obligations under the Contract Documents; and (vi) completed operations and products liability; and (vii) independent contractor's contingent coverage. Insurance is to be placed with insurers approved by the State of California, Department of Insurance and with a Bests' rating of no less than (A-) Level VII.

6.2.1 Commercial General Liability Requirement, Maintaining Insurance. The Contractor and its Subcontractors shall procure and maintain insurance on all of their operations during the progress of the Work, issued by insurance companies meeting the Insurer requirements set forth above, on forms acceptable to District, for the minimum insurance coverage limits as set forth in the Special Conditions:

6.2.1.1 Automobile Bodily Injury and Property Damage Insurance. This coverage shall include all owned, hired and non-owned equipment with combined bodily injury and property damage not less than the limits as set forth in the Special Conditions. An excess liability policy with a total dollar amount of three times the amount of the contract or $1,000,000, whichever is greater may be used to supplement the automobile liability to the full amount. If Contractor or their subcontractors or venders will be hauling hazardous materials, the automobile liability policy shall include the MCS 90 endorsement and bodily Injury / Property Damage Combined Single Limit shall not be less than $3,000,000.

6.2.1.2 Aircraft Liability Insurance. If Contractor and/or its subcontractors use any owned, leased, chartered or hired aircraft of any type (including Helicopters) in the performance of this Contract, it shall maintain aircraft liability insurance not less than the limits as set forth in the Special Conditions or a limit sufficient to replace the item being hoisted, whichever is greater, or shall require subcontractor performing such work to provide such coverage and shall have named as additional insured the District and Construction Manager. Acceptable evidence of coverage and additional insured status shall be provided prior to any work being performed.

6.2.1.3 Pollution Liability. If Contractor is required to perform remedial Hazardous material operations such as asbestos-containing materials, contaminated soil, etc., they must, in addition to the above requirements, carry a "Contractor's Pollution Liability" policy with limits not less than the limits as set forth in the Special Conditions naming the District, Construction Manager, and Architect, and their respective officers, employees and agents as additional insured's including contractual liability coverage. Where Contractor in installing mechanical systems or exterior insulation and finish systems, Contractor shall provide Contractor's Pollution Liability which includes coverage for "Mold" with limits of liability of not less than the limits as set forth in the Special Conditions naming the District, Construction Manager, and Architect, and their respective officers, employees and agents as additional insured's including contractual liability coverage.

6.2.1.4 Additional Insured. All policies shall be endorsed to include the District, Construction Manager, Architect, District Inspector, Architect's Consultants, and their officers and employees as additional insured and shall provide that they are primary with any insurance maintained by District or Construction Manager as non-contributory. Such policies shall be provided using the ISO Additional Insured Endorsement or CG2010 (1993 or later) in combination with CG2037 (10/01). Copies of the additional insured endorsement(s) shall be attached to the certificate of insurance.

6.2.1.5 Occurrence Basis. All liability insurance shall be issued on an occurrence basis.

6.2.1.6 Application of Coverage. Coverage shall state that the Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability**.**

6.2.1.7 Waiver of Subrogation. The insurer shall agree to waive all rights of subrogation against the District, Construction Manager, District Inspector or Architect or any of their respective officers, agents, employees and volunteers for losses arising from work performed by the Contractor for the District.

6.2.1.8 Primary Insurance. The policy shall state that it is primary insurance and that any insurance or self-insurance fund maintained by or available to the District, Construction Manager, District Inspector or Architect or any of their respective officers, agents, employees or volunteers shall be in excess of the Contractor's insurance and shall not be called upon to contribute to a loss covered by the policy.

6.2.1.9 Cross-Liability Endorsement. A cross-liability endorsement must be included to the effect that each insured is covered as if separate policies had been issued to each insured.

6.2.1.10 Deductible. Any deductibles or self-insured retentions must be declared to and approved by the District and Construction Manager. Any and all deductibles or self-insurance retentions in the above described insurance policies shall be assumed by and be for the account of, and at the sole risk of the Contractor.

6.3 Builder's Risk "All-Risk" Insurance. The Contractor, during the progress of the Work and until Final Acceptance of the Work by the District upon completion of the entire Contract, shall maintain Builder's Risk "All-Risk" Completed Value Insurance Coverage on all insurable Work included under the Contract Documents which coverage is to provide extended coverage and insurance against vandalism and malicious mischief, perils of fire, sprinkler leakage, civil authority, sonic boom, collapse and flood upon the entire Work which is the subject of the Contract Documents, and including completed Work and Work in progress to the full insurable value thereof. Contractor's Builders Risk Insurance shall include coverage and insurance against the perils of earthquake, if so indicated in the Special Conditions. Such insurance shall include the District as an additional named insured, and any other person with an insurable interest designated by the District as an additional named insured. The risk of damage to the Work due to the perils covered by the Builder's Risk "All Risk" Insurance, as well as any other hazard which might result in damage to the Work, is that of the Contractor and the Surety, and no claims for such loss or damage shall be recognized by the District, nor will such loss or damage excuse the complete and satisfactory performance of the Contract by the Contractor.

6.4 Coverage Amounts. The insurance required of the Contractor hereunder shall be written for not less than any limits of liability specified in the Contract Documents, or required by law, whichever is greater. In the event of any loss or damage covered by a policy of insurance required to be obtained and maintained by the Contractor hereunder, the Contractor shall be solely and exclusively responsible for the payment of the deductible, if any, under such policy of insurance, without adjustment to the Contract Price on account thereof.

6.5 Evidence of Insurance; Subcontractor's Insurance.

6.5.1 Certificates of Insurance. Prior to commencing the Work, Contractor shall deliver to the District Certificates of Insurance evidencing the insurance coverage required by the Contract Documents. Failure or refusal of the Contractor to so deliver Certificates of Insurance may be deemed by the District to be a default of a material obligation of the Contractor under the Contract Documents, and thereupon the District may proceed to exercise any right or remedy provided for under the Contract Documents or at law. The Certificates of Insurance and the insurance policies required by the Contract Documents shall contain a provision that coverage afforded under such policies will not be canceled or allowed to expire until at least thirty (30) days prior written notice has been given to the District. The insurance policies required of Contractor hereunder shall also name the District, Architect, and Construction Manager as an additional insured as its interests may appear. Should any policy of insurance be canceled before Final Acceptance of the Work by the District and the Contractor fails to immediately procure replacement insurance as required, the District reserves the right to procure such insurance and to deduct the premium cost thereof and other costs incurred by the District in connection therewith from any sum then or thereafter due the Contractor under the Contract Documents. The Contractor shall, from time to time, furnish the District, when requested, with satisfactory proof of coverage of each type of insurance required by the Contract Documents; failure of the Contractor to comply with the District's request may be deemed by the District to be a default of a material obligation of the Contractor under the Contract Documents.

6.5.2 Subcontractors' Insurance. Contractor shall require that every Subcontractor, of any tier, performing or providing any portion of the Work obtain and maintain the policies of insurance set forth in Articles 6.1 and 6.2 of these General Conditions; the coverage and limits of liability of such policies of insurance to be obtained and maintained by Subcontractors shall be as set forth in the Special Conditions. The policies of insurance to be obtained and maintained by Subcontractors hereunder are in addition to, and not in lieu of, Contractor obtaining and maintaining such policies of insurance. Each of the policies of insurance obtained and maintained by a Subcontractor hereunder shall conform with the requirements of this Article 6. Upon request of the District, Contractor shall promptly deliver to the District Certificates of Insurance evidencing that the Subcontractors have obtained and maintained policies of insurance in conformity with the requirements of this Article 6. Failure or refusal of the Contractor to provide the District with Subcontractors' Certificates of Insurance evidencing the insurance coverages required hereunder is a material default of Contractor hereunder.

6.6 Maintenance of Insurance. Any insurance bearing on the adequacy of performance of Work shall be maintained after the District's Final Acceptance of all of the Work for the full one-year correction of Work period and any longer specific guarantee or warranty periods set forth in the Contract Documents. Should such insurance be canceled before the end of any such periods and the Contractor fails to immediately procure replacement insurance as specified, the District reserves the right to procure such insurance and to charge the cost thereof to the Contractor. Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from its operations or performance of the Work under the Contract Documents, including without limitation the Contractor's obligation to pay Liquidated Damages. In no instance will the District's exercise of its option to occupy and use completed portions of the Work relieve the Contractor of its obligation to maintain insurance required under this Article until the date of Final Acceptance of the Work by the District, or such time thereafter as required by the Contract Documents. The insurer providing any insurance coverage required hereunder shall be to the reasonable satisfaction of the District.

6.7 Contractor's Insurance Primary. All insurance and the coverage there under required to be obtained and maintained by Contractor hereunder, if overlapping with any policy of insurance maintained by the District,

shall be deemed to be primary and non-contributing with any policy maintained by the District and any policy or coverage there under maintained by District shall be deemed excess insurance. To the extent that the District maintains a policy of insurance covering property damage arising out of the perils of fire or other casualty covered by the Contractor's Builder's Risk Insurance or the Comprehensive General Liability Insurance of the Contractor or any Subcontractor, the District, Contractor and all Subcontractors waive rights of subrogation against the others. The costs for obtaining and maintaining the insurance coverage required herein shall be included in the Contract Price.

6.8 **Indemnity.** Unless arising solely out of the active negligence, gross negligence or willful misconduct the District or the Architect, the Contractor shall indemnify, defend and hold harmless the Indemnified Parties who are: (i) the District and its Board of Trustees, officers, employees, agents and representatives (including the District's Inspector); (ii) the Architect its respective agents and employees~~,~~ and (iii) if one is designated by the District for the Work, the Project Manager and its agents and employees. The Contractor's obligations hereunder includes indemnity, defense and hold harmless of the Indemnified Parties from and against any and all damages, losses, claims, demands or liabilities whether for damages, losses or other relief, including, without limitation attorney's fees and costs which arise, in whole or in part, from the Work, the Contract Documents or the negligent, grossly negligent or willful acts, omissions or other conduct of the Contractor, any Subcontractor or any person or entity engaged by them for the Work. The Contractor's obligations under the foregoing include without limitation: (i) injuries to or death of persons; (ii) damage to property; or (iii) theft or loss of property; (iv) Stop Notice claims asserted by any person or entity in connection with the Work; and (v) other losses, liabilities, damages or costs resulting from, in whole or part, any acts, omissions or other conduct of Contractor, any Subcontractor or any other person or entity employed directly or indirectly by Contractor or a Subcontractor in connection with the Work and their respective agents, officers or employees. If any action or proceeding, whether judicial, administrative, arbitration or otherwise, shall be commenced on account of any claim, demand or liability subject to Contractor's obligations hereunder, and such action or proceeding names any of the Indemnified Parties as a party thereto, the Contractor shall, at its sole cost and expense, defend the named Indemnified Parties in such action or proceeding with counsel reasonably satisfactory to the named Indemnified Parties. In the event that there shall be any judgment, award, ruling, settlement, or other relief arising out of any such action or proceeding to which any of the Indemnified Parties are bound by, Contractor shall pay, satisfy or otherwise discharge any such judgment, award, ruling, settlement or relief; Contractor shall indemnify and hold harmless the Indemnified Parties from any and all liability or responsibility arising out of any such judgment, award, ruling, settlement or relief. The Contractor's obligations hereunder are binding upon Contractor's Performance Bond Surety and these obligations shall survive notwithstanding Contractor's completion of the Work or the termination of the Contract.

6.8.1 **Indemnification.** The Contractor shall defend, indemnify and save harmless the District, Brailsford & Dunlavey/Ausonio, Inc. (Construction Manager), and Architect and any of their respective officers, agents, and employees from any and all claims, demands, costs, expenses, or liability occasioned by the performance or attempted performance of the provisions hereof or in any way arising out of this contract, including but not limited to, inverse condemnation, equitable relief, or any wrongful act, or any negligent act or omission to act on the part of the Contractor or any of its agents, employees, independent contractors, or subcontractors; provided, further, without limiting the foregoing, that the indemnity is intended to apply to any wrongful acts, or any actively or passively negligent acts or omissions to act, committed jointly or concurrently by the Contractor, the Contractor's agents, employees or independent contractors or subcontractors, and the District, Brailsford & Dunlavey/Ausonio, Inc., Architect, their agents, employees, or independent contractors.

Such indemnity obligation expressly extends to and includes any and all claims, demands, damages, costs, expenses, or liability occasioned as a result of damages to adjacent property caused by the conduct of the Work.

Such indemnity obligation expressly extends to and includes any and all claims, demands, damages, costs, expenses, or liability occasioned as a result of the violation by the Contractor, the Contractor's agents, employees, or independent contractors or subcontractors, of any provisions of federal, state or local law, including applicable administrative regulations.

Such indemnity obligation also expressly extends to and includes any claims, demands, damages,

costs, expenses, or liability occasioned by injury to or death of any person, or any property damage to property owned by any person while on or about the Site or as a result of the Work, whether such persons are on or about the Site by right or not, whenever the Work is alleged to have been a contributing cause in any degree in whatsoever.

Nothing contained in the foregoing indemnity provisions shall be construed to require the Contractor to indemnify the District in contravention of Section 2782 of the Civil Code for the sole negligence or willful misconduct of the District.

6.8.2 Indemnification of Adjacent Property Owners. In the event the Contractor enters any agreement with the owners of any adjacent property to enter upon or adjacent to such property for the purpose of performing this contract, the Contractor shall fully indemnify, defend and save harmless such person, firm, or corporation, state or other governmental agency which owns or has any interest in such adjacent property. The form and content of such indemnification agreement shall be approved by the District prior to commencement of any work on or about such property. The Contractor also shall indemnify the District and Brailsford & Dunlavey/Ausonio, Inc. as provided in Article 10 herein. These provisions shall be in addition to any other requirements of the owners of said property.

6.9 Payment Bond; Performance Bond. Prior to commencement of the Work, the Contractor shall furnish a Performance Bond as security for Contractor's faithful performance of the Contract and a Labor and Material Payment Bond as security for payment of persons or entities performing work, labor or furnishing materials in connection with Contractor's performance of the Work under the Contract Documents. Unless otherwise stated in the Special Conditions, the amounts of the Performance Bond and the Payment Bond required hereunder shall be one hundred percent (100%) of the Contract Price. Said Labor and Material Payment Bond and Performance Bond shall be in the form and content set forth in the Contract Documents. The failure or refusal of the Contractor to furnish either the Performance Bond or the Labor and Material Payment Bond in strict conformity with this Article 6.9 may be deemed by the District as a default by the Contractor of a material obligation hereunder. Upon request of the Contractor, the District may consider and accept, but is not obligated to do so, multiple sureties on such bonds. The Surety on any bond required under the Contract Documents shall be an Admitted Surety Insurer as that term is defined in California Code of Civil Procedure §995.120 and shall be rated at least A-/VII by A.M. Best.

ARTICLE 7 CONTRACT TIME

7.1 Substantial Completion of the Work Within Contract Time. Unless otherwise expressly provided in the Contract Documents, the Contract Time is the period of time, including authorized adjustments thereto, allotted in the Contract Documents for achieving Substantial Completion of the Work. The date for commencement of the Work is the date established by the Notice to Proceed issued by the District pursuant to the Agreement, which shall not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible. The date of Substantial Completion is the date certified by the Architect and the District's Inspector as such in accordance with the Contract Documents.

7.2 Progress and Completion of the Work.

7.2.1 Time of Essence. Time limits stated in the Contract Documents are of the essence. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing and achieving Substantial Completion of the Work. The Contractor shall employ and supply a sufficient force of workers, material and equipment, and prosecute the Work with diligence so as to maintain progress, to prevent Work stoppage and to achieve Substantial Completion of the Work within the Contract Time.

7.2.2 Substantial Completion. Substantial Completion is that stage in the progress of the Work when the Work is complete in accordance with the Contract Documents so the District can occupy or use the Work for its intended purpose. The Architect and the District’s Inspector, upon request by the Contractor in accordance with the Contract Documents, shall determine Substantial Completion. The good faith and reasonable determination of Substantial Completion by the District's Inspector and the Architect shall be controlling and final.

7.2.3 Correction or Completion of the Work After Substantial Completion.

7.2.3.1 Punch list. Upon achieving Substantial Completion of the Work, the District, The District's Inspector, the District's Project Manager, the Construction Manager, Architect and the Contractor shall jointly inspect the Work and prepare a comprehensive list of items of the Work to be corrected or completed by the Contractor ("the Punch list"). The exclusion of, or failure to include, any item on the Punch list shall not alter or limit the obligation of the Contractor to complete or correct any portion of the Work in accordance with the Contract Documents.

7.2.3.2 Time for Completing Punch list Items. In addition to setting forth items for correction or completion pursuant to Article 7.2.3.1, the Project Manager, if any, Contractor and Architect shall, after the joint inspection, establish a reasonable time for Contractors' completion of all Punchlist items. If mutual agreement is not reached for the Contractor's completion of Punch list items, the Architect shall determine such time, and in such event, the time determined by the Architect shall be final and binding upon the District and Contractor so long as the Architect's determination is made in good faith. The Contractor shall promptly and diligently proceed to complete all Punch list items within the time established. In the event that the Contractor shall fail or refuse, for any reason, to complete all Punch list items within the time established, Contractor shall be subject to assessment of Liquidated Damages in accordance with Article 7.5 hereof. The foregoing notwithstanding, if the Contractor fails or refuses to complete all Punch list items, the District may in its sole and exclusive discretion and without further notice to Contractor, elect to cause the completion of all remaining Punch list items provided, however that such election by the District is in addition to and not in lieu of any other right or remedy of the District under the Contract Documents or at law. If the District elects to complete Punch list items of the Work, pursuant to the foregoing, Contractor shall be responsible for all costs incurred by the District in connection herewith and the District may deduct such costs from the Contract Price then or thereafter due the Contractor, if these costs exceed the remaining Contract Price due to the Contractor, the Contractor and the Performance Bond Surety are liable to District for any such excess costs.

7.2.4 Final Completion. Final Completion is that stage of the Work when all Work has been completed in accordance with the Contract Documents, including without limitation, the performance of all correction or completion items noted upon Substantial Completion, and the Contract has been otherwise fully performed by the Contractor. The Architect and the District's Inspector, upon request of the Contractor, shall determine Final Completion. The good faith and reasonable determination of Final Completion by the District's Inspector and the Architect shall be controlling and final.

7.2.5 Contractor Responsibility for Multiple Inspections. In the event the Contractor shall request determination of Substantial Completion or Final Completion by the District's Inspector and the Architect and it is determined by the District's Inspector and the Architect that the Work does not then justify certification of Substantial Completion or Final Completion and re-inspection is required at a subsequent time to make such determination, the Contractor shall be responsible for all costs of such re-inspection, including without limitation, the fees of the Architect and the salary of the District's Inspector. The District may deduct such costs from the Contract Price then due or thereafter due to the Contractor.

7.2.6 Final Acceptance. Final Acceptance of the Work shall occur upon approval of the Work by the District's Board of Trustees; such approval shall be submitted for adoption at the next regularly scheduled meeting of the District's Board of Trustees after the determination of Final Completion. The commencement of any warranty or guarantee period under the Contract Documents shall be deemed to be the date upon which the District's Board of Trustees approves of the Final Acceptance of the Work.

7.3 Construction Schedule.

7.3.1 Bid Time master Schedule. The Bid Time Master Schedule (if included with construction bid documents) is for reference only is provided as a graphic representation of one potential alternative

for construction. The District reserves the right to modify the Bid Time Master Schedule. Any modifications including but not limited to, logic changes, sequencing, milestone completion dates, or changed durations, to the Bid Time Master Schedule shall not be the basis for any claim, future or otherwise against the District or its representatives.

7.3.2 Submittal of Preliminary Construction Schedule. Within five (5) days following execution of the Agreement, the Contractor shall prepare and submit to the District, the Project Manager and the Architect a Preliminary Construction Schedule indicating, in graphic form, the estimated rate of progress and sequence of all Work required under the Contract Documents. The purpose of the Preliminary Construction Schedule is to assure adequate planning and execution of the Work so that it is completed within the Contract Time and to permit evaluation of the progress of the Work. Unless otherwise provided in the Special Conditions, the Construction Schedules required under this Article 7 shall; (i) be prepared with a commercially available computer software program in a critical path format; (ii) indicate the date(s) for commencement and completion of various portions of the Work including without limitation, procurement, fabrication and delivery of majors items, materials or equipment; (iii8) indicate manpower and other resources required for completion of each Construction Schedule activity; (iv) indicate costs for completion of each Construction Schedule activity; (v) identify each Submittal required by the Contract Documents, the date for the Contractor's submission of each Submittal required by the Contract Documents, the date for the Contractor's submission of each Submittal and the date for the return of the reviewed Submittal to the Contractor. The Contactor may submit a Preliminary Construction Schedule depicting completion of the Work in a duration shorter than the Contract Time; provided that such Preliminary Construction Schedule shall not be a basis for adjustment to the Contract Price in the event that completion of the Work shall occur after the time depicted therein, nor shall such Preliminary Construction Schedule be the basis for any extension of the Contract Time, the Contractor's entitlement to any extension of the Contract Time shall be based upon the Contract Time and not on any shorter duration which may be depicted in the Contractor's Preliminary Construction Schedule. If the Construction Schedule required under this Article 7.3 incorporate therein any "float" time, such float shall be deemed to jointly belong to and owned by the District and the Contractor. As used herein, "float time" shall be deemed to refer to the time between earliest finish date and the latest finish date of each activity shown on the Construction Schedule.

7.3.3 Review of Preliminary Construction Schedule. The District, the Project Manager and the Architect shall review the Preliminary Construction Schedule submitted by the Contractor pursuant to Article 7.3.1 above for conformity with the requirements of the Contract Documents. Within fifteen (15) days of the date of receipt of the Preliminary Construction Schedule, the Preliminary Construction Schedule will be returned to the Contractor with comments to the form or content thereof. Review of the Preliminary Progress Schedule and any comments thereto by the District, the Project Manager and/or the Architect shall not be deemed to be the assumption of construction means, methods or sequences by the District, the Project Manager or the Architect, all of which remain the Contractor's obligations under the Contract Documents.

7.3.4 Preparation and Submittal of Contract Construction Schedule. Within ten (10) days of the District's return of the Preliminary Construction Schedule to the Contractor pursuant to Article 7.3.2 above, the Contractor shall prepare and submit to the Architect and the Project Manager the Construction Schedule which incorporates therein the comments to the Preliminary Construction Schedule. Upon the Contractor's submittal of such Construction Schedule, the District, the Project Manager and the Architect shall review the same for purposes of determining conformity with the requirements of the Contract Documents. Within fifteen (15) days of the receipt of the Construction Schedule, the District will approve such Construction Schedule or will return the same to the Contractor with comments to the form or content. In the event there are comments to the form or content thereof, the Contractor, shall within seven (7) days of receipt of such comments, revise and resubmit the Construction Schedule incorporating therein such comments. Upon the District's approval of the form and content of a Construction Schedule, the same shall be deemed the "Approved Construction Schedule." The District's approval of a Construction Schedule shall be for the sole and limited purpose of determining conformity with the requirements of the Contract Documents. By the Approved Construction Schedule, the District shall not be deemed to have

exercised control over, or approval of, construction means, methods or sequences, all of which remain the responsibility and obligation of the Contractor in accordance with the terms of the Contract Documents. Further, the Approved Construction Schedule shall not operate to limit or restrict any of Contractor's obligations under the Contract Documents nor relieve the Contractor from the full, faithful and timely performance of such obligations in accordance with the terms of the Contract Documents. The activities, commencement and completion dates of activities, and the sequencing of activities depicted on the Approved Construction Schedule shall not be modified or revised by the Contractor without the prior consent, or direction, of the District and the Architect. Updates to the Approved Construction Schedule pursuant to Article 7.3.5 below shall not be deemed revisions to the Approved Construction Schedule, In the event that the Approved Construction Schedule shall depict completion of the Work in a duration shorter than the Contract Time, the same shall not be a basis for an adjustment of the Contract Time or the Contract Price in the event that actual completion of the Work shall occur after such the time depicted in such Approved Construction Schedule. In such event, the Contract Price shall not be subject to adjustment on account of any additional costs incurred by the Contractor to complete the Work prior to the Contract Time, as adjusted in accordance with the terms of the Contract Documents. Any adjustment of the Contract Time or the Contract Price shall be based upon the Contract Time set forth in the Contract Documents and not any shorter duration which may be depicted in the Approved Construction Schedule.

7.3.5 Revisions to Approved Construction Schedule. In the event that the progress of the Work or the sequencing of the activities of the Work shall materially differ from that indicated in the Approved Construction Schedule, as determined by the District in its reasonable discretion and judgment, the District may direct the Contractor to revise the Approved Construction Schedule; within fifteen (15) days of the District's direction, the Contractor shall prepare and submit to the Architect and the Project Manager a revised Approved Construction Schedule, for review and approval by the District. The Contractor may request consent of the District to revise the Approved Construction Schedule. Any such request shall be considered by the District only if in writing setting forth the Contractor's proposed revision(s) to the Approved Construction Schedule and the reason(s) therefore. The District may consent to, or deny, any such request of the Contractor to revise the Approved Construction Schedule in its reasonable discretion.

7.3.6 Updates to Approved Construction Schedule. The contractor shall monitor and update the Approved Construction Schedule on a monthly basis, or more frequently as required by the conditions or progress of the Work, or as may be requested by the District. The Contractor shall provide the District, the Project Manager and the Architect with updated Approved Construction Schedules indicating progress achieved and activities commenced or completed within the prior updated Approved Construction Schedule. Updates to the Approved Construction Schedule shall not include any revisions to the activities, commencement and completion dates of activities or the sequencing of activities depicted on the Approved Construction Schedule. Any such revisions to the Approved Construction Schedule shall result in the District's rejection of such update and Contractor shall, within seven (7) days of the District's rejection of such update, submit to the Architect and the Project Manager an Updated Approved Construction Schedule which does not incorporate any such revisions. If requested by the District, the Contractor shall also submit, with its updates to the Approved Construction Schedule a narrative statement including a description of current and anticipated problem areas of the Work, delaying factors and their impact, and an explanation of corrective action taken or proposed by the Contactor, If the progress of the Work is behind the Approved Construction Schedule, the Contractor shall indicate what measures will be taken to place the Work back on schedule. The District may, from time to time, and in the District's sole and exclusive direction, transmit to the Contractor's Performance Bond Surety the Approved Construction Schedule, any updates thereof and the narrative statement described hereinabove. The District's election to transmit, or not to transmit such information, to the Contractor's Performance Bond Surety shall not limit the Contractor's obligations under the Contract Documents.

7.3.7 Contractor Responsibility for Construction Schedule. The Contractor shall be responsible for the preparation, submittal and maintenance of the Construction Schedules required by the Contract

Documents, and any failure of the Contractor to do so may be deemed by the District as the Contractor's default in the performance of a material obligation under Contract Documents. Any and all costs or expenses required or incurred to prepare, submit, maintain, and update the Construction Schedules shall be solely that of the Contractor and no such cost or expense shall be charged to the District. The Contract Price shall not be subject to adjustment on account of costs, fees or expenses incurred or associated with the Contractor's preparation, submittal, and maintenance or updating of the Construction Schedules.

7.4 Adjustment of Contract Time. If Substantial Completion is delayed, adjustment, if any, to the Contract Time on account of such delay shall be in accordance with this Article 7.4.

7.4.1 Excusable Delays. If Substantial Completion of the Work is delayed by Excusable Delays, the Contract Time shall be subject to adjustment for such reasonable period of time as determined by the Architect; Excusable Delays shall not result in any increase in the Contract Price. Excusable Delays refer to unforeseeable and unavoidable casualties or other unforeseen causes beyond the control, and without fault or neglect, of the Contractor, any Subcontractor, Material Supplier or other person directly or indirectly engaged by the Contractor in performance of any portion of the Work. Excusable Delays include unanticipated and unavoidable labor disputes, unusual and unanticipated delays in transportation of equipment, materials or Construction Equipment reasonably necessary for completion and proper execution of the Work, unanticipated unusually severe weather conditions or DSA directive to stop the Work. Neither the financial resources of the Contractor or any person or entity directly or indirectly engaged by the Contractor in performance of any portion of the Work shall be deemed conditions beyond the control of the Contractor. If an event of Excusable Delay occurs, the Contract Time shall be subject to adjustment hereunder only if the Contractor establishes: (i) full compliance with all applicable provisions of the Contract Documents relative to the method, manner and time for Contractor's notice and request for adjustment of the Contract Time; (ii) that the event(s) forming the basis for Contractor's request to adjust the Contract Time are outside the reasonable control and without any fault or neglect of the Contractor or any person or entity directly or indirectly engaged by Contractor in performance of any portion of the Work; and (iii) that the event(s) forming the basis for Contractor's request to adjust the Contract Time directly and adversely impacted the progress of the Work as indicated in the Approved Construction Schedule or the most recent updated Approved Construction Schedule relative to the date(s) of the claimed event(s) of Excusable Delay.

The foregoing provisions notwithstanding, if the Special Conditions set forth a number of "Rain Days" to be anticipated during performance of the Work, the Contract Time shall not be adjusted for rain related unusually severe weather conditions until and unless the actual number of Rain Days during performance of the Work shall exceed those noted in the Special Conditions and such additional Rain Days shall have directly and adversely impacted the progress of the Work as depicted in the Approved Construction Schedule or the most recent updated Approved Construction Schedule relative to the date(s) of such additional Rain Days.

Article 7.4.1 "Excusable Delays" of the General Conditions is modified by inclusion of governmentally ordered reduction, interruption or elimination of electrical power supply to the Site. If Work on the critical path of the then current Construction Schedule is impacted by such reduction, interruption or elimination of electrical power service, upon the Contractor's compliance with applicable provisions of the Contract Documents, the Contract Time will be adjusted to reflect delays to critical path Work resulting from such reduction, interruption or elimination of electrical power service; the Contract Price is not subject to adjustment for such reduction, interruption or elimination of electrical power service.

7.4.2 Compensable Delays. If Substantial Completion of the Work is delayed and such delay is caused by the acts or omissions of the District, the Architect, or separate contractor employed by the District (collectively "Compensable Delays"), upon Contractor's request and notice, in strict conformity with Articles 7 and 9 of these General Conditions, the Contract Time will be adjusted by Change Order for such reasonable period of time as determined by the Architect and the District. In accordance with California Public Contract Code §7102, if the Contractor's progress is delayed by any of the events described in the preceding sentence, Contractor shall not be precluded from the recovery

of damages directly and proximately resulting there from, provided that the District is liable for the delay, the delay is unreasonable under the circumstances involved and the delay was not within the reasonable contemplation of the District and the Contractor at the time of execution of the Agreement. In such event, Contractor's damages, if any, shall be limited to direct, actual and unavoidable additional costs of labor, materials or Construction Equipment directly resulting from such delay, and shall exclude indirect or other consequential damages. Except as expressly provided for herein, Contractor shall not have any other claim, demand or right to adjustment of the Contract Price arising out of delay, interruption, hindrance or disruption to the progress of the Work. Adjustments to the Contract Price and the Contract Time, if any, on account of Changes to the Work or Suspension of the Work shall be governed by the applicable provisions of the Contract Documents, including without limitation, Articles 9 and 14 of these General Conditions.

7.4.3 Inexcusable Delays. Inexcusable Delays refer to any delay to the progress of the Work caused by events or factors other than those specifically identified in Articles 7.4.1 and 7.4.2 above. Neither the Contract Price nor the Contract Time shall be adjusted on account of Inexcusable Delays.

7.4.4 Adjustment of Contract Time.

7.4.4.1 Procedure for Adjustment of Contract Time. The Contract Time shall be subject to adjustment only in strict conformity with applicable provisions of the Contract Documents. Failure of Contractor to request adjustment(s) of the Contract Time in strict conformity with applicable provisions of the Contract Documents shall be deemed Contractor's waiver of the same.

7.4.4.2 Limitations Upon Adjustment of Contract Time on Account of Delays. Any adjustment of the Contract Time on account of an Excusable Delay or a Compensable Delay shall be limited as set forth herein. If an Excusable Delay and a Compensable Delay occur concurrently, the maximum extension of the Contract Time shall be the number of days from the commencement of the first delay to the cessation of the delay which ends last. If an Inexcusable Delay occurs concurrently with either an Excusable Delay or a Compensable Delay, the maximum extension of the Contract Time shall be the number of days, if any, which the Excusable Delay or the Compensable Delay exceeds the period of time of the Inexcusable Delay.

In addition to the foregoing limitations upon extension of the Contract Time, no adjustment of the Contract Time shall be made on account of any Excusable Delays or Compensable Delays unless such delay(s) actually and directly impact Work or Work activities on the critical path of the then current and updated Approved Construction Schedule as of the date on which such delay first occurs. The District shall not be deemed in breach of, or otherwise in default of any obligation hereunder, if the District shall deny any request by the Contractor for an adjustment of the Contract Time for any delay which does not actually and directly impact Work or Work activities on the critical path of the then current and updated Approved Construction Schedule.

7.5 Liquidated Damages. Should the Contractor neglect, fail or refuse to: (i) submit Submittals in accordance with the Approved Construction Schedule; (ii) achieve Substantial Completion of the Work within the Contract Time, (subject to adjustments authorized under the Contract Documents); (iii) or to complete Punch list items within the time established pursuant to the Contract Documents, the Contractor agrees to pay to the District the amount of per diem Liquidated Damages set forth in the Special Conditions, not as a penalty but as Liquidated Damages, for every day beyond the Contract Time, as adjusted, until Submittals are submitted, Substantial Completion or completion of the Punch list items are achieved. The Liquidated Damages amounts set forth in the Special Conditions are agreed upon by and between the Contractor and the District because of the difficulty of fixing the District's actual damages in the event of delayed submission of Submittals, Substantial Completion or completion of Punch list items. The Contractor and the District specifically agree that said amounts are reasonable estimates of the District's damages in such event, and that such amounts do not constitute a penalty. Liquidated Damages may be deducted from the Contract Price then or thereafter due the Contractor. The Contractor and the Surety shall be liable to the District for any Liquidated Damages exceeding any amount of the Contract Price then held or retained by the District. In the event that the Contractor shall fail or refuse to complete Punch list items and the District elects to

exercise its right to cause completion or correction of such items pursuant to Article 7.2.3.2 hereof, the District's assessment of Liquidated Damages pursuant to the foregoing shall be in addition, and not in lieu of, the District's right to charge Contractor with the cost of completing or correcting such items of the Work, as provided for under Article 7.2.3.2. The Contractor and the District acknowledge and agree that the provisions of this Article 7.5 are reasonable under the circumstances existing at the time of the Contractor's execution of the Agreement.

ARTICLE 8 CONTRACT PRICE

8.1 Contract Price. The Contract Price is the amount stated in the Agreement as such, and subject to any authorized adjustments thereto in accordance with the Contract Documents, is the total amount payable by the District to the Contractor for performance of the Work under the Contract Documents. The District's payment of the Contract Price to the Contractor shall be in accordance with the Contract Documents.

8.2 Cost Breakdown. Within fifteen (15) days of the execution of the Agreement by Contractor, Contractor shall furnish, on forms provided by the District, a detailed estimate and complete Cost Breakdown of the Contract Price. The Cost Breakdown shall be subject to the District's review and approval of the form and content thereof. In the event that the District shall reasonably object to any portion of the Cost Breakdown, within ten (10) days of the District's receipt of the Cost Breakdown, the District shall notify the Contractor, in writing of the District's objection(s) to the Cost Breakdown. Within five (5) days of the date of the District's written objection(s), Contractor shall submit a revised Cost Breakdown to the District for review and approval. The foregoing procedure for the preparation, review and approval of the Cost Breakdown shall continue until the District has approved of the entirety of the Cost Breakdown. Once the District approves the Cost Breakdown, the Cost Breakdown shall not be thereafter modified or amended by the Contractor without the prior consent and approval of the District, which may be granted or withheld in the sole reasonable discretion of the District. Notwithstanding any provision of the Contract Documents to the contrary, payment of the Contractor's overhead, supervision and general conditions costs and profit, as such items are reflected in the Cost Breakdown, shall be made by the District in equal installments with its disbursements of Progress Payments and the Final Payment with the amount of each such installment equal to the aggregate amount of such items as reflected in the Cost Breakdown divided by the number of months of the Contract Time.

8.3 Progress Payments.

8.3.1 Applications for Progress Payments. During the Contractor's performance of the Work, the Contractor shall submit monthly, on the first working day of each month, to the Construction Manager, the District’s Project Manager and the Architect, Applications for Progress Payments, on forms approved by the District, setting forth an itemized estimate of Work completed in the preceding month for the purpose of the District's making of Progress Payments thereon. Values utilized in the Applications for Progress Payments shall be based upon the District approved Cost Breakdown pursuant to Article 8.2 above and such values shall be only for determining the basis of Progress Payments to Contractor and shall not be considered as fixing a basis for adjustments, whether additive or deductive, to the Contract Price, or for determining the extent of Work actually completed.

8.3.2 District's Review of Applications for Progress Payments. In accordance with Public Contract Code §20104.50, upon receipt of an Application for Progress Payment, the District shall cause the same to be reviewed by the Project Inspector, the Construction Manager, if one is designated by the District, and the Architect, as soon as is practicable after receipt of such Application for Progress Payment. Such review shall be for the purpose of determining that the Application for Progress Payment is a proper Progress Payment request. For purposes of this Article 8.3.2, an Application for Progress Payment shall be deemed "proper" only if it is submitted on the form approved by the District, with all of the requested information of such form of Application for Progress Payment completely and accurately provided by the Contractor and such completed Application for Progress Payment is accompanied by: (i) a Certification, executed under penalty of perjury by the Contractor’s Superintendent and/or Project Manager, that all weekly Certified Payroll Records for the Contractor and all Subcontractors required to submit weekly Certified Payroll Records under the LCP for the period of time covered by the Application for Progress Payment have been

completed and submitted in strict conformity with the LCP; (ii) Certified Payrolls of any Subcontractors, of any tier, (who are not required under the LCP to submit Certified Payroll Records on weekly basis) for laborers performing any portion of the Work for which a Progress Payment is requested; (iii) duly completed and executed forms of Conditional Waiver and Release of Rights upon Progress Payment in accordance with California Civil Code §3262 of the Contractor, all Subcontractors of any tier, and Material Suppliers covering the Progress Payment requested; (iv) duly completed and executed forms of Unconditional Waiver and Release of Rights upon Progress Payment in accordance with California Civil Code §3262 of the Contractor, all Subcontractors of any tier, and Material Suppliers covering the Progress Payment received by the Contractor under the prior Application for Progress Payment; (v) if applicable, a current union statement reflecting that the Contractor and any Subcontractor of any tier, are current in the payment of any supplemental fringe benefits required pursuant to any collective bargaining agreement to which the Contractor or any such Subcontractor is a party to or is otherwise bound by; and (vi) a certification by the Contractor that it has continuously maintained, or caused to maintained, the Record Drawings reflecting the actual as-built conditions of the Work performed be for which the Progress Payment is requested, it being understood that such certification is subject to verification by the District, Architect, or the Construction Manager prior to disbursement of the Progress Payment. In accordance with Public Contract Code §20104.50, an Application for Progress Payment determined by the District not to be a proper Application for Progress Payment shall be returned by the District to the Contractor as soon as is practicable after receipt of the same from the Contractor, but in no event not more than seven (7) days after the District's receipt thereof. The District's return of any Application for Progress Payment pursuant to the preceding sentence shall be accompanied by a written document setting forth the reason(s) why the Application for Progress Payment is not proper.

8.3.3 Architect and District's Inspector Review of Applications for Progress Payments. Upon receipt of an Application for Progress Payment, the Architect and the District's Inspector shall inspect and verify the Work to determine whether it has been performed in accordance with the terms of the Contract Documents and to determine the portion of the Application for Progress Payment which is properly due to the Contractor under the terms of the Contract Documents.

8.3.4 District's Disbursement of Progress Payments.

8.3.4.1 Timely Disbursement of Progress Payments. In accordance with Public Contract Code §20104.50, within thirty (30) days after the District's receipt of a proper Application for Progress Payment, there shall be paid, by District, to Contractor a sum equal to ninety five percent (95%) of the value of the Work indicated in the Application for Progress Payment which is actually in place as of the date of the Application for Progress Payment and as verified and approved by the District's Inspector and the Architect and the pro rata portion of the Contractor's overhead, supervision and general conditions costs and profit for that month; provided, however, that the District's obligation to disburse any Progress Payment shall be subject to the District's receipt of all documents set forth in Article 8.3.2 above, each and all of which are conditions precedent to the District's obligation to disburse Progress Payments. If an Application for Progress Payment is determined not to be proper due to the failure or refusal of the Contractor to submit documents with the Application for Progress Payment, as required by Article 8.3.2, or incompleteness or inaccuracies in any such documents submitted or if it is reasonably determined that the Record Drawings have not been continuously maintained to reflect the actual as built conditions of the Work completed in the period for which the Progress Payment is requested, the thirty (30) day period hereunder for the District’s timely disbursement of a Progress Payment shall be deemed to commence on the date that the District is actually in receipt of documents not submitted with the Application for Progress Payment, or corrections to documents with the Application for Progress Payment so as to render them complete and accurate, or the date upon which the Contractor accurately and fully completes preparation of the Record Drawings relating to the Work for which the Progress Payment is requested.

8.3.4.2 Untimely Disbursement of Progress Payments. In accordance with Public Contract Code §20104.50, in the event that the District shall fail to make any Progress Payment

within thirty (30) days after receipt of an undisputed and properly submitted Application for Progress Payment, the District shall pay the Contractor interest on the undisputed amount of such Application for Progress Payment equal to the legal rate of interest set forth in California Code of Civil Procedure §685.010(a). The foregoing notwithstanding, in the event that the District shall determine that any Application for Progress Payment is not proper, pursuant to Article 8.3.2 above, and the District does not return such Application for Progress Payment within the seven (7) day period provided for in Article 8.3.2, the period of time for the District's disbursement of the Progress Payment on such Application for Progress Payment without incurring the interest liability shall be reduced by the number of days exceeding the seven (7) day return period.

8.3.4.3 District's Right to Disburse Progress Payments by Joint Checks. Provided that the District is in receipt of the applicable Subcontract or Purchase Order, the District, may in its sole discretion, issue joint checks to the Contractor and such Subcontractor or Material Supplier in satisfaction of its obligation to make Progress Payments or the Final Payment due hereunder.

8.3.4.4 No Waiver of Defective or Non-Conforming Work. The approval of any Application for Progress Payment or the disbursement of any Progress Payment to the Contractor shall not be deemed nor constitute acceptance of defective Work or Work not in conformity with the Contract Documents.

8.3.5 Progress Payments for Changed Work. The Contractor's Applications for Progress Payment may include requests for payment on account of Changes in the Work which have been properly authorized and approved by the District's Inspector, the Architect and all other governmental agencies with jurisdiction over such Change in accordance with the terms of the Contract Documents and for which a Change Order has been issued. Except as provided for herein, the District shall make no other payment for Changes in the Work.

8.3.6 Materials or Equipment Not Incorporated into the Work.

8.3.6.1 Limitations Upon Payment. Except as expressly provided for herein, no payments shall be made by the District on account of any item of the Work, including without limitation, materials or equipment which, at the time of the Contractor's submittal of an Application for Progress Payment, has/have not been incorporated into and made a part of the Work.

8.3.6.2 Materials or Equipment Delivered and Stored at the Site. The District may, in its sole and exclusive discretion, make payment for materials or equipment not yet incorporated into the Work if, at or prior to the time of the Contractor's submittal of a an Application for Progress Payment incorporating therein a request for payment of such materials or equipment if all of the following are complied with: (a) the materials or equipment have been delivered to the Site; (b) adequate arrangements, reasonably satisfactory to the District, have been made by the Contractor to store and protect such materials or equipment at the Site including without limitation, insurance reasonably satisfactory to the District, covering and protecting against the risk of loss, destruction, theft or other damage to such materials or equipment while in storage; and (c) the establishment of procedures reasonably satisfactory to the District by which title to such materials or equipment will be vested in the District upon the District's payment there from. The Contractor acknowledges that the discretion to make, or not to make, payment for materials or equipment delivered or stored at the site of the Work pursuant to the preceding sentence shall be exercised exclusively by the District; the District's exercise of discretion not to make payment for materials or equipment delivered or stored at the Site, but not yet incorporated into the Work shall not be deemed the District's default hereunder. In the event that the District shall elect to make payment for materials or equipment delivered and stored at the Site, the costs and expenses incurred to comply with the requirements of (b) and (c) of this Article 8.3.6.2 shall be borne solely and exclusively by the Contractor and no payment shall be made by the District on account of such costs and expenses.

8.3.6.3 Materials or Equipment Not Delivered or Stored at the Site. No payments shall be made by the District for materials or equipment to be incorporated into the Work where such materials or equipment have not been delivered or stored at the Site. The foregoing notwithstanding, the District may, in its sole and exclusive discretion, elect to make payment for materials or equipment not incorporated into the Work and which are not delivered or stored at the Site at or prior to the time of the Contractor's submittal of an Application for Progress Payment incorporating therein a request for payment of such materials or equipment provided that each and all of the following have been complied with: (a) adequate arrangements, reasonably satisfactory to the District, have been made by the Contractor to store and protect such materials or equipment which include without limitation, insurance reasonably satisfactory to the District, covering and protecting against the risk of loss, destruction, theft or other damage to such materials or equipment while in storage; and (b) the establishment of procedures reasonably satisfactory to the District by which title to such materials or equipment will be vested in the District upon the District's payment, therefore. The Contractor acknowledges that the discretion to make, or not to make, payment for such materials or equipment pursuant to the preceding sentence shall be exercised exclusively by the District; the District's exercise of discretion not to make payment for such materials or equipment shall not be deemed the District's default hereunder. In the event that the District shall elect to make payment for materials or equipment not at the Site, the costs and expenses incurred to comply with the requirements of (a) and (b) of this Article 8.3.6.3 shall be borne solely and exclusively by the Contractor and no payment shall be made by the District on account of such costs and expenses.

8.3.6.4 Materials or Equipment in Fabrication or Transit. The provisions of this Article 8.3.6 notwithstanding, the District shall not make any payment on account of any materials or equipment which are in the process of being fabricated or which are in transit to the Site of or other storage location.

8.3.7 Exclusions from Progress Payments. In addition to the District's right to withhold disbursement of any Progress Payment provided for in the Contract Documents, neither the Contractor's Application for Progress Payment shall include, nor shall the District be obligated to disburse any portion of the Contract Price for amounts which the Contractor does not intend to pay any Subcontractor, of any tier, or Material Supplier because of a dispute or any other reason.

8.3.8 Title to Work. The Contractor warrants that title to all Work covered by an Application for Progress Payment will pass to the District no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Progress Payment, all Work for which a Progress Payment has been previously issued and the Contractor has received payment from the District therefore **shall**, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, stop notices, security interests or encumbrances in favor of the Contractor, Subcontractors, Material Suppliers or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

8.3.9 Substitute Security for Retention. In accordance with the provisions of California Public Contract Code §22300, eligible and equivalent securities may be substituted for any monies withheld by the District to ensure the Contractor's performance under the Contract Documents at the request and expense of the Contractor and in conformity with the provisions of California Public Contract Code §22300. The foregoing and the provisions of California Public Contract Code §22300 notwithstanding, failure of the Contractor to request the substitution of eligible and equivalent securities for monies to be withheld by the District within ten (10) days following award of the Contract to Contractor shall be deemed a waiver of such right.

8.4 Final Payment.

8.4.1 Application for Final Payment. When the Contractor has achieved Final Completion of the Work and has otherwise fully performed its obligations under the Contract Documents, the Contractor shall submit an Application for Final Payment on such form as approved by the District. Thereupon, the Architect and the District's Inspector will promptly make a final inspection of the Work and when the Architect and the District's Inspector find the Work acceptable under the Contract Documents

and that the Contract has been fully performed by the Contractor, the Architect and the District's Inspector will thereupon promptly approve the Application for Final Payment, stating that to the best their knowledge, information and belief, the Work has been completed in accordance with the terms of the Contract Documents. The Final Payment shall include the remaining balance of the Contract Price and any retention from Progress Payments previously withheld by the District.

8.4.2 Conditions Precedent to Disbursement of Final Payment. Neither Final Payment nor any remaining Contract Price shall become due until the Contractor submits to the District each and all of the following, the submittal of which are conditions precedent to the District's obligation to disburse the Final Payment: (i) an affidavit or certification by the Contractor that payrolls, bills for materials and other indebtedness incurred in connection with the Work for which the District or the District's property may or might be responsible or encumbered have been paid or otherwise satisfied; (ii) a certificate evidencing that insurance required by the Contract Documents to remain in force after the Contractor's receipt of Final Payment is currently in effect; (iii) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover any period following Final Payment as required by the Contract Documents; (iv) consent of the Surety on the Labor and Material Payment Bond and Performance Bond, to Final Payment if required; (v) duly completed and executed forms of Conditional or Unconditional Waivers and Releases of rights upon Final Payment of the Contractor, Subcontractors of any tier and Material Suppliers in accordance with California Civil Code §3262, with each of the same stating that there are, or will be, no claims for additional compensation after disbursement of the Final Payment; (vi) Operations and Maintenance manuals and separate warranties provided by any manufacturer or distributor of any materials or equipment incorporated into the Work; (vii) the Record Drawings; (viii) the form of Guarantee included in the Contract Documents duly executed by an authorized representative of the Contractor; (ix) any and all other items or documents required by the Contract Documents to be delivered to the District upon completion of the Work; (x) the completion and submittal of all reports required by the Contract Documents, including without limitation, verified reports required by applicable provisions of the California Code of Regulations; and (xi) if required by the District, such other data establishing payment or satisfaction of obligations such as receipts, releases and waivers of liens, stop notices, claims, security interest or encumbrances arising out of the Contract to the extent and in such form as may be required by the District.

8.4.3 Disbursement of Final Payment. Provided that the District is then in receipt of all documents and other items in Article 8.4.2 above as conditions precedent to the District’s obligation to disburse Final Payment, not later than sixty (60) days following Final Acceptance the District shall disburse the Final Payment to the Contractor. Pursuant to California Public Contract Code §7107, if there is any dispute between the District and the Contractor at the time that disbursement of the Final Payment is due, the District may withhold from disbursement of the Final Payment an amount not to exceed one hundred twenty five percent (125%) of the amount in dispute.

8.4.4 Waiver of Claims. The Contractor's acceptance of the Final Payment is a waiver and release by the Contractor of any and all claims against the District for compensation or otherwise in connection with the Contractor's performance of the Contract.

8.4.5 Claims Asserted After Final Payment. Any lien, stop notice or other claim filed or asserted after the Contractor's acceptance of the Final Payment by any Subcontractor, of any tier, laborer, Material Supplier or others in connection with or for Work performed under the Contract Documents shall be the sole and exclusive responsibility of the Contractor who further agrees to indemnify, defend and hold harmless the District and its officers, agents, representatives and employees from and against any claims, demands or judgments arising or associated therewith, including without limitation attorney’s fees incurred by the District in connection therewith. In the event any lien, stop notice or other claim of any Subcontractor, Laborer, Material Supplier or others performing Work under the Contract Documents remain unsatisfied after Final Payment is made, Contractor shall refund to District all monies that the District may pay or be compelled to pay in discharging any lien, stop notice or other claim, including, without limitation all costs and reasonable attorneys’ fees incurred by District in connection therewith.

8.5 Withholding of Payments. The District may withhold any Progress Payment or the Final Payment, in

whole or in part, or back charge the Contractor to the extent it may deem advisable to protect the District on account of: (i) defective Work or Work not in conformity with the requirements of the Contract Documents which is not remedied; (ii) failure of the Contractor to make payments when due Subcontractors or Material Suppliers for materials or labor; (iii) claims filed or reasonable evidence of the probable filing of claims by Subcontractors, laborers, Material Suppliers, or others performing any portion of the Work under the Contract Documents for which the District may be liable or responsible including, without limitation, Stop Notice Claims filed with the District pursuant to California Civil Code §3179 et seq.; (iv) a reasonable doubt that the Contract can be completed for the then unpaid balance of the Contract Price; (v) tax demands filed in accordance with California Government Code §12419.4; (vi) other claims, penalties and/or forfeitures for which the District is required or authorized to retain funds otherwise due the Contractor; (vii) any amounts due from the Contractor to the District under the terms of the Contract Documents; or (viii) the Contractor's failure to perform any of its obligations under the Contract Documents or its default under the Contract Documents or its failure to maintain adequate progress of the Work. In addition to the foregoing, the District shall not be obligated to process any Application for Progress Payment or Final Payment, nor shall Contractor be entitled to any Progress Payment or Final Payment so long as any lawful or proper direction concerning the Work or the performance thereof or any portion thereof, given by the District, the District's Inspector, the Architect or any public authority having jurisdiction over the Work, or any portion thereof, shall not be fully and completely complied with by the Contractor. When the District is reasonably satisfied that the Contractor has remedied any such deficiency, payment shall be made of the amount withheld.

8.6 Payments to Subcontractors. The Contractor shall pay all Subcontractors for and on account of Work of the Contract performed by such Subcontractors in accordance with the terms of their respective subcontracts and as provided for pursuant to California Public Contract Code §10262, the provisions of which are deemed incorporated herein by this reference. In the event of the Contractor's failure to make payment to Subcontractors in conformity with California Public Contract Code §10262, the provisions of California Public Contract Code §10253 shall apply; by this reference, the provisions of California Public Contract Code §10253 are incorporated herein in its entirety, except that the references in said Section 10253 to "the director" shall be deemed to refer to the District. The Contractor shall timely make payment of retention due Subcontractors in accordance with Public Contract Code §7101.

8.7 Computerized Job Cost Reporting System.

8.7.1 Job Cost Reporting. The Contractor and each Subcontractor with a Subcontract valued at One Million Five Hundred Thousand Dollars ($1.5M) or greater shall maintain a computerized job cost reporting system conforming with the requirements set forth herein. The computer program(s) utilized by the Contractor and applicable Subcontractors shall be subject to the review and acceptance by the District. The job cost reporting systems for the Work shall be updated in regular intervals of not more than one (1) calendar month.

8.7.2 Job Cost Reporting System Requirements. The computerized job cost programs utilized by the Contractor and applicable Subcontractors shall conform and comply with generally accepted accounting principles applied in a consistent manner and with recognized and generally accepted construction industry accounting standards, guidelines and procedures. The job cost reporting system format and configuration shall follow the general format of the District approved Cost Breakdown and budgets established for each line item shall be traceable to a bid estimate of costs. The job cost reporting systems utilized by the Contractor and applicable Subcontractors shall be capable of: (a) providing overall cost status on a monthly and cumulative basis; (b) providing comparative analysis of the original budgeted costs, actual costs, remaining budget, and projected cost of completion; the job cost reporting system shall be capable of providing comparative analysis for individual line items and the totality of the Work reflected in the job cost report and; (c) tracking adjustments to original budget amounts for Changes to the Work (including, without limitation, issued, pending and potential Change Orders).

8.7.3 Job Cost System Information. Upon request of the District, the Contractor and applicable Subcontractors shall make available written job cost reports and/or provide the District with the electronic files of the then current or requested job cost report. The Contractor’s obligations hereunder are material.

ARTICLE 9 CHANGES

9.1 Changes in the Work. The District, at any time, by written order, may make Changes within the general scope of the Work under the Contract Documents or issue additional instructions, require additional Work or direct deletion of Work. The Contractor shall not proceed with any Change involving an increase or decrease in the Contract Price or the Contract Time without prior written authorization from the District. The foregoing notwithstanding, the Contractor shall promptly commence and diligently complete any Change to the Work subject to the District's written authorization issued pursuant to the preceding sentence; the Contractor shall not be relieved or excused from its prompt commencement and diligent completion of any Change subject to the District's written authorization by virtue of the absence or inability of the Contractor and the District to agree upon the extent of any adjustment to the Contract Time or the Contract Price on account of such Change. The issuance of a Change Order pursuant to this Article 9 in connection with any Change authorized by the District under this Article 9.1 shall not be deemed a condition precedent to Contractor's obligation to promptly commence and diligently complete any such Change authorized by the District hereunder. The District's right to make Changes shall not invalidate the Contract nor relieve the Contractor of any liability or other obligations under the Contract Documents. Any requirement of notice of Changes in the scope of Work to the Surety shall be the responsibility of the Contractor. Changes to the Work depicted or described in the Drawings or the Specifications shall be subject to approval by the DSA. The District may make Changes to bring the Work or the Project into compliance with environmental requirements or standards established by state or federal statutes and regulations enacted after award of the Contract.

9.2 Oral Order of Change in the Work. Any oral order, direction, instruction, interpretation, or determination from the District, the District's Inspector, the District's Project Manager, the Construction Manager or the Architect which in the opinion of the Contractor causes any change to the scope of the Work, or otherwise requires an adjustment to the Contract Price or the Contract Time, shall be treated as a Change only if the Contractor gives the Construction Manager and the District's Inspector written notice within ten (10) days of the order, directions, instructions, interpretation or determination and prior to acting in accordance therewith. Time is of the essence in Contractor's written notice pursuant to the preceding sentence so that the District can promptly investigate and consider alternative measures to address the order, direction, instruction, interpretation or determination giving rise to Contractor's notice. Accordingly, Contractor acknowledges that its failure, for any reason, to give written notice within ten (10) days of such order, direction, instruction, interpretation or determination shall be deemed Contractor's waiver of any right to assert or claim any entitlement to an adjustment of the Contract Time or the Contract Price on account of such order, direction, instruction, interpretation or determination. The written notice shall state the date, circumstances, extent of adjustment to the Contract Price or the Contract Time, if any, requested, and the source of the order, directions, instructions, interpretation or determination that the Contractor regards as a Change. Unless the Contractor acts in strict accordance with this procedure, any such order, direction, instruction, interpretation or determination shall not be treated as a Change and the Contractor hereby waives any claim for any adjustment to the Contract Price or the Contract Time on account thereof.

9.3 Changes in Specifications or Plans

9.3.1 Written Authorization. The Construction Manager and/or District may, at any time, by written order authorize additions, deletions, and or other changes in the Work including, but not limited to:

(a) Changes in the Specifications or Plans.

(b) Changes in the sequence, method or manner of performance of the Work.

(c) Changes in the owner-furnished facilities, equipment, materials, services or site; or

(d) Changes directing acceleration of the Work.

9.3.2 Modification. Such modification will be in the form of a Contract Change Order or Field Order, which will set forth the Work to be done or the method by which the change and cost adjustment, if any, will be determined, and the time of completion of the Work. It is understood that said modifications shall not invalidate the Contract and may be without notice to sureties. Absence of such notice shall not relieve such sureties of any of their obligations.

9.4 Procedures and Allowable Costs on Changes.

9.4.1 Increase in the Contract Price. If the change in or addition to the Work will result in an increase in the Contract Price, the Construction Manager shall have the right to require the performance thereof in any of the following ways, at their sole election:

(a) By agreed unit prices, if unit prices are required by the District's bid form and provided with Contractor's bid.

(b) By proposal and acceptance of an agreed upon itemized lump sum.

(c) On a time and materials basis.

(d) Construction Manager's estimate of the value of the change.

9.4.2 Lump Sum Proposals. If the Construction Manager elects to have the change in the Work performed on a lump sum basis, such election will be based on a lump sum proposal that shall be submitted by the Contractor within five (5) days of the Construction Manager's request, therefore. Request for a lump sum proposal shall not be deemed an election to have the Work performed on a lump sum basis. The Contractor's proposal shall be completely itemized and segregate the cost of work by labor, materials for the various components of the change, taxes, and equipment (no aggregate or lump sum total will be acceptable on any of the above) and shall be accompanied by like kind signed proposals of any subcontractors which will perform any portion of the change, and of any persons who will furnish materials or equipment for incorporation therein. The proposal shall also include the Contractor's estimate of the time required to perform said changes or additional work. Costs of preparing the proposal shall not be compensable.

9.4.3 Actual Cost. The term "extra work" as used shall mean actual costs incurred by the Contractor and each Subcontractor regardless of tier involved, and shall be limited to the following (to the extent the Contractor demonstrates that they were actually incurred):

9.4.3.1 Straight Time Wages. Actual Straight-time wages of salaries for employees employed at the Project site, or at fabrication sites off Project site, in the direct performance of the extra work. Wages shall be based on verified prevailing wage rates for the area and job classification or verified collective bargaining agreements for the area.

9.4.3.2 Straight Time Fringe Benefits. Actual Fringe Benefits and Payroll Taxes for employees employed at the Project site, or at fabrication site off the Project site, in the direct performance of the extra work. Benefits and Taxes shall be based on verified prevailing wage rates for area and job classification or verified collective bargaining agreements for area.

9.4.3.3 Authorized Overtime. Actual Overtime wages or salaries specifically authorized in writing by the District or Construction Manager, for employees employed at the Project site, or at fabrication sites off Project site, in the direct performance of the extra work. Wages shall be based on verified prevailing wage rates for area and job classification or verified collective bargaining agreements for area.

9.4.3.4 Authorized Overtime Fringe Benefits. Actual Overtime Fringe Benefits and Payroll Taxes specifically authorized in writing by the District or Construction Manager, for employees employed at the Project site, or at fabrication sites off Project site, in the direct performance of the extra work. Wages shall be based on verified prevailing wage rates for area and job classification or verified collective bargaining agreements for area.

9.4.3.5 Materials and Consumable Items. Itemized costs of Materials and consumable items, which are furnished and incorporated into the extra work, as approved by the District or Construction Manager. Such costs shall be charged at the lowest price available to the Contractor or its subcontractors. In no event shall such costs exceed verified competitive costs obtainable from other contractors, subcontractors, suppliers, manufacturers, and/or distributors in the area of the project site. All discounts, rebates, and refunds and all returns from sale of surplus, materials and consumable items shall accrue to the Construction Manager and Contractor shall make provisions so that they may be obtained.

9.4.3.6 Sales Taxes. Sales taxes on the costs of materials and consumable items, which are incorporated into and used in the performance of the Extra Work. In no case shall the sales taxes exceed the amount required by the Project location.

9.4.3.7 Authorized Construction Equipment. Rental charges for necessary construction equipment, whether owned or hired, as authorized in writing by the District or Construction Manager, exclusive of hand tools, used directly in the performance of the Extra Work. Such rental charges shall in no case exceed the current California Department of Transportation's published equipment rental rates for the area of the Project. The charges for the equipment shall be for the actual time of use and shall not be subjected to minimum hourly charges without the approval of the Construction Manager.

9.4.3.8 Royalties and Permits. Actual additional costs of royalties and permits if required due to the performance of the Extra Work.

9.4.3.9 Insurance Premium Costs. The insurance premium cost of all insurance coverage required, including but not limited to general liability, auto, and workers compensation, and Bonds shall not exceed two percent (2%) of actual costs.

9.4.4 Extra Work Cost Exclusions. Cost of Extra Work shall not include any of the following: (a) Superintendent(s) as identified; (b) Assistant Superintendent(s); (c) Project Engineer(s); (d) Project Manager(s); (e) Scheduler(s); (f) Estimators(s); (g) Drafting of Detailing; (h) As-builts; (i) Small tools (Replacement value that does not exceed $800); (j) Office expenses including staff, materials and supplies; (k) On-site or off-site trailer and storage rental and expenses; (l) Site fencing; (m) Utilities including gas, electric, sewer, water, telephone, telefax and copier equipment; (n) Data processing personnel and equipment; (o) Federal, state, or local business income and franchise taxes; (p) Home office overhead and profit; (q) Costs and expenses of any kind of item not specifically and expressly included in 9.4.3 above; (r) Costs and expenses of any kind of item not specifically and expressly included in definition of Contractor Base Fee.

9.4.5 Contractor Fee. The term Contractor Fee shall mean the full amount of compensation, both direct and indirect (including without limitation all overhead and profit), to be paid to the Contractor for its own Work and the Work of all Subcontractors, for all expenses not included in the Cost of Extra Work, whether or not such costs and expenses specifically referred to in 9.4.3 above. The Contractor Fee shall not be compounded. The Contractor Fee shall be calculated on actual construction cost and not on marked-up numbers. No other overhead, profit or other amounts will be paid by the District on account of a change in the Work except as specifically provided in this section. Overhead and Profit shall be deemed to include all costs and expenses, including site overhead, which the Contractor or any of its subcontractors may incur in the performance of the change in the Work and which are not otherwise specifically recoverable by them pursuant to the Contract Documents. The Contractor Fee shall be computed as follows:

9.4.5.1 Contractor Performed Extra Work. Fifteen percent (15%) of the cost of that portion of the Extra Work to be performed by the Contractor with its own forces.

9.4.5.2 Subcontractor Performed Extra Work. Twelve percent (12%) of the cost of that portion of the Work to be performed by a subcontractor with its own forces, plus five percent (5%) for the Contractor. This shall not exceed (17%) of the actual cost.

9.4.5.3 Sub-Subcontractor Performed Extra Work. Twelve percent (12%) of the cost of that portion of the Work to be performed by a sub-subcontractor with its own forces, or any lower tier of the subcontractor, plus five percent (5%) for the Subcontractor, plus five percent (5%) for the Contractor. This shall not exceed (22%) of the actual cost.

9.4.6 Deleted Work. For work to be deleted, the reduction of the Contract sum shall be computed on the basis of one of the following: (a) By agreed unit prices, if unit prices are required by the District's bid form and provided with Contractor's bid; (b) By proposal and acceptance of an agreed upon itemized lump sum; (c) On a time and materials basis; or (d) Construction Manager's estimate of the value of the change. The aggregate reduction of the Contract Price for deleted Work shall be an amount equal to the costs of the deleted Work, computed in accordance with the preceding.

The Contractor agrees that it shall not be entitled to claim damages for anticipated profits on any portion of work that may be deleted. The amount of any adjustment for work deleted shall be estimated at the time deletion of work is ordered and the estimated adjustment will be deducted for the subsequent monthly pay estimates.

9.4.7 Change Involving Extra Work and Deleted Work. In the event any one Change involves both Extra Work and Deleted Work in the same portion of the Work, the Contractor Fee will not be allowed if the deductive cost exceeds the additive cost. If the additive cost exceeds the deductive cost, the Contractor Fee will be allowed only on the difference between the two.

9.4.8 Time / Material Requirements. If the District and/or the Construction Manager elects to have the change in the Work performed on a time and material basis, the same shall be performed, whether by the Contractor's forces or the forces of any of its subcontractors or sub-subcontractors, at actual costs to the entity or entities performing the change in the Work (without any charge for administration, clerical expense, supervision or superintendence of any nature whatsoever, including foremen, or the costs of use or rental of tools or plant). Fee shall be calculated as outlined in 9.4.5 above. No other mark-ups shall be allowed hereunder. The Contractor shall submit to the Construction Manager verified daily detailed and accurate records itemizing each element of cost and shall provide substantiating records and documentation, including time cards and paid invoices. Tickets, to include the identification number assigned to the change in the Work, the location and description of the change in the Work, the classification of labor employed (and names and social security numbers), the material used, the equipment rented (not tools) and such other evidence of cost as the Construction Manager may require. The District and/or Construction Manager may require authentication of all time and material tickets and invoices by persons designated by the Construction Manager for such purpose. The failure of the Contractor to secure any required authentication shall, if the District and/ Construction Manger elects to treat it as such, constitute a waiver by the Contractor of any claim for the cost of that portion of the change in the Work covered by a non-authenticated ticket or invoice; provided, however, that the authentication of any such ticket or invoice by the District shall not constitute an acknowledgment by the District that the items thereon were reasonably required for the change in the Work. Such records and documentation shall be submitted to the Construction Manager on a daily basis.

9.4.9 Overhead and Profit. No overhead and profit will be paid by the District on account of a change in the Work except as **specifically** provided in this section. Overhead and Profit shall be deemed to include all costs and expenses, including site overhead and home office overhead, which the Contractor or any of its subcontractors may incur in the performance of the change in the Work and which are not otherwise specifically recoverable by them pursuant to this paragraph.

9.4.10 Claim Damages for Anticipated Profits. The Contractor agrees that it shall not be entitled to claim damages for anticipated profits on any portion of work that may be deleted. The amount of any adjustment for work deleted shall be estimated at the time deletion of work is ordered and the estimated adjustment will be deducted for the subsequent monthly pay estimates.

9.5 Unilateral Change in or Addition to the Work. Notwithstanding the above, the District and/or the Construction Manager may direct the Contractor in writing to perform changes in or additions to the scope of the Contract. The Contractor shall perform such work and the parties shall proceed pursuant to the provisions of Section 9.4. In the event that the parties are unable to agree as to the reasonable costs and time to perform the change in or addition to the Work based upon the Contractor's proposal and the District and / or Construction Manager do not elect to have the change in the Work performed on a time and material basis, the District and / or the Construction shall make a unilateral determination of the reasonable cost and time to perform the change in the work, based upon their own estimates, the Contractor's submission or combination thereof. A Change Order shall be issued for the amount of costs and time determined by the District and the Construction Manager and shall become binding upon the Contractor unless the Contractor submits its protest in writing to the District and Construction Manager within thirty (30) days of the issuance of the Change Order. The District and Construction Manager has the right to direct the Contractor in writing to perform the Change in the Work which is the subject of the Change Order. Failure of the parties to reach agreement regarding the costs and time of the performing the change in the Work and/or any pending protest shall not relieve the Contractor from performing the change in the Work promptly and expeditiously.

9.6 Claims for Extra Costs

9.6.1 It is hereby mutually agreed that the Contractor shall not be entitled to the payment of any additional compensation for any cause, including any act, or failure to act, by the District, Architect or the Construction Manager, or the happening of any event, thing or occurrence, unless it shall have given the Construction Manager due written notice of potential claims hereinafter specified, provided, however, that compliance with this section shall not be a prerequisite as to matters within the scope of the provisions in Section 9.4.

9.6.2 The written notice of potential claims shall set forth the reasons for which the Contractor believes additional compensation will or may be due, the nature of the costs involved, and, insofar as possible, the amount of the potential claim. The notice as above required shall be given to the Construction Manager prior to the time that the Contractor commences performance of the work giving rise to the potential claim for additional compensation, if based on an act or failure to act by the District, Architect or the Construction Manager, or in all other cases within ten (10) days after the happening of the event, thing or occurrence giving rise to the potential claim.

9.6.3 The Contractor may submit a claim to the Construction Manager concerning any matter for which a protest under Article 14.2 or a notice of potential claim is filed within sixty (60) days following the submission of said protest or notice, unless, due to the nature of the claim or the uncompleted state of the work, it is impracticable to determine the amount or the extent of the claim within such period, in which case a claim may be submitted at the earliest time thereafter that such determination can be made, but in no event later than the final release by the Contractor. The claims shall set forth clearly and in detail, for each item of additional compensation claimed, the reasons for the claim, reference to applicable provisions of the Specifications, the nature and the amount of the cost involved, the computations used in determining such costs, and all pertinent factual data. The Contractor shall maintain complete and accurate records of the cost or any portion of the work for which additional compensation is claimed, and shall provide the Construction Manager with copies thereof, as required.

9.6.4 The Construction Manager will, within a reasonable time after submission of the Contractor's claim, make decisions in writing on all claims of the Contractor. All such decisions of the Construction Manager shall be final unless the Contractor shall within ten (10) days after receipt of the Construction Manager's decision, file with the Construction Manager a written protest, stating clearly and in detail the basis thereof. The Construction Manager will forward such protest promptly to the District, which will issue a decision upon each such protest, and the District's decision will be final. Pending such decision, the Contractor shall proceed with its work in accordance with the determination or instructions of the Construction Manager. It is hereby agreed that the Contractor's failure to protest the Construction Managers determination or instructions, within ten (10) days from and after the Construction Managers determinations or instructions, shall constitute a waiver by the Contractor of all its rights to further protest, judicial or otherwise.

9.6.5 It is the intention of this Section that the differences between the parties, arising under and by virtue of the Contract, be brought to the attention of the Construction Manager at the earliest possible time in order that such matters may be settled, if possible or other appropriate action promptly taken. The Contractor hereby agrees that it shall have no right to additional compensation for any claim that may be based on any act, failure to act, event, thing or occurrence for which no written notice of potential claim as herein required was timely filed.

9.7 Effect on Sureties. All changes authorized by the Contract Documents may be made without notice to or consent of the sureties on the contract bonds and shall not reduce the sureties' liability on the bonds. The District reserves the right to require additional payment or performance bonds to secure a change order.

9.8 Unforeseen Site Conditions. If this contract requires the digging of trenches or other excavations that extend deeper than four feet below the existing surface, the following provision shall apply to those trenches or excavations. In the event that any of the following described conditions is suspected to exist in the trench or excavation, the Contractor shall promptly, and before the condition is disturbed, notify the District Inspector, in writing, as per Article 4.2.3.

9.9 Adjustment to Contract Time. Refer to Article 7.4.

9.10 Addition or Deletion of Alternate Bid Item(s). If the Bid for the Work includes proposal(s) for Alternate Bid Item(s), during Contractor's performance of the Work, the District may elect, pursuant to this Article to add any such Alternate Bid Item(s) if the same did not form a basis for award of the Contract or delete any such Alternate Bid Item(s) if the same formed a basis for award of the Contract. If the District elects to add or delete any such Alternate Bid Item(s) pursuant to the foregoing, the cost or credit for such Alternate Bid Item(s) shall be as set forth in the Contractor's Bid. If any Alternate Bid Item is added or deleted from the Work pursuant to the foregoing, the Contract Time shall be adjusted by the number of days allocated for the added or deleted Alternate Bid Item in the Contract Documents; if days are not allocated for any Alternate Bid Item added or deleted pursuant to the foregoing, the Contract Time shall be equitably adjusted.

9.11 Change Orders. If the District approves of a Change, a written Change Order prepared by the Architect on behalf of the District shall be forwarded to the Contractor describing the Change and setting forth the adjustment to the Contract Time and the Contract Price, if any, on account of such Change. All Change Orders shall be in full payment and final settlement of all claims for direct, indirect and consequential costs, including without limitation, costs of delays or impacts related to, or arising out of, items covered and affected by the Change Order, as well as any adjustments to the Contract Time. Any claim or item relating to any Change incorporated into a Change Order not presented by the Contractor for inclusion in the Change Order shall be deemed waived. The Contractor shall execute the Change Order prepared pursuant to the foregoing; once the Change Order has been prepared and forwarded to the Contractor for execution, without the prior approval of the District which may be granted or withheld in the sole and exclusive discretion of the District, the Contractor shall not modify or amend the form or content of such Change Order, or any portion thereof. The Contractor's attempted or purported modification or amendment of any such Change Order, without the prior approval of the District, shall not be binding upon the District; any such unapproved modification or amendment to such Change Order shall be null, void and unenforceable. Unless otherwise expressly provided for in the Contract Documents or in the Change Order, any Change Order issued hereunder shall be binding upon the District only upon action of the District's Board of Trustees approving and ratifying such Change Order. In the event of any amendment or modification made by the Contractor to a Change Order for which there is no prior approval by the District, in accordance with the provisions of this Article 9.5, unless otherwise expressly stated in its approval and ratification of such Change Order, any action of the Board of Trustees to approve and ratify such Change Order shall be deemed to be limited to the Change Order as prepared by the Architect; such approval and ratification of such Change Order shall not be deemed the District's approval and ratification of any unapproved amendment or modification by the Contractor to such Change Order.

9.12 Contractor Notice of Changes. If the Contractor should claim that any instruction, request, the Drawings, the Specifications, action, condition, omission, default, or other situation obligates the District to increase the Contract Price or to extend the Contract Time, the Contractor shall notify the Construction Manager and the Architect, in writing, of such claim within ten (10) days from the date of its actual or constructive notice of the factual basis supporting the same. The District shall consider any such claim of the Contractor only if sufficient supporting documentation is submitted with the Contractor's notice to the Construction Manager and the Architect. Time is of the essence in Contractor's written notice pursuant to the preceding sentence so that the District can promptly investigate and consider alternative measures to the address such instruction, request, Drawings, Specifications, action, condition, omission, default or other situation. Accordingly, Contractor acknowledges that its failure, for any reason, to give written notice (with sufficient supporting documentation to permit the District's review and evaluation) within ten (10) days of its actual or constructive knowledge of any instruction, request, Drawings, Specifications, action, condition, omission, default or other situation for which the Contractor believes there should an adjustment of the Contract Time or the Contract Price shall be deemed Contractor's waiver, release, discharge and relinquishment of any right to assert or claim any entitlement to an adjustment of the Contract Time or the Contract Price on account of any such instruction, request, Drawings, Specifications, action, condition, omission, default or other situation. In the event that the District determines that the Contract Price or the Contract Time are subject to adjustment based upon the events, circumstances and supporting documentation submitted with the Contractor's written notice under this Article 9.6, any such adjustment shall be determined in accordance with the provisions of Articles 9.4.1 and 9.4.2.

9.13 Disputed Changes. In the event of any dispute or disagreement between the Contractor and the District

or the Architect regarding the characterization of any item as a Change to the Work or as to the appropriate adjustment of the Contract Price or the Contract Time on account thereof, the Contractor shall promptly proceed with the performance of such item of the Work, subject to a subsequent resolution of such dispute or disagreement in accordance with the terms of the Contract Documents. The Contractor's failure or refusal to proceed with such Work may be deemed to be Contractor's default of a material obligation of the Contractor under the Contract Documents.

9.14 Emergencies. In an emergency affecting the safety of life, or of the Work, or of property, the Contractor, without special instruction or prior authorization from the District or the Architect, is permitted to act at its discretion to prevent such threatened loss or injury. Any compensation claimed by the Contractor on account of such emergency work shall be submitted and determined in accordance with this Article 9.

9.15 Minor Changes in the Work. The Architect may order minor Changes in the Work not involving an adjustment in the Contract Price or the Contract Time and consistent with the intent of the Contract Documents. Such Changes shall be affected by written order and shall be binding on the District and the Contractor. The Construction Manager may direct the Contractor to perform Changes provided that each such Change does not result in an increase of more than $500.00 to the Contract Price and no adjustment of the Contract Time. The Contractor shall carry out such orders promptly.

9.16 Unauthorized Changes. Any Work beyond the lines and grades shown on the Contract Documents, or any extra Work performed or provided by the Contractor without notice to the Construction Manager and the District's Inspector in the manner and within the time set forth in Article 9.2 or 9.6 shall be considered unauthorized and at the sole expense of the Contractor. Work so done will not be measured or paid for, no extension to the Contract Time will be granted on account thereof and any such Work may be ordered removed at the Contractor's sole cost and expense. The failure of the District to direct or order removal of such Work shall not constitute acceptance or approval of such Work nor relieve the Contractor from any liability on account thereof.

ARTICLE 10 SEPARATE CONTRACTORS

10.1 District's Right to Award Separate Contracts. The District reserves the right to perform construction or operations related to the Project with the District's own forces or to award separate contracts in connection with other portions of the Project or other construction or operations at or about the Site. If the Contractor claims that delay or additional cost is involved because of such action by the District, the Contractor shall seek an adjustment to the Contract Price or the Contract Time as provided for in the Contract Documents. Failure of the Contractor to request such an adjustment of the Contract Time or the Contract Price in strict conformity with the provisions of the Contract Documents applicable thereto shall be deemed a waiver of the same.

10.2 District's Coordination of Separate Contractors. The District shall provide for coordination of the activities of the District's own 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 respective Construction Schedules when directed to do so. The Contractor shall make any revisions to the Approved Construction Schedule for the Work hereunder deemed necessary after a joint review and mutual agreement. The Construction Schedules shall then constitute the Construction Schedules to be used by the Contractor, separate contractors and the District until subsequently revised.

10.3 Mutual Responsibility. The Contractor shall afford the District and separate contractors reasonable opportunity for storage of their materials and equipment and performance of their activities at the Site and shall connect and coordinate the Contractor's Work, construction and operations with theirs as required by the Contract Documents.

10.4 Discrepancies or Defects. If part of the Contractor's Work depends for proper execution or results upon construction or operations by the District or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect and the District's Inspector any apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acknowledgment that the District's or separate contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then discoverable by the Contractor's reasonable diligence.

ARTICLE 11 TESTS AND INSPECTIONS

11.1 Tests; Inspections; Observations.

11.1.1 Contractor's Notice. If the Contract Documents, laws, ordinances or any public authority with jurisdiction over the Work requires the Work, or any portion thereof, to be specially tested, inspected or approved, the Contractor shall give the Construction Manager, the Project Manager and the District's Inspector written notice of the readiness of such Work for observation, testing or inspection at least two (2) working days prior to the time for the conducting of such test, inspection or observation. If inspection, testing or observation is by authority other than the District, the Contractor shall inform the District's Inspector and the Construction Manager not less than two (2) working days prior to the date fixed for such inspection, test or observation. The Contractor shall not cover up any portion of the Work subject to tests, inspections or observations prior to the completion and satisfaction of the requirements of such test, inspection or observation. In the event that any portion of the Work subject to tests, inspection or approval shall be covered up by Contractor prior to completion and satisfaction of the requirements of such tests, inspection or approval, Contractor shall be responsible for the uncovering of such portion of the Work as is necessary for performing such tests, inspection or approval without adjustment of the Contract Price or the Contract Time on account thereof.

11.1.2 Cost of Tests and Inspections. Costs for initial tests and inspection of materials shall be paid by the District. If the materials are not deemed to comply with requirements of the Contract Documents upon completion of the initial test/inspection, costs, expenses and other charges arising out of subsequent test(s)/reinspections(s) shall be borne by the Contractor; the District may deduct such costs, expenses or other charges from the Contract Price then or thereafter due the Contractor. In addition to the Contractor's responsibility for fees, costs, expenses and charges incurred or arising out of tests/reinspections, the Contractor shall be solely responsible for payment of fees, costs, expenses and charges incurred or arising out of tests/reinspections conducted at a location exceeding a fifty (50) mile radius from the Site, including without limitation, fees, costs, expenses or charges for: travel/transportation, meals and lodging.

11.1.3 Testing/Inspection Laboratory. The District shall select duly qualified person(s) or testing laboratory(ies) to conduct the tests and inspections to be paid for by the District and required by the Contract Documents. All such tests and inspections shall be in conformity with Title 24 of the California Code of Regulations. Where inspection or testing is to be conducted by an independent laboratory or testing agency, materials or samples thereof shall be selected by the laboratory, testing agency, the District's Inspector, the Construction Manager or the Architect and not by the Contractor.

11.1.4 Additional Tests, Inspections and Approvals. If the Architect, the Construction Manager, the District's Inspector or public authorities having jurisdiction over the Work determine that portions of the Work require additional testing, inspection or approval, the Architect will, upon written authorization from the District, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the District, and the Contractor shall give timely notice to the Architect, the Construction Manager and the District's Inspector of when and where tests and inspections are to be made so the District's Inspector and the Architect may observe such procedures. The District shall bear the costs of such additional tests, inspections or approvals, except to the extent that such additional tests, inspections or approvals reveal any failure of the Work to comply with the requirements of the Contract Documents, in which case the Contractor shall bear all costs made necessary by such failures, including without limitation, the costs of corrections, repeat tests, inspections or approvals and the costs of the Architect's services or its consultants in connection therewith.

11.2 Delivery of Certificates. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

11.3 Timeliness of Tests, Inspections and Approvals. Tests or inspections required and conducted pursuant to the Contract Documents shall be made or arranged by Contractor to avoid delay in the progress of the Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

12.1 Inspection of the Work.

12.1.1 Access to the Work. All Work and all materials and equipment forming a part of the Work or incorporated into the Work are subject to inspection by the District, the District's Project Manager, the Construction Manager, the Architect and the District's Inspector for conformity with the Contract Documents. The Contractor shall, at its cost and without adjustment to the Contract Price or the Contract Time, furnish any facilities necessary for sufficient and safe access to the Work for purposes of inspection by the District, the District's Project Manager, the Construction Manager, the Architect, the District's Inspector, DSA or any other public or quasi-public authority with jurisdiction over the Work or any portion thereof.

12.1.2 Limitations Upon Inspections. Inspections, tests, measurements, or other acts of the Architect and the District's Inspector hereunder are for the sole purpose of assisting them in determining that the Work, materials, equipment, progress of the Work, and quantities generally comply and conform with the requirements of the Contract Documents. These acts or functions shall not relieve the Contractor from performing the Work in full compliance with the Contract Documents. No inspection by the Architect or the District's Inspector shall constitute or imply acceptance of Work inspected. Inspection of the Work hereunder is in addition to, and not in lieu of, any other testing, inspections or approvals of the Work required under the Contract Documents.

12.2 Uncovering of Work. If any portion of the Work is covered contrary to the request of the Architect, the District's Inspector or the requirements of the Contract Documents, it must, if required by the Architect or the District's Inspector, be uncovered for observation by the Architect's and the District's Inspector and be replaced at the Contractor's expense without adjustment of the Contract Time or the Contract Price.

12.3 Rejection of Work. Prior to the District's Final Acceptance of the Work, any Work or materials or equipment forming a part of the Work or incorporated into the Work which is defective or not in conformity with the Contract Documents may be rejected by the District, the Construction Manager the Architect or the District's Inspector and the Contractor shall correct such rejected Work without any adjustment to the Contract Price or the Contract Time, even if the Work, materials or equipment have been previously inspected by the Architect or the District's Inspector or even if they failed to observe the defective or non-conforming Work, materials or equipment.

12.4 Correction of Work. The Contractor shall promptly correct any portion of the Work rejected by the District, the Construction Manager, the Architect or the District's Inspector for failing to conform to the requirements of the Contract Documents, or which is determined by them to be defective, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby. The Contractor shall bear all costs of correcting destroyed or damaged construction, whether completed or partially completed, of the District or separate contractors, caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents, or which is defective.

12.5 Removal of Non-Conforming or Defective Work. The Contractor shall, at its sole cost and expense, remove from the Site all portions of the Work which are defective or are not in accordance with the requirements of the Contract Documents which are neither corrected by the Contractor nor accepted by the District.

12.6 Failure of Contractor to Correct Work. If the Contractor fails to commence to correct defective or non-conforming Work within 3 days of notice of such condition and promptly thereafter complete the same within a reasonable time, the District may correct it in accordance with the Contract Documents. If the Contractor does not proceed with correction of such defective or non-conforming Work within the time fixed herein, the District may remove it and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage after written notice, the District may sell such materials or equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including without limitation compensation for the Architect services, attorneys fees and other expenses made necessary thereby. If

such proceeds of sale do not cover costs that the Contractor should have borne, the Contract Price shall be reduced by the deficiency. If payments of the Contract Price then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor and the Surety shall promptly pay the difference to the District.

12.7 Acceptance of Defective or Non-Conforming Work. The District may, in its sole and exclusive discretion, elect to accept Work which is defective or which is not in accordance with the requirements of the Contract Documents, instead of requiring its removal and correction, in which case the Contract Price shall be reduced as appropriate and equitable.

ARTICLE 13 WARRANTIES

13.1 Workmanship and Materials. The Contractor warrants to the District that all materials and equipment furnished under the Contract Documents shall be new, of good quality and of the most suitable grade and quality for the purpose intended, unless otherwise specified in the Contract Documents. All Work shall be of good quality, free from faults and defects and in conformity with the requirements of the Contract Documents. If required by the Architect or the District, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment incorporated into the Work. Any Work, or portion thereof not conforming to these requirements, including substitutions or alternatives not properly approved in accordance with the Contract Documents may be deemed defective. Where there is an approved substitution of, or alternative to, material or equipment specified in the Contract Documents, the Contractor warrants to the District that such installation, construction, material, or equipment will equally perform the function and have the quality of the originally specified material or equipment. The Contractor expressly warrants the merchantability, the fitness for use, and quality of all substitute or alternative items in addition to any warranty given by the manufacturer or supplier of such item.

13.2 Warranty Work. If, within one year after the date of Final Acceptance, or such other time frame set forth elsewhere in the Contract Documents, any of the Work is found to be defective or not in accordance with the requirements of the Contract Documents, or otherwise contrary to the warranties contained in the Contract Documents, the Contractor shall commence all necessary corrective action not more than seven (7) days after receipt of a written notice from the District to do so, and to thereafter diligently complete the same. In the event that Contractor shall fail or refuse to commence correction of any such item within said seven (7) day period or to diligently prosecute such corrective actions to completion, the District may, without further notice to Contractor, cause such corrective Work to be performed and completed. In such event, Contractor and Contractor's Performance Bond Surety shall be responsible for all costs in connection with such corrective Work, including without limitation, general administrative overhead costs of the District in securing and overseeing such corrective Work. Nothing contained herein shall be construed to establish a period of limitation with respect to any obligation of the Contractor under the Contract Documents. The obligations of the Contractor hereunder shall be in addition to, and not in lieu of, any other obligations imposed by any special guarantee or warranty required by the Contract Documents, guarantees or warranties provided by any manufacturer of any item or equipment forming a part of, or incorporated into the Work, or otherwise recognized, prescribed or imposed by law. Neither the District's Final Acceptance, the making of Final Payment, any provision in Contract Documents, nor the use or occupancy of the Work, in whole or in part, by District shall constitute acceptance of Work not in accordance with the Contract Documents nor relieve the Contractor or the Contractor's Performance Bond Surety from liability with respect to any warranties or responsibility for faulty or defective Work or materials, equipment and workmanship incorporated therein.

13.3 Guarantee. Upon completion of the Work, Contractor shall execute and deliver to the District the form of Guarantee included within the Contract Documents. The Contractor's execution and delivery of the form of Guarantee is an express condition precedent to any obligation of the District to disburse the Final Payment to the Contractor.

13.4 Survival of Warranties. The provisions of this Article 13 shall survive the Contractor's completion of Work under the Contract Documents, the District's Final Acceptance or the termination of the Contract.

ARTICLE 14 SUSPENSION OF WORK

14.1 District's Right to Suspend Work. The District may, without cause, and without invalidating or terminating

the Contract, order the Contractor, in writing, to suspend, delay or interrupt the Work in whole or in part for such period of time as the District may determine. The Contractor shall resume and complete the Work suspended by the District in accordance with the District's directive, whether issued at the time of the directive suspending the Work or subsequent thereto.

14.2 Adjustments to Contract Price and Contract Time. In the event the District shall order suspension of the Work, an adjustment shall be made to the Contract Price for increases in the direct cost of performance of the Work of the Contract Documents, actually caused by suspension, delay or interruption ordered by the District; provided however that no adjustment of the Contract Price shall be made to the extent: (i) that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible under the Contract Documents; or (ii) that an equitable adjustment is made or denied under another provision of the Contract Documents. The foregoing notwithstanding, any such adjustment of the Contract Price shall not include any adjustment to increase the Contractor's overhead, general administrative costs or profit, all of which will remain as reflected in the Cost Breakdown submitted by the Contractor pursuant to the Contract Documents. In the event of the District's suspension of the Work, the Contract Time shall be equitably adjusted.

ARTICLE 15 TERMINATION

15.1 Termination for Cause.

15.1.1 District's Right to Terminate. The District may terminate the Contract upon the occurrence of any one or more of the following events of the Contractor's default: (i) if the Contractor refuses or fails to prosecute the Work with diligence as will insure Substantial Completion of the Work within the Contract Time, or if the Contractor fails to substantially Complete the Work within the Contract Time; (ii) if the Contractor becomes bankrupt or insolvent, or makes a general assignment for the benefit of creditors, or if the Contractor or a third party files a petition to reorganize or for protection under any bankruptcy or similar laws, or if a trustee or receiver is appointed for the Contractor or for any of the Contractor's property on account of the Contractor's insolvency, and the Contractor or its successor in interest does not provide adequate assurance of future performance in accordance with the Contract Documents within 10 days of receipt of a request for such assurance from the District; (iii) if the Contractor repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment; (iv) if the Contractor repeatedly fails to make prompt payments to any Subcontractor, of any tier, or Material Suppliers or others for labor, materials or equipment; (v) if the Contractor disregards laws, ordinances, rules, codes, regulations, orders applicable to the Work or similar requirements of any public entity having jurisdiction over the Work; (iv) if the Contractor disregards proper directives of the Architect, the District's Inspector or District under the Contract Documents; (vii) if the Contractor performs Work which deviates from the Contract Documents and neglects or refuses to correct such Work; or (viii) if the Contractor otherwise violates in any material way any provisions or requirements of the Contract Documents. Once the District determines that sufficient cause exists to justify the action, the District may terminate the Contract without prejudice to any other right or remedy the District may have, after giving the Contractor and the Surety at least seven (7) days advance written notice of the effective date of termination. The District shall have the sole discretion to permit the Contractor to remedy the cause for the termination without waiving the District's right to terminate the Contract, or otherwise waiving, restricting or limiting any other right or remedy of the District under the Contract Documents or at law.

15.1.2 District's Rights upon Termination. In the event that the Contract is terminated pursuant to this Article 15.1, the District may take over the Work and prosecute it to completion, by contract or otherwise, and may exclude the Contractor from the site. The District may take possession of the Work and of all of the Contractor's tools, appliances, construction equipment, machinery, materials, and plant which may be on the site of the Work and use the same to the full extent they could be used by the Contractor without liability to the Contractor. In exercising the District's right to prosecute the completion of the Work, the District may also take possession of all materials and equipment stored at the site of the Work or for which the District has paid the Contractor but which are stored elsewhere and finish the Work as the District deems expedient. In exercising the District's right to prosecute the completion of the Work, the District shall have the right to exercise its sole discretion as to the manner, methods, and reasonableness of the costs of completing the

Work and the District shall not be required to obtain the lowest figure for completion of the Work. In the event that the District takes bids for remedial Work or completion of the Work, the Contractor shall not be eligible for the award of such contract(s).

15.1.3 Completion by the Surety. In the event that the Contract is terminated pursuant to this Article 15.1, the District may demand that the Surety take over and complete the Work. The District may require that in so doing, the Surety not utilize the Contractor in performing and completing the Work. Upon the failure or refusal of the Surety to take over and begin completion of the Work within twenty (20) days after demand therefore, the District may take over the Work and prosecute it to completion as provided for above.

15.1.4 Assignment and Assumption of Subcontracts. The District shall, in its sole and exclusive discretion, have the option of requiring any Subcontractor or Material Supplier to perform in accordance with its Subcontract or Purchase Order with the Contractor and assign the Subcontract or Purchase Order to the District or such other person or entity selected by the District to complete the Work.

15.1.5 Costs of Completion. In the event of termination under this Article 15.1, the Contractor shall not be entitled to receive any further payment of the Contract Price until the Work is completed. If the unpaid balance of the Contract Price as of the date of termination exceeds the District's direct and indirect costs and expenses for completing the Work, including without limitation, attorneys' fees and compensation for additional professional and consultant services, such excess shall be used to pay the Contractor for the cost of the Work performed prior to the effective date of termination with a reasonable allowance for overhead and profit. If the District's costs and expenses to complete the Work exceed the unpaid Contract Price, the Contractor and/or the Surety shall pay the difference to the District.

15.1.6 Contractor Responsibility for Damages. The Contractor and the Surety shall be liable for all damage sustained by the District resulting from, in any manner, the termination of Contract under this Article 15.1, including without limitation, attorneys' fees, and for all costs necessary for repair and completion of the Work over and beyond the Contract Price.

15.1.7 Conversion to Termination for Convenience. In the event the Contract is terminated under this Article 15.1, and it is determined, for any reason, that the Contractor was not in default under the provisions hereof, the termination shall be deemed a Termination for Convenience of the District and thereupon, the rights and obligations of the District and the Contractor shall be determined in accordance with Article 15.2 hereof.

15.1.8 District's Rights Cumulative. In the event the Contract is terminated pursuant to this Article 15.1, the termination shall not affect or limit any rights or remedies of the District against the Contractor or the Surety. The rights and remedies of the District under this Article 15.1 are in addition to, and not in lieu of, any other rights and remedies provided by law or otherwise under the Contract Documents. Any retention or payment of monies to the Contractor by the District shall not be deemed to release the Contractor or the Surety from any liability hereunder.

15.2 Termination for Convenience of the District. The District may at any time, in its sole and exclusive discretion, by written notice to the Contractor, terminate the Contract in whole or in part when it is in the interest of, or for the convenience of, the District. In such case, the Contractor shall be entitled to payment for: (i) Work actually performed and in place as of the effective date of such termination for convenience of the District, with a reasonable allowance for profit and overhead on such Work, and (ii) reasonable termination expenses for reasonable protection of Work in place and suitable storage and protection of materials and equipment delivered to the site of the Work but not yet incorporated into the Work, provided that such payments exclusive of termination expenses shall not exceed the total Contract Price as reduced by payments previously made to the Contractor and as further reduced by the value of the Work as not yet completed. The Contractor shall not be entitled to profit and overhead on Work which was not performed as of the effective date of the termination for convenience of the District. The District may, in its sole discretion, elect to have subcontracts assigned pursuant to Article 15.1.4 above after exercising the right hereunder to terminate for the District’s convenience.

15.3 Termination without Cause. This Agreement may be terminated by the District upon giving thirty days’

advance written notice of an intention to terminate,

ARTICLE 16 MISCELLANEOUS

16.1 Governing Law. This Contract shall be governed by and interpreted in accordance with the laws of the State of California.

16.2 Marginal Headings; Interpretation. The titles of the various Articles of these General Conditions and elsewhere in the Contract Documents are used for convenience of reference only and are not intended to, and shall in no way, enlarge or diminish the rights or obligations of the District or the Contractor and shall have no effect upon the construction or interpretation of the Contract Documents. The Contract Documents shall be construed as a whole in accordance with their fair meaning and not strictly for or against the District or the Contractor.

16.3 Successors and Assigns. Except as otherwise expressly provided in the Contract Documents, all terms, conditions and covenants of the Contract Documents shall be binding upon, and shall inure to the benefit of the District and the Contractor and their respective heirs, representatives, successors-in-interest and assigns.

16.4 Cumulative Rights and Remedies; No Waiver. Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not in lieu of or otherwise a limitation or restriction of duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the District shall constitute a waiver of a right or remedy afforded it under the Contract Documents or at law nor shall such an action or failure to act constitute approval of or acquiescence in a breach hereunder, except as may be specifically agreed in writing.

16.5 Severability. In the event any provision of the Contract Documents shall be deemed illegal, invalid, unenforceable and/or void, by a court or any other governmental agency of competent jurisdiction, such provision shall be deemed to be severed and deleted from the Contract Documents, but all remaining provisions hereof, shall in all other respects, continue in full force and effect.

16.6 No Assignment by Contractor. The Contractor shall not sublet or assign the Contract, or any portion thereof, or any monies due thereunder, without the express prior written consent and approval of the District, which approval may be withheld in the sole and exclusive discretion of the District. The District's approval to such assignment shall be upon such terms and conditions as determined by the District in its sole and exclusive discretion.

16.7 Gender and Number. Whenever the context of the Contract Documents so require, the neuter gender shall include the feminine and masculine, the masculine gender shall include the feminine and neuter, the singular number shall include the plural and the plural number shall include the singular.

16.8 Independent Contractor Status. In performing its obligations under the Contract Documents, the Contractor is an independent contractor to the District and not an agent or employee of the District.

16.9 Notices. Except as otherwise expressly provided for in the Contract Documents, all notices which the District or the Contractor may be required, or may desire, to serve on the other, shall be effective only if delivered by personal delivery or by postage prepaid, First Class Certified Return Receipt Requested United States Mail, addressed to the District or the Contractor at their respective address set forth in the Contract Documents, or such other address(es) as either the District or the Contractor may designate from time to time by written notice to the other in conformity with the provisions hereof. In the event of personal delivery, such notices shall be deemed effective upon delivery, provided that such personal delivery requires a signed receipt by the recipient acknowledging delivery of the same. In the event of mailed notices, such notice shall be deemed effective on the third working day after deposit in the mail.

16.10 Disputes; Continuation of Work. Notwithstanding any claim, dispute or other disagreement between the District and the Contractor regarding performance under the Contract Documents, the scope of Work thereunder, or any other matter arising out of or related to, in any manner, the Contract Documents, the Contractor shall proceed diligently with performance of the Work in accordance with the District's written direction, pending any final determination or decision regarding any such claim, dispute or disagreement.

16.11 Dispute Resolution; Arbitration.

16.11.1 Claims Under $375,000.00. Claims between the District and the Contractor of $375,000.00 or less shall be resolved in accordance with the procedures established in Part 3, Chapter 1, Article 1.5 of the California Public Contract Code, §20104 et seq.; provided however that California Public Contract Code §20104.2(a) shall not supersede the requirements of the Contract Documents with respect to the Contractor's notification to the District of such claim or extend the time for the giving of such notice as provided in the Contract Documents. The term "claims" as used

16.11.2 Arbitration. Except as provided in Article 16.11.1, any other claims, disputes, disagreements or other matters in controversy between the District and the Contractor arising out of, or related, in any manner, to the Contract Documents, or the interpretation, clarification or enforcement thereof shall be resolved by arbitration conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association ("AAA") in effect as of the date that a Demand for Arbitration is filed, except as expressly modified herein. The locale for any arbitration commenced hereunder shall be the regional office of the AAA closest to the Site. The award rendered by the Arbitrator(s) shall be final and binding upon the District and the Contractor. In connection with any arbitration proceeding commenced hereunder, the discovery rights and procedures provided for in California Code of Civil Procedure §1283.05 shall be applicable, and the same shall be deemed incorporated herein by this reference. A Demand for Arbitration shall be filed and served within a reasonable time after the occurrence of the claim, dispute or other disagreement giving rise to the Demand for Arbitration, but in no event shall a Demand for Arbitration be filed or served after the date when the institution of legal or equitable proceedings based upon such claim, dispute or other disagreement would be barred by the applicable statute of limitations. In the event more than one Demand for Arbitration is made by either the District or the Contractor, all such controversies shall be consolidated into a single arbitration proceeding, unless otherwise agreed to by the District and the Contractor. The Contractor's Surety, a Subcontractor or Material Supplier to the Contractor and other third parties may be permitted to join in and be bound by an arbitration commenced hereunder if required by the terms of their respective agreements with the Contractor, except to the extent that such joinder would unduly delay or complicate the expeditious resolution of the claim, dispute or other disagreement between the District and the Contractor, in which case an appropriate severance order shall be issued by the Arbitrator(s). The expenses and fees of the Arbitrator(s) shall be divided equally among the parties to the arbitration. Each party to any arbitration commenced hereunder shall be responsible for and shall bear its own attorneys' fees, witness fees and other cost and expense incurred in connection with such arbitration. The foregoing notwithstanding, the Arbitrator(s) may award arbitration costs, including Arbitrators' fees but excluding attorneys' fees, to the prevailing party. The confirmation, enforcement, vacation or correction of an arbitration award rendered hereunder shall be the Superior Court of the State of California for the county in which the Site is situated. The substantive and procedural rules for such post-award proceedings shall be as set forth in California Code of Civil Procedure §1285 et seq.

16.11.3 Inapplicability to Bid Bond. The provisions of this Article 16.11 shall not be applicable to disputes, disagreements or enforcement of rights or obligations under the Bid Bond; all claims, disputes and actions to enforce rights or obligations under the Bid Bond shall be adjudicated only by judicial proceedings commenced in a court of competent jurisdiction.

16.12 Capitalized Terms. Except as otherwise expressly provided, capitalized terms used in the Contract Documents shall have the meaning and definition for such term as set forth in the Contract Documents.

16.13 Attorneys Fees. Except as expressly provided for in the Contract Documents, or authorized by law, neither the District nor the Contractor shall recover from the other any attorney’s fees or other costs associated with or arising out of any legal, administrative or other proceedings filed or instituted in connection with or arising out of the Contract Documents or the performance of either the District or the Contractor thereunder.

16.14 Provisions Required by Law Deemed Inserted. Each and every provision of law and clause required by law to be inserted in the Contract Documents is deemed to be inserted herein and the Contract Documents shall be read and enforced as though such provision or clause are included herein, and if through mistake, or otherwise, any such provision or clause is not inserted or if not correctly inserted, then upon application of either party, the Contract Documents shall forthwith be physically amended to make such insertion or correction.

16.15 Days. Unless otherwise expressly stated, references to "days" in the Contract Documents shall be deemed to be calendar days. Refer also to Article 1.

16.16 Key Maintenance Records. Contractor shall maintain books, records and accounts of all costs incurred in connection with the Work in accordance with generally accepted accounting principles and practices. The District and/or the Construction Manager shall have the right to audit the books, records and accounts of the Contractor under any of the following conditions: (a) The Contract is terminated for any reason in accordance with the provisions of the Contract Documents in order to arrive at equitable termination costs; (b) in the event of a disagreement between the Contractor and the District and/or Construction Manager over the amount due the Contractor under the terms of the Contract; (c) To check or substantiate any amount invoiced or paid which are required to reflect the costs of the Contractor, or the Contractor's efficiency or effectiveness under this Contract or in connection with extras, changes, claims, additions, back charges, or others, as may be provided for in this Contract; (d) If it becomes necessary to determine the District's and Construction Manager's rights and the Contractor's obligations under the Contract or to ascertain facts relative to any claim against the Contractor which may result in a charge against the District or Construction Manager; (e) To determine any difference in cost occasioned by a permissible substitution; and/or (f)For any other reason in the District's or Construction Manager's reasonable judgment.

16.17 Contractor Preservation of Records; District Rights. The Contractor, from the effective date of Final Payment or termination hereunder, shall preserve and make available to the District and Construction Manager for review, inspection, reproduction or auditing for a period of three (3) years thereafter, at all reasonable times at the office of the Contractor (but without any charge to the District or Construction Manager), all Contractor's books, records, documents, photographs, micro-photographs, and other evidence bearing on the costs and expenses of the Contract under this Contract and relating to the work hereunder. Such preservation and right of review shall (without limitation) extend to Contractor's estimate for the Work (including all calculations and take-offs) and any budget prepared thereon.

16.17.1 Termination of District Access to Contractor Records. The District's and Construction Manager's right to audit and the preservation of records shall terminate at the end of three (3) years after the date Final Payment is made or termination of the Contract. The Contractor shall include the provisions of this section in all Subcontracts issued by Contractor and shall require the same to be inserted by all Subcontractors in their respective subcontracts with lower-tier Subcontractors, for any portion of the work. Should Contractor fail to include this clause in any such contract or lower tier contract, or otherwise fail to insure the District's and Construction Manager's rights hereunder, Contractor shall be liable to the District and Construction Manager for all costs, expenses and attorney's fees which the District and Construction Manager may have to incur obtaining or attempting to obtain an audit or inspection of or the restoration of records which otherwise have been available to the District and Construction Manager from said persons under this clause. Such audit may be conducted by the District, Construction Manager or any other District authorized representative.

16.18 Contractor Waiver of Consequential/Special Damages. In the event of the District's breach or default of its obligations under the Contract Documents, the Contractor expressly waives any right to seek or obtain recovery of any damages in the nature of consequential or special damages.

16.19 Entire Agreement. The Contract Documents contain the entire agreement and understanding between the District and the Contractor concerning the subject matter hereof, and supersedes and replaces all prior negotiations, proposed agreements or amendments, whether written or oral. No amendment or modification to any provision of the Contract Documents shall be effective or enforceable except by an agreement in writing executed by the District and the Contractor. Refer also to Article 1.

[END OF SECTION 007213]

SECTION 007313

SPECIAL CONDITIONS

Application of Special Conditions. These Special Conditions form a part of the Contract Documents for the Work generally described as: **Pacific Grove Adult School & Co-op Preschool Site Improvements.**

1. **Bid Proposal - Per Diem Rate** (reference 004213**)**
    a. Per Diem rate will be considered a maximum proposal rate and part of the actual costs incurred in compensable time per section 007213 7.4.2 and will need to be supported by actual costs. Actual costs will not exceed the proposed maximum rate given by the Contractor with his bid.
    b. Per Diem rate may be used for more than 30 days if required.
    c. The work to be done includes all labor, tools and equipment necessary to furnish and install all materials and equipment shown on the drawings and described herein and to perform tests described herein, to provide complete and operating systems to the extent specified and shown on the drawings. The Contractor shall furnish all equipment, material and supplies, except where specifically noted as existing or supplied by the District.

2. **Plans and specifications provided to Contractor** (reference 007213**)**
    a. Copies of Plans and Specifications have been made publicly available at Pacific Grove Unified School District, Maintenance, Operations & Transportation Department; 435 Hillcrest Avenue, Pacific Grove, CA 93950 or at **https://www.pgusd.org/Parents--Community/Facilities/BID-OPPORTUNITIES/index.html**.
    b. 360 Photos for the site can be found on Drone Deploy at: https://www.dronedeploy.com/app2/sites/68659af7c1e3e5675ff46c39?jwt_token=eyJhbGciOiJIUzUxMiIsInR5cCI6IkpXVCJ9.eyJpZCI6IjY4NjU5YWY5MzA3OTU0YzM5NDRkZDg4NyIsInR5cGUiOiJQdWJsaWNTaGFyZVYyIiwiYWNjZXNzX3R5cGUiOiJwcm9qZWN0In0.vmCbziquT0iEuEzku5kRk2FetOQXPd8_5X6ob5Sta_jFVXlQ9aPjMSqN9V8tFRC8Hz4ULopxQaEfZ5IpbH_RRQ

3. **Facilities for District Staff** (reference 007213 & 015000).
    a. Construction Facilities are as noted in Section 015000

4. **Project Utilities (**reference 007213 & 015000) Refer to 015100, Temporary Utilities.
    a. Electricity: The Contractor will not be charged for the use of electricity
    b. Water: The Contractor will not be charged for the use of water, and may use the nearest hose bib as needed
    c. Restrooms: Temporary restroom facilities will be provided by Contractor for Contractor's employees and Subcontractors' use.

5. **Permits and Fees (**reference 007213-2.1.2)
    a. Contractor responsible for all permits not specifically called out in 007213-4.6.2
    b. Contractor to file Notice of Intent with the State Water Resources Control Board (SWRCB), if applicable.
    c. Contractor to obtain necessary grading permits with Monterey Bay Air Resources District (MBARD), if applicable.
    d. All permits, fees and approvals, except for those arising in connection with any Deferred Approval items under the Contract Documents will be obtained and paid for by the District
    e. Contractor to notify DSA prior to start of work (reference 007213). A site safety plan is required as part of this notification. See Bulletin BU 24-05 for document requirements.

6. **Prompt Submittals** (reference 007213-4.7.2.1)
    a. Within ten (10) working days after the date of commencement specified in the Notice to Proceed, submit schedule of submittals required under Divisions 1 through 17. Schedule shall list submittals and indicate date submittal will be made.
    b. All submittals are due within **30 calendar days** of Notice to Proceed – or sooner if required to meet the schedule requirements. Any submittal rejected or required to be revised and

[CONTINUED NEXT PAGE]

resubmitted will be considered not submitted, and subject to the delayed submittal penalty costs, until it is submitted complete and acceptable for review with acceptance by the reviewing party.

c. Delayed submittals will incur a per diem assessment of Liquidated Damages for Contractors' delayed submission of Submittals pursuant to Article 4.7.2.1 of the General Conditions is Two Hundred Fifty Dollars ($250.00) per submittal per day until the required submittal is submitted.

d. Schedule
   i. Within ten (10) working days after the Notice to Proceed, the Contractor shall submit to the District's Construction Manager a digital copy of the complete project schedule for approval or disapproval. In the event the complete project schedule is disapproved, the Contractor shall resubmit a correct schedule within five (5) working days after the notice of disapproval is received by the Contractor.

e. Schedule of Values
   i. Provide cost breakdown of the Contract Price, itemizing estimated cost of each class of Work
   ii. Include line item amounts for mobilization, bonds and insurance. Mobilization shall be limited to one percent of the total contract amount.
   iii. An amount equal to one percent of the total contract amount shall be designated for punch list work. Values will be assigned to individual punch list items as the punch list is compiled. If the aggregate value of these items is less than the one percent designated for this work, the difference will be included in the next payment to the Contractor.
   iv. An amount equal to one percent of the total contract amount shall be assigned to the Contract Closeout items specified in Section 017700.

f. Daily reports/progress reports: The Contractor shall prepare a Daily Report for every working day giving brief particulars of work accomplished, number of workers employed for each trade, and weather conditions.

g. Within ten (10) working days after the date of commencement specified in the Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name and model number of each product. Indicate products that require long lead-time and length of lead-time. Long lead-time items which can impact the schedule shall be included in the Preliminary Schedule as well as the Procurement Schedule.

h. Within ten (10) working days after the date of commencement specified in the Notice to Proceed, submit qualifications for firm(s) and/or installer(s) as required in the specifications under Quality Assurance sections. If the firm(s) and/or installer(s) do not meet the required qualifications, they will be rejected. All costs and impacts to Contract Sum and Contract Schedule as a result of the rejection shall be borne by the Contractor.

7. **Hazardous Materials (**reference 007213-4.9.7 & 007213-4.17)
   a. Contractor's onsite supervisor must have asbestos awareness training. Contractor is to properly notify the district representative of any materials that may be considered suspected to contain hazardous materials. This is applicable to all underground, grading, and demolition. All hazardous materials will be removed under separate contract.
   b. All work to comply with Cal-OSHA and relevant Local, State or Federal codes.

8. **Maintenance of Record Drawings** (reference 007213-4.10.2)
   a. Contractor shall keep on the Project site / maintain a record of the Contract documents, including but not limited to; Specifications, Drawings, Responses to Requests for Information (RFI), Change Orders, and the same shall be available at all reasonable times for inspection and use by the District's Representative and by any other person authorized by the District's Representative. Any Drawings listed in the detail Specifications shall be regarded as a part thereof and of the Contract. Anything mentioned in these Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in these Specifications, shall be of like effect as though shown or mentioned in both.
   b. It shall be the duty of Contractor to see that the provisions of these Specifications are complied with in detail irrespective of the inspection given the work during its progress by the District's Representative or others. Any failure on the part of Contractor to strictly comply with the requirements of the contract documents, including without limitation the Specifications, will be

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sufficient cause for the rejection of the work at any time before its acceptance and/or constitute an event of Contractor default.

c. The District's Representative will furnish from time to time, such detail drawings, plans, profiles, and information, as the District's Representative may consider necessary for Contractor's guidance to insure the proper and adequate execution of the Contract. Contractor shall comply with such detail drawings, plans, profiles and information without adjustment of the Contract Price or the Contract Time.
d. Only favorably reviewed shop drawings and submittals shall be used in construction.

9. **Payroll Records** (reference 007213-4.18.4)
   a. Contractor to provide certified payroll with each pay application covering the previous pay period
10. **Limitations Upon Site Activities** (reference 007213-4.20)
   a. Contractor to comply with applicable ordinances, codes, rules and regulations, including the City of Pacific Grove, governing the days / hours of construction activities and transportation of materials/ equipment to / from construction sites.
   b. Contractor responsible to provide and maintain all – weather access for project.
11. **Contractor's Insurance.** (reference 007213-Article 6)
   a. Pursuant to Article 6 of the General Conditions, the Contractor shall obtain and maintain the following insurance coverage with minimum coverage amounts as set forth below:

Commercial General Liability Insurance:
- Per Occurrence $1,000,000
- Aggregate $2,000,000

Workers Compensation Insurance

In accordance with limits established by law.

Employers Liability Insurance $1,000,000

Aircraft Liability Insurance *(if applicable)*
- Per Occurrence $5,000,000

Passenger liability with minimum limit for
- "on-hook" liability: $250,000

Pollution Liability Insurance:
Hazardous Materials Operations:
- Per Occurrence / or Claim $5,000,000

Include coverage for Mold if scope of work
Includes Installation of Mechanical Systems
Exterior Insulation or exterior finish systems
- Per Occurrence $1,000,000

12. **Builders Risk Insurance.** (reference 007200-6.3)
   a. The Contractor shall obtain and maintain Builder's Risk Insurance conforming with the requirements of Article 6.3 of the General Conditions with coverage against losses from earthquakes/seismic activity, the Builder's Risk Insurance obtained by the Contractor shall include such coverage.
13. S**ubcontractor's Insurance.** (reference 007213-6.5)
   a. In accordance with Article 6.5 of the General Conditions, each Subcontractor shall obtain and maintain the following insurance coverage in the following minimum coverage amounts:

Commercial General Liability Insurance:
- Per Occurrence $1,000,000

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- **Aggregate** **$2,000,000**

Workers Compensation Insurance

In accordance with limits established by law.

Employers Liability Insurance $1,000,000

14. **Evidence of Insurance** (reference 007213-6.7)
    a. Contractor to provide insurance certificates which **completely** meet the contract insurance requirements prior to starting work.
    b. A penalty of One Hundred Dollars ($100.00) / per day for insurances which do not **completely** meet the contract requirements will be assessed starting 10 days from the Notice to Proceed.
    c. Failure to provide the required insurances may be deemed a default by the District.
15. **Contract Time.** (reference 007213-7.1)
    a. The commencement date of the Contract Time of the Work shall be as set forth in the Notice to Proceed issued by the District. The Contractor shall achieve Substantial Completion of the Work **140 calendar days** after the date for commencement of the Work as set forth in the Notice to Proceed. Procurement is projected to run from NTP to start of construction.
    b. The Contractor shall commence Work as of the date set forth in the Notice to Proceed issued by or on behalf of the District to the Contractor. The Contract Time shall be computed from the date for commencement of Work set forth in the Notice to Proceed issued by or on behalf of the District; the Contract Time will not be extended or otherwise adjusted if the Contractor does not commence Work as of the date established in the Notice to Proceed for commencement of the Work.
16. **Pull Planning**
    a. Contractor to provide one (1) facilitated pull planning scheduling session to be attended by general contractor, all trade subcontractor key personnel, and District personnel. Session is to take place at the start of the project. PGUSD will provide conference room venue. Contractor to provide facilitator and necessary workshop supplies and materials. Time associated with the workshop will be included in project cost.
17. **Construction Phasing – See Exhibit C at end of Section 007313**
    a. Phase 1 – Parking Lot 2
        i. Phase 1 shall commence upon authorization to proceed with construction and shall include completion of the south parking lot adjacent to the Child Care facility, identified as Parking Lot 2 on the Drawings. Phase 1 improvements shall be substantially complete and the parking lot available for District use prior to commencement of Phase 2A. The Contractor shall maintain existing pedestrian access and circulation around the Phase 1 work area throughout construction
    b. Phase 2A – Site Improvements
        i. Phase 2A may commence only after Phase 1 has been substantially completed and Parking Lot 2 has been made available for District use. Prior to commencement of Phase 2A, the Contractor shall establish and make available the designated temporary parking areas shown on the Site Phasing and Logistics Plan. Temporary parking shall remain available throughout Phase 2A and 2B construction unless otherwise authorized by the District. The Contractor shall provide and maintain temporary pedestrian access, signage, fencing, and appropriate barriers to safely redirect students, staff, and visitors around the construction area, including access to the Child Care facility.
    c. Phase 2B – Southwest Building Walkway Improvements
        i. Phase 2B shall consist of the concrete walkway and paving improvements connecting the Main Building to the Southwest Building, as identified on the Site Phasing and Logistics Plan. Work associated with Phase 2B shall not commence prior to June 2027 and shall be scheduled during the final two (2) weeks of June 2027 when the campus is closed for break. The Contractor shall maintain the existing pedestrian walkway and accessible path of travel during Phases 1 and 2A until the designated Phase 2B work period.

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d. Substantial Completion
   i. All three phases of construction, including removal of temporary construction facilities, restoration of affected areas, and reopening of parking and pedestrian circulation areas, shall be substantially complete by June 30, 2027.

18. **Excusable Delays** (reference 007213-7.4.1**)**
    a. **Rain Days**. For purposes of Article 7.4.1 of the General Conditions Rain Days expected during the Contract Time for each month of a calendar year are listed in Division 1, Section 012000.
       i. The Contractor's Construction Schedules prepared pursuant to Article 7 of the General Conditions shall incorporate the Rain Days set forth above; there shall be no adjustment to the Contract on account of unusually severe weather conditions resulting from rainfall during any month of the Contract Time until the actual number of Rain Days for that month exceeds the number of Rain Days set forth above for that month. Also refer to Division 1
       ii. Excusable Delays caused by weather are non-compensable.

19. **Liquidated Damages.** (reference 007213-7.5)
    a. **Delayed Substantial Completion.** The delayed Substantial Completion of the Work will result in the assessment and withholding of Liquidated Damages for each day of delayed Substantial Completion beyond the Contract Time for Substantial Completion of the Work in accordance with the following:

Substantial Completion Achieved Number of Days After Contract Time	**Per Diem Rate of Liquidated Damages**
1-14	One Thousand Dollars ($1,000) per day.
15-28	One Thousand Five Hundred Dollars ($1,500) per day.
29-42	Two Thousand Dollars ($2,000) per day.
43-56	Two Thousand Five Hundred Dollars ($2,500) per day.
57 or more	Three Thousand Five Hundred Dollars ($3,500) per day.

    b. **Punch list Period** (reference 007213-7.2.3)
       i. Unless noted otherwise in writing by the District, the punch list period for correction is 30 calendar days.
    c. **Delayed Punch list Completion** (reference 007200-7.5)
       i. If completion of punch list items for the Work is not achieved within the time limit established pursuant to the Contract Documents, the Contractor shall be subject to assessment and withholding of Liquidated Damages in accordance with the following:

Punch list Items Completed Number of Days After Time Established Pursuant to Contract Documents	**Per Diem Rate of Liquidated Damages**
1-7	Five Hundred Dollars ($500) per day.
8 or more	One Thousand Dollars ($1,000) per day.

20. **Application for Payment Considerations** (reference 007213-8.3)
    a. The District may withhold payment to the Contractor until the Contractor has submitted certified payroll records that are acceptable to the District, for each journeyman, apprentice, worker or other person employed by the Contractor and/or each Subcontractor in connection with the Work for the period of the Application for Payment. The District may withhold the lesser of ten thousand dollars or ten percent of the

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Application for payment for any month in which the Contractor has not submitted complete, certified payroll records that are acceptable to the District. The District may withhold payments, 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 herein 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:

i. Failure to provide certified payroll records acceptable to the District for each journeyman, apprentice, worker or other person employed by the Contractor and/or each Subcontractor in connection with the Work for the period of the Application for Payment.
ii. Failure to properly pay prevailing wages as defined in Labor Code section 1720 et. Seq.
iii. Failure to comply with any other Labor Code requirements.
iv. Failure to comply with the District's Labor Compliance Program

b. Contractor to review current as-builts with the District IOR before the Contractor is paid.
c. The acceptance by Contractor of the final payment made under the terms of the Contract shall operate as, and shall be as a release to the District, the District's Representative and their duly authorized agents, from all claim of and/or liability to Contractor for anything done or furnished for, or in relation to, the Work or for any act or neglect of the District or any person related to or affecting the Work.

21. **District Tests/Inspections** (reference 007213-11.1.2)
    a. Pursuant to Article 11.1.2 of the General Conditions, within twenty-one (21) days after the date of award of the Contract, the District, Architect, Construction Manager and Contractor will meet and confer to reach mutual agreement as to the specific tests/inspections which will be conducted by or on behalf of the District and limitations on costs to be incurred by the District for such tests/inspections. If mutual agreement is not reached, the Architect will make a final decision which is binding upon the District and the Contractor.

22. **Additional Definitions.** (reference 007213)
    a. Unless otherwise expressly noted in the Contract Documents, the following terms and phrases shall be defined as indicated below:
    b. Owner. The term "Owner" refers to the District.
    c. Bidder. Party submitting a bid for consideration by the District.
    d. District's Representative. The term "District's Representative" refers to the Construction Manager.
    e. Project Manager. The term "Project Manager" refers to the District's Director of Facilities, or their designee.
    f. Architect. "Architect" refers to the designer of record.
    g. Supplementary Conditions. The term "Supplementary Conditions" refers to the Special Conditions.
    h. Project Inspector. The term "Project Inspector" refers to the District Inspector or Inspector of Record (IOR).
    i. Schedule of Values. The terms Schedule of Values and Cost Breakdown are used interchangeably.

23. **Waste Disposal**
    a. The Contractor shall not, and shall not permit any Subcontractor to, use District dumpsters or waste disposal services for removal of waste and debris resulting from the Work. The Contractor is solely responsible for arranging for the removal of waste/debris materials from the Site with its own forces or with its own retained waste/debris removal service, without adjustment of the Contract Price. The handling, transportation and disposal of all waste/debris materials resulting from the Work shall be in accordance with the Laws.

25. **Demolition Materials**.
    a. Demolition Materials Categories. All demolished materials/equipment shall be separated by the Contractor into three (3) categories: (i) concrete and concrete type materials; (ii) steel and other metals; and (ii) general trash.
    b. Recycling of Demolition Materials. The Contractor and any Subcontractors engaged in any portion of demolition work shall: (i) recycle concrete/concrete type and steel/metal materials; and (ii) maintain recycling records/submit recycling reports as set forth herein. All concrete/concrete type and steel/metal demolition materials shall be recycled at appropriate recycling centers and/or locations. Each Subcontractor engaged in any portion of the demolition work shall submit a written report to the Contractor upon completion of its demolition activities at the Site. Each report shall include: (i) the name of the Contractor/Subcontractor; (ii) address/telephone of the Contractor/Subcontractor; (iii) date(s) of demolition materials removed; (iv) estimated weight of demolition materials removed from the Site; (v) type(s) of demolition materials removed from the Site; and (vi) the disposal location. The Contractor shall compile the foregoing reports prepared by its Subcontractor and submit to the District, Architect and Project

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Manager a comprehensive report of demolition materials types, removal and disposition prior to Final Payment. The Contractor's obligations under the preceding sentence are material and the Contractor's submission of the comprehensive report summarizing the reports of its Subcontractors activities relating to demolition materials and the removal, disposal or recycling thereof is an express condition precedent to the District's obligation to disburse the Final Payment and the Contractor's right to receive the Final Payment.

26. **Use of Site.**
    a. Staging/Storage. Staging/storage areas shall be restricted to areas designated in the Contract Documents for such purposes. The Contractor, without adjustment of the Contract Price or the Contract Time, shall secure and pay for the use of additional storage, staging areas, or work areas needed for operations. The Contractor and Subcontractors are responsible for following the requirements established in the Contract Documents for deliveries, storage trailers, office trailers and temporary utilities. The Contractor and Subcontractors shall coordinate material and equipment deliveries with the District and to ensure that materials can be off-loaded efficiently and that Site use operations are maintained in an orderly fashion. If any materials or equipment stored at the Site obstruct the performance of any portion of the Project or otherwise interfere with District operations or activities, these materials shall be removed and relocated by the Contractor without adjustment of the Contract Price or the Contract Time. If the Contractor fails or refuses to comply with the foregoing staging/storage requirements and limitations within a reasonable time, but not more than twenty-four (24) hours after notice, the District reserves the right to take measures to comply with such requirements or limitations, with the costs of such measures being the sole responsibility of the Contractor. **Contractor's laydown areas are indicated in Exhibits A-C at the end of Section 007313.**

    b. Site Logistics Plans.
        i. General. Prior to commencement of Work at the Site, the Contractor shall prepare a Site Logistics Plan for review and acceptance by the District which includes, without limitation: delivery routes, storage/staging areas, jobsite trailer locations, wash out areas, and other similar activities. The Site Logistics Plan shall: (i) take into account emergency vehicle ingress/egress; pedestrian paths of travel and disabled persons paths of travel; (ii) be subject to review and acceptance by the District; and (iii) be subject to modification during performance of the Work.
        ii. Vehicular Access. Construction activities which limit or prevent access to existing vehicular roadways or existing parking areas shall be performed only during non-school hours. Performance of such Work in such areas during non-school hours shall be without adjustment of the Contract Price or the Contract Time.
        iii. Fire, Police, Emergency/Public Safety Access. The Contractor shall at all times during the Work provide unimpeded vehicular access for police, fire and other emergency/public safety services at the Site and adjacent areas. The Contractor shall provide the District, Project Manager, Project Inspector and any other public agency designated by the District with keys/codes/card keys to all Site perimeter locks.
        iv. Contractor Parking and Access Details. See Exhibits A, B and C at the end of this Section.
    c. Parking. Personnel of the Contractor, Subcontractors and others performing Work at the Site will be allowed to park vehicles in areas outside the Site, with a valid District parking permit, in the parking spaces at a location designated by the District. Parking permit charges, if any, shall be borne and paid by the Contractor without adjustment of the Contract Price. The foregoing notwithstanding, the extent or location of parking for such personnel may be limited, restricted, eliminated or modified by the District as reasonably necessary to facilitate and accommodate necessary parking for the District's students, staff and visitors. Neither the Contract Price nor the Contract Time shall be adjusted as a result of any such District modifications to the extent or location of parking.
    d. Cleaning. Contractor shall clean up the Project and construction area such that the Project site is kept continuously clean. The Contractor is required to maintain at least one (1) dumpster adequately sized for general use as well as trash receptacles as necessary on the Project site.
    e. Project Signage. Contractor is to install a 4' x 8' multi-colored sign at the entrance to each construction zone. The signs are to include the following information:
        i. Contractor name and logo
        ii. Brief description of the project, including start and end dates
        iii. PGUSD Bond Measure B information

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iv. Final proof to be reviewed with District prior to production; additional information may be requested

27. **Occupied Site**
    a. Campus will be an occupied site. All contractors and subcontractors will be required to be fingerprinted to perform work on site.
    b. Job site should be fenced with signage directing staff and students around the site. Contractors should wear badges or name tags when outside of the fenced area.
    c. Contractor shall provide and maintain all fencing, barricades, guard rails, bridges, warning signs, lights, paved paths, and the like as are necessary to protect Contractor's own personnel, PGUSD staff and students, and outside public from the work site.
    d. Contractor shall be responsible for protection and safekeeping of products furnished under the Contract that are stored within Limits of Work.
    e. Move products stored under the Contractor's control that interfere with operations of the District.
    f. Stockpiling of materials, storage of equipment, trailers and other appurtenances related to construction operations will be limited to specific locations to be approved by the District's Representative or the District's Construction Manager in their sole reasonable discretion.
    g. All areas within Limits of Work that do not require specific work shall be returned to the District at completion of the Project in same condition as received by the Contractor; the Contractor shall repair, replace or correct any condition within the area of the Limits of Work that are damaged, destroyed or altered during performance of the Work to the condition(s) existing immediately prior to the Contractor's commencement of Work.
    h. Disagreements between Contractor and other contractors about concurrent use of work areas or access to the site that are not resolved by the participants shall be referred to the District's Representative. Contractor shall agree to abide by the District Representative's determination as to concurrent use or priority of access and to perform its work in compliance with the District Representative's resolution at no additional cost to the District.
    i. The Limits of Work shall not be used for stockpiling or storage of materials, equipment, trailers, and other appurtenances not related to the construction operations of this Project without written approval from the District's Representative.
    j. All material and equipment deliveries shall be made only to the Project site. The District's receiving personnel will not accept any material and equipment for this project that is received at the District's warehouse or other facilities.
    k. Any unauthorized interaction with the District's staff, faculty, and students shall be documented in writing and submitted to the District's Representative within 24 hours of the interaction. Any items, conflicts, or issues raised during this interaction must be referred to the District's Representative immediately.

28. **Pull Planning**
    a. Contractor to provide one (1) facilitated pull planning scheduling session to be attended by general contractor, all trade subcontractor key personnel, and District personnel. Session is to take place at the start of the project. PGUSD will provide conference room venue. Contractor to provide facilitator and necessary workshop supplies and materials. Time associated with the workshop will be included in project cost.

29. **Conduct of the Contractor's Personnel**
    a. The Contractor shall at all times maintain discipline among personnel employed at or having business at the Project site, including during meal and break periods. The Contractor shall act promptly to correct conduct which the District's Representative and/or The Construction Manager deems intimidating, offensive, or hostile to the District's personnel, students, and visitors; such as: whistling or staring at, calling to, or commenting on persons passing the site (whether intended as complimentary or offensive); making obscene gestures; making or displaying offensive drawings, graffiti, or photographs; making propositions or invitations for dates or sex; or making racially, sexually, or ethnically related remarks or jokes. The Contractor shall inform all new personnel of this policy.
    b. In the event that any Contractor's employee initiates such unwarranted or unwanted interaction, or utilizes profanity or offensive language, the Contractor shall, either upon the request of the District, Construction Manager, or on its own initiative, replace the employee with another of equivalent skill, at

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no additional cost to the District.

c. The Contractor shall be responsible to ensure that its employees observe the District's rules on Tobacco policies. The project site has been designated as a Tobacco-free zone. No Tobacco products of any kind are allowed on the Project site.
d. The Contractor shall be responsible to ensure that its employees do not bring to, possess at, or consume alcoholic beverages on or near the Project site.
e. The Contractor shall be responsible to ensure that its employees are properly attired at all times. Proper attire includes, but is not limited to, shirts, full-length pants, appropriate work shoes and boots, safety head gear, and safety eye protection. No suggestive, offensive or sexually explicit clothing shall be worn or displayed

30. **Site Survey and Verification on Conditions**
    a. Prior to commencing the Work, Contractor, the District, and the District's Representative shall tour the Project site together to examine and record damage to existing adjacent buildings, curbs, roads, paved parking areas, and other structures and improvements. This record shall serve as a basis for determination of subsequent damage due to Contractor's operations and shall be signed by all parties making the tour. Any cracks, sags, or damage to existing adjacent buildings, curbs, roads, paved parking areas, and other structures and improvements not noted in the original survey, but subsequently discovered, shall be reported to the District's Representative.
    b. Contractor shall examine the site and become acquainted with the conditions under which the Work is to be carried out. Upon submitting Contractor's bid, Contractor shall be held to have made such examination, and no allowance for extras will be allowed for any error or oversight resulting from Contractor's unfamiliarity with the site or existing conditions. Contractor shall obtain accurate field dimensions of all related areas, spaces, openings, levels, and items of adjacent work and, before commencing work, report to the District, in writing, via the District's Representative, all discrepancies between the Contract Documents and the actual field conditions. Commencement of work by Contractor shall constitute acceptance of all existing conditions affecting the work.

31. **Order of Precedence**
    a. The order of precedence of the documents set forth below will be used by the District's Representative to; (1) define the intent and meaning of the Contract Documents; (2) resolve apparent inconsistencies in Submittals and Contract Documents; (3) determine the adequacy and completeness of Contractor's submittals; (4) determine the acceptability of construction; and (5) determine entitlement to extra compensation:
        i. Modifications
        ii. The Agreement
        iii. Addenda
        iv. Special Conditions
        v. Division 1, General Requirements
        vi. General Conditions
        vii. Technical Specifications
        viii. Drawings
        ix. Standard Specifications
        x. Standard Drawings
        xi. Submittals (as favorably reviewed)
    b. Should Contractor find discrepancies in, or omissions from the Drawings or Specifications, or should the Contractor be in doubt as to their meaning, the Contractor shall at once notify the District's Representative in writing and should it be found that the point in question is not clearly and fully set forth, a written clarification will be issued. Neither the District's Representative nor the District will be responsible for any oral instructions.
    c. It shall be distinctly understood that no oral statement of any person shall be allowed in any manner to modify any of the Contract provisions. Changes shall be made only on written authorization of the District's Representative, except in an emergency endangering life or property.

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32. **Manufacturer's Instructions**
    a. Where the contract documents state that products, processes, equipment or the like shall be installed or applied in accordance with manufacturer's instructions, directions or specifications, they shall be construed to mean that said application or installation shall be in strict accordance with printed instructions furnished by the manufacturer of the material concerned for use under conditions similar to those at the Project site.
    b. The manufacturer's directions do not take precedence over the Contract Drawings and Specifications. Where such directions are in conflict with the Contract Documents, Contractor shall request in writing a clarification from the District's Representative before proceeding with the work.

33. **Substitution Procedures**
    a. If a request for substitution occurs after the bid period, the substitution may be reviewed only at the sole discretion of the Architect and the costs of such review, as approved by the District, shall be borne by Contractor and will be deducted from the Contract Sum.
    b. Wherever more than one (1) manufacturer's product is specified, the first-named product is the basis for the design used in the work and all other listed products and/or manufacturers are considered substitutions. The use of alternative-named manufacturers' products or substitutes may require modifications in the design. If such substitutions are proposed by Contractor and are approved by the Architect/Construction Manager, Contractor shall assume all costs required to make necessary revisions and modifications to the design, including additional costs to the District for evaluation of revisions and modifications of the design resulting from the substitutions submitted by Contractor to the Architect/ Construction Manager.
    c. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name and product number, and "or equal," supporting data for the second manufacturer's product, if proposed by Contractor, is not required. However, Contractor shall be responsible for all costs (including additional design and engineering costs) of any changes resulting from the use of the second manufacturer that affect other parts of the Work. Contractor is responsible for coordination of all other work effected by the substitution, including vibration, isolation, and acoustical requirements and criteria, at no additional cost to the District.
    d. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name (without the product number), and "or equal," supporting data for the second manufacturer's product, if proposed by Contractor, shall be submitted in accordance with the requirements for substitutions.
    e. Where alternate brands are specified as equal but without model number or other specific identification, Contractor shall submit this information in the foregoing listing for approval by the Architect/Construction Manager. Specified items shall be listed in the following format: first manufacturer and model number, equivalent second manufacturer and model number. Contractors wishing to submit any 'equivalent' second manufacturer shall do so in accordance with this Section.
    f. When an unnamed brand or materials are proposed as an equal, sufficient information shall be included to prove equality to and for comparison with the named brand. The burden of proving the quality rests with Contractor; final decision rests with the Architect.

34. **Closeout Procedures**
    a. Contractor to file Final Verified Report with DSA.
    b. Contractor to submit PDFs of final As-built drawings.

[END OF SECTION]

EXHIBIT A: TEMPORARY STAFF PARKING

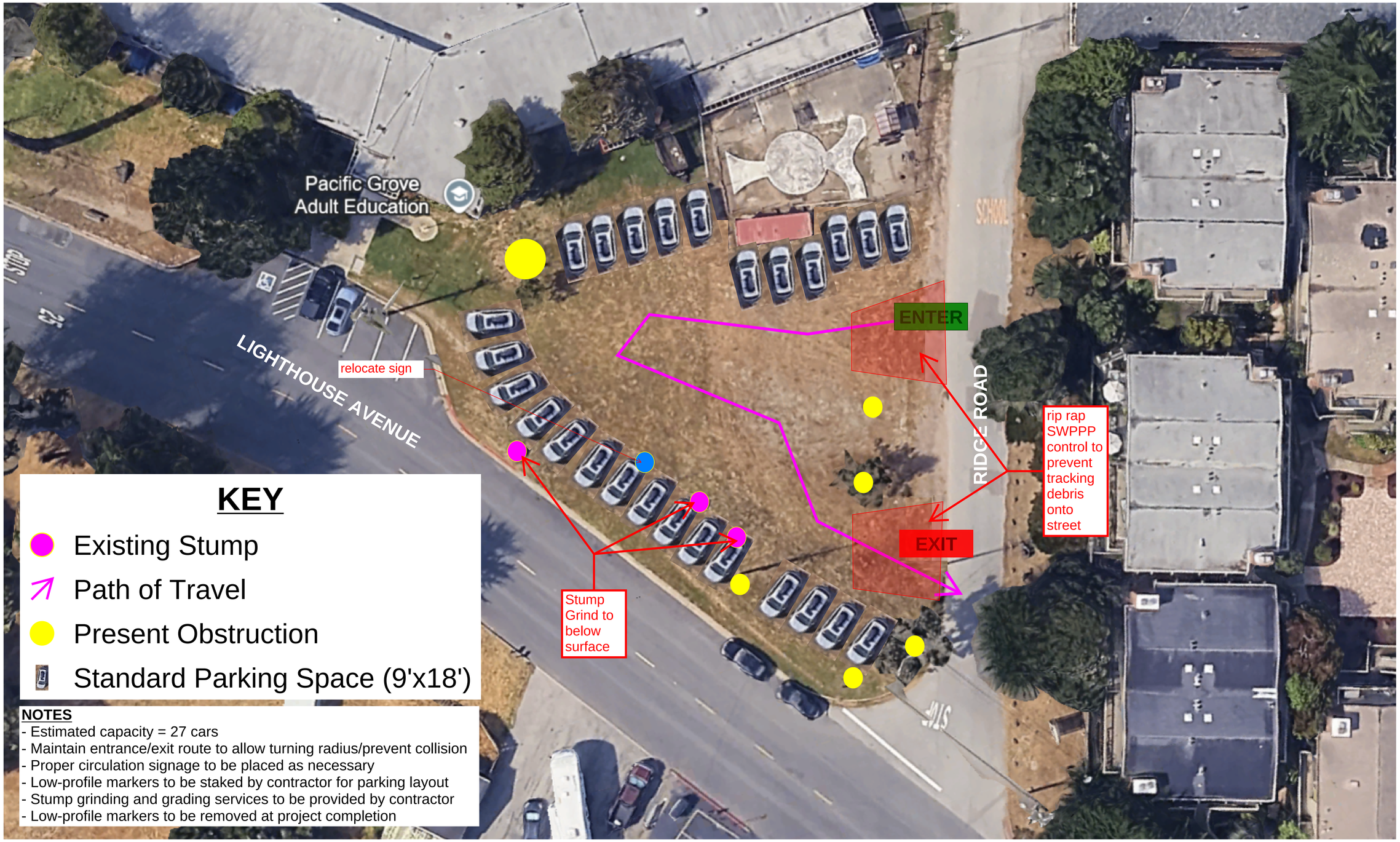


EXHIBIT B: TEMPORARY STAFF PARKING

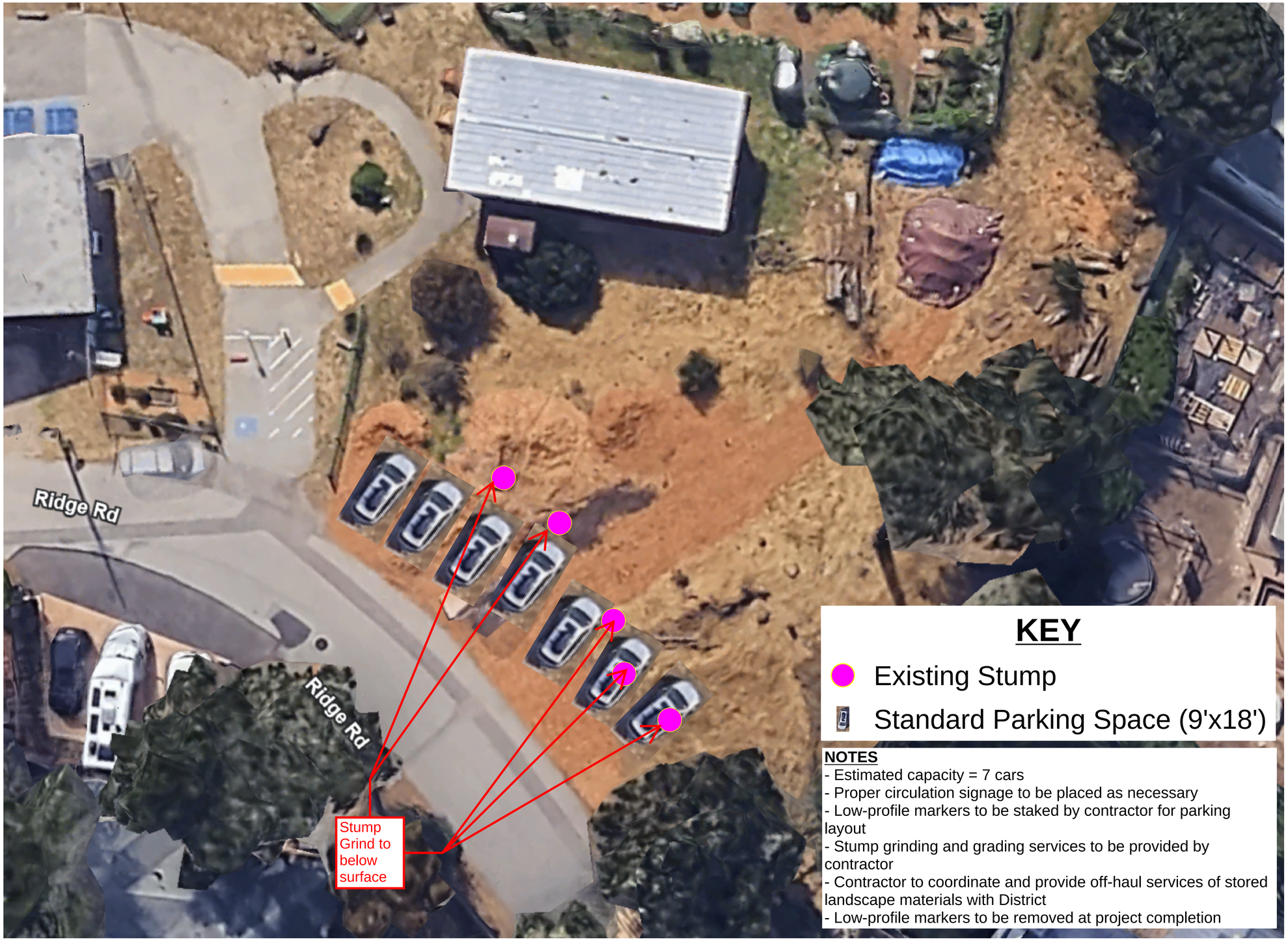


EXHIBIT C: SITE LOGISTICS



NOTES

1. Adjacent sidewalk at Phase 1 to be left undisturbed i.e. pedestrian circulation is maintained.
2. Signage to be posted to redirect pedestrians safely around construction via pink path outlined on Site Logistics.
3. "Emergency Exit Only" signage to be posted at Adult School interior doors to restrict tenant access from work area.
4. Signage to be posted to direct crew and deliveries to assigned locations.
5. Stage equipment and materials in the designated work areas during corresponding phase.
6. Phase 2B to occur during the month of June with campus is closed the last two weeks of June for break. contractor to work with district to route pedestrian traffic around MPR on ridge road during this period
7. Access gates to remain closed at all times when not being used.
8. Portable toilets & wash stations to be provided by contractor, as needed.
9. Contractor shall implement dust control measures (water, covering debris).
10. Site to be cleaned daily for public safety.
11. Contractor responsible for securing construction zone at end of each workday.
12. Contractor shall follow CEQA procedures to protect nearby Monarch Butterfly Sanctuary.
13. Contractor to return access area to original condition after project completion.

SECTION 012500

SUBSTITUTION PROCEDURES

1.01 SUBSTITUTION OF MATERIALS AND EQUIPMENT

A. Catalog numbers and specific brands or trade names followed by the designation "or equal" are used in conjunction with material and equipment required by the Specifications to establish the standards of quality, utility, and appearance required. Wherever more than one (1) manufacturer's product is specified, the first-named product is the basis for the design Substitutions which are equal in quality, utility, and appearance to those specified may be accepted, subject to the following provisions:

1. The Architect must accept all substitutions in writing.
2. All substitution requests shall be submitted prior to the bid by the date noted in section 001113, “Last day for Pre-Bid RFIs”
3. The Architect will review substitution requests submitted after the district award if one of the following criteria is met:
    a. The specified product is no longer available
    b. The proposed substitute product provides a substantial cost or time savings.
4. Contractor shall provide supporting data required by Paragraph 1.01C of this Section. The supporting data must be submitted in reasonable promptness and in a sequence as to cause no delay in the Work, or in activities of the District or of separate Contractors.
5. The Architect/Construction Manager will accept, in writing, proposed substitutions that are in the District's Representative's opinion equal in quality, utility, and appearance to the material or equipment specified, after a complete submittal of all supporting data, as required by Paragraph 1.01C of this Section, is received by the Architect/Construction Manager, the Contractor must allow at least ten (10) working days for the Architect’s/Construction Manager’s review.
6. Such acceptance shall not relieve Contractor from complying with the requirements of the Drawings and the Specifications.
7. Contractor shall be responsible for all costs (including additional design and engineering costs) of any changes resulting from Contractor's proposed substitutions that affect other parts of the Work or the work of Separate Contractors. Contractor is responsible for coordination of all other work effected by the substitution, including but not limited to vibration, isolation, and acoustical requirements and criteria, at no additional cost to the District.
8. The decision of the Architect/Construction Manager shall be final.
9. Refer to Article 4.3.2 of the General Conditions.

B. If a request for substitution occurs after the bid period, the substitution may be reviewed only at the sole discretion of the Architect and the costs of such review, as approved by the District, shall be borne by Contractor and will be deducted from the Contract Sum.

C. Requests for substitutions will only be considered if Contractor submits the following minimum supporting data:

1. Completed Form (see section 006000).
    a. Complete technical data including drawings, performance specifications, samples, and test reports of the article proposed for substitution; and any additional information required by the District's Representative.

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b. Statement by Contractor that the proposed substitution is in full compliance with the requirements of the Contract Documents and applicable Code requirements, and that any costs as a result of delay in the Work related to the proposed substitution will be borne by the Contractor.

c. List of Subcontractors, if any, that may be affected by the substitution.

d. If the proposed substitution requires that portions of the Work be redesigned or removed in order to accommodate the substituted item, submit design and engineering calculations prepared by a properly licensed design professional.

D. Failure of the Contractor to submit proposed substitutions in the time limits and manner described within this Section shall be sufficient cause for the Architect to reject and disapprove any substitutions otherwise proposed.

E. Wherever catalog numbers and specific brands or trade names not followed by the designation "or equal" are used in conjunction with material or equipment required by the Specifications, no substitutions will be considered.

F. The ten (10) day submittal period does not excuse Contractor from completing the Work within the Contract Time or excuse Contractor from paying liquidated damages if Substantial or Final Completion is delayed.

G. Wherever more than one (1) manufacturer's product is specified, the first-named product is the basis for the design used in the work and all other listed products and/or manufacturers are considered substitutions. The use of alternative-named manufacturers' products or substitutes may require modifications in the design. If such substitutions are proposed by Contractor and are approved by the Architect/Construction Manager, Contractor shall assume all costs required to make necessary revisions and modifications to the design, including additional costs to the District for evaluation of revisions and modifications of the design resulting from the substitutions submitted by Contractor to the Architect/ Construction Manager.

H. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name and product number, and "or equal," supporting data for the second manufacturer's product, if proposed by Contractor, is not required. However, Contractor shall be responsible for all costs (including additional design and engineering costs) of any changes resulting from the use of the second manufacturer that affect other parts of the Work. Contractor is responsible for coordination of all other work effected by the substitution, including vibration, isolation, and acoustical requirements and criteria, at no additional cost to the District.

I. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name (without the product number), and "or equal," supporting data for the second manufacturer's product, if proposed by Contractor, shall be submitted in accordance with the requirements for substitutions.

J. If the Architect/Construction Manager, in reviewing the list of substitution materials and equipment, requires revisions or corrections to be made to previously accepted Shop Drawings and supplemental supporting data to be resubmitted, Contractor shall promptly do so. If any proposed substitution is judged by the Architect to be unacceptable, the specified material or equipment shall be provided.

K. Samples may be required. Tests required by the Architect/Construction Manager for the determination of quality and utility shall be made by Contractor's Testing Laboratory and at the expense of Contractor, with acceptance of the test procedure first given by the Architect/Construction Manager.

L. In reviewing the supporting data submitted for substitutions, the Architect/Construction Manager will use, for purposes of comparison, all the characteristics of the first listed material or equipment as they appear in the manufacturer's published data even though all the characteristics may not have been particularly mentioned in the Specifications. If more than two submissions of supporting data are required, the cost of reviewing the additional supporting data shall be borne by Contractor; and the District will deduct the costs from the Contract Sum.

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M. Where alternate brands are specified as equal but without model number or other specific identification, Contractor shall submit this information in the foregoing listing for approval by the Architect/Construction Manager. Specified items shall be listed in the following format: first manufacturer and model number, equivalent second manufacturer and model number. Contractors wishing to submit any 'equivalent' second manufacturer shall do so in accordance with this Section.

N. When an unnamed brand or materials are proposed as an equal, sufficient information shall be included to prove equality to and for comparison with the named brand. The burden of proving the quality rests with Contractor; final decision rests with the Architect.

[END OF SECTION 012500]

SECTION 012613
REQUEST FOR INTERPRETATION

1.01 GENERAL

This Section contains the procedures to be followed by the Contractor upon discovery of any apparent conflicts, omissions, or errors in the Contract Documents or upon having any question concerning interpretation.

1.02 PROCEDURES

A. Notification by Contractor.

1. Submit all requests for clarification or additional information in writing to the District's Representative using a Request for Information (RFI) form as acceptable to the District's Representative.
2. Number RFIs sequentially. Follow RFI number with sequential alphabetical suffix as necessary for each resubmission. For example, the first RFI would be "001." the second RFI would be "002." The first re-submittal of RFI "002" would be "002R."
3. Limit each RFI to one (1) subject.
4. Submit an RFI if one of the following conditions occur:
    a. The Contractor discovers an unforeseen condition or circumstance that is not described in the Contract Documents.
    b. The Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or cannot be reasonably inferred from the intent of the Contract Documents.
    c. The Contractor discovers what appears to be an omission from the Contract Documents that cannot be reasonably inferred from the intent of the Contract Documents.
5. RFIs will not be recognized or accepted if, in the opinion of the District's Representative, one of the following conditions exists:
    a. The Contractor submits the RFI as a request for substitution.
    b. The Contractor submits the RFI as a submittal.
    c. The Contractor submits the RFI under the pretense of a Contract Documents discrepancy or omission without thorough review of the Contract Documents.
    d. The Contractor submits the RFI in a manner that suggest that specific portions of the Contract Documents are assumed to be excluded or by taking an isolated portion of the Contract Documents in part rather than whole.
    e. The Contractor submits an RFI in an untimely manner without proper coordination and scheduling of Work of related trades.
6. Ask for any clarification or request for information immediately upon discovery. Submit RFIs in a reasonable time frame so as not to affect the Contract Schedule while allowing the full response time described below.

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1.03 RESPONSE TIME

A. The District's Representative, whose decision will be final and conclusive, shall resolve such questions and issue instructions to the Contractor within a reasonable time frame. In most cases, RFIs will receive a response within 10 working days. In some cases, this time may need to be lengthened for complex issues, or shortened for emergency situations, as mutually agreed in writing.

B. Should the Contractor proceed with the Work affected before receipt of a response from the District's Representative, within the response time described above, any portion of the Work which is not done in accordance with the District's Representative's interpretations, clarifications, instructions, or decisions is subject to removal or replacement and the Contractor shall be responsible for all resultant losses.

C. Failure to Agree.

1. In the event of failure to agree as to the scope of the Contract requirements, the Contractor shall follow procedures set forth in the General Conditions.

[END OF SECTION 012613]

SECTION 013100

PROJECT MANAGEMENT AND COORDINATION

1.01 GENERAL

Responsibilities of the Contractor include but are not limited to the following:

A. The Contractor shall coordinate all Work with the District's Representative.

B. Coordinate the Work and do not delegate responsibility for coordination to any subcontractor.

C. Anticipate the interrelationship of all subcontractors and their relationship with the Work.

D. Resolve differences or disputes between subcontractors concerning coordination, interference, or extent of the Work between Sections.

E. Coordinate the Work of subcontractors and material suppliers so that portions of the Work are performed in a manner that minimizes interference with the progress of the Work.

F. Do not obstruct spaces and installations that are required to be clear by applicable code requirements.

G. Do not cover any piping, wiring, ducts, or other installations until they have been inspected approved, and the required certificates of inspection have been issued.

H. Remove and replace all Work that does not comply with the Contract Documents. Repair or replace any other work or property damaged by these operations with no adjustment of Contract Sum.

I. Coordinate all portions of the mechanical, electrical and other Work requiring careful coordination in order to fit in space available.

1.02 PROJECT COORDINATION

A. Meetings: Refer to Section 013119.

B. Submittals: Refer to Sections 013300 and 013323.

C. Contract Close-Out: Refer to Section 017700.

D. Correspondence: Clearly identify correspondence with Project name, number, subject and detailed reference to relevant Drawings and Specifications. Details of distribution will be determined at Preconstruction Conference; refer to Section 013119.

1.03 MECHANICAL, ELECTRICAL, AND RELATED SYSTEMS COORDINATION

A. Prior to proceeding with the work, and before installation, coordinate and work out all "tight" conditions involving work of various Sections. Before work proceeds in these areas, prepare supplemental drawings in CAD format for review by the District's Representative (refer to Section 013300, 1.04 Layout Data). Provide all work necessary to coordinate tight conditions including supplemental drawings in sufficient detail for showing that all work is coordinated in "tight" areas, and additional labor and materials necessary to overcome "tight" conditions at no increase in Contract price or Contract time. Coordination of "tight" conditions shall include:

   1. Providing sufficient clear space around all equipment necessary for maintenance access and as required by Code.

   2. Adjustments in depth, position, and elevation of underground and overhead utilities at points of conflict. Utility space conflicts shall be resolved by giving precedence to those utilities that are called out to be sloped. The term "utility" as used in this paragraph includes: all piping, conduit, and ductwork.

B. The Contractor is responsible for coordination of the work with all trades.

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1.04 INTERRUPTION OF SERVICE

A. Any utility (including electronic system) interruptions shall be coordinated with the District, via the District's Representative. At least two weeks' preliminary written notice shall be given prior to any utility interruption. Final written notice shall be given a minimum of five (5) working days in advance of utility interruption. The District will make any interruption of utility service upon such notice. The Contractor shall not interrupt any utility service without the prior consent and approval of the District, which may be withheld, conditioned or limited in the sole and exclusive discretion of the District based upon the District's on-going activities and operations at and about the Site.

B. All materials and supplies for completing the connection and restoring service shall be on hand before service is interrupted. Service interruptions shall be limited to eight (8) hour durations. The Contractor shall not leave the Project site until service is restored each day. The Contractor and its Performance Bond Surety shall be liable to the District for all damages (whether general, special or consequential damages) sustained by the District and resulting in whole or in part from the Contractor's unauthorized interruption of utility services and/or the Contractor's failure or refusal to restore interrupted utility service in strict conformity with applicable provisions of the Contract Documents.

1.05 CUTTING AND PATCHING

A. The Contractor shall be responsible for the coordination and final results of all cutting and patching. Cutting shall be done neatly. Patching shall be of the same material and workmanship as the surrounding finish so that in the final results the patch is not visible. Where pipes, ducts, or other elements are required to pass through or otherwise interfere with any structure, or where notching, boring, cutting, or patching of said structure is necessary, the work shall be done only after the District's Representative's approval has been obtained.

1.06 NOXIOUS OR TOXIC MATERIALS

A. The use of noxious or toxic materials for all applications in alterations of work in or adjacent to buildings occupied by the District's personnel shall be done only after submittal of product data if required, proper notification to and approval of the District, via the District's Representative, who may also require that such work be performed on the weekends or other unoccupied days. Such notice shall be given to the District, in writing, via the District's Representative, a minimum of five (5) working days in advance of said use.

1.07 NOISE ABATEMENT

A. Residential, offices, classrooms, and other facilities surround the Project area and will be occupied during the course of construction. Every effort shall be made to minimize excessive levels of noise, particularly over prolonged periods of time. Scheduling of particularly noisy construction operations shall be coordinated with the District, via the District's Representative. The District may direct the cessation or other limitation on the Contractor's Work as necessary or appropriate to permit the continuance of instructional activities at or about the Site.

B. Powder-actuated anchors and fasteners may be used if approved, and where directed by the District's Representative. Blasting of any description is strictly prohibited on any portion of the work of this contract.

C. Use of radio or other music amplification devices will not be permitted on the Project site.

D. Use of personal music devices or similar devices which use headphone and/or earplugs will not be permitted on the Project Site.

E. Refer also to Section 013500 and Section 015000.

[END OF SECTION 013100]

SECTION 013119

PROJECT MEETINGS

1.01 PRECONSTRUCTION CONFERENCE

A. Prior to mobilization or the commencement of any work on the Project site, and not later than 14 days after issuance of the Notice to Proceed, a pre-construction conference will be scheduled. The pre-construction conference will be conducted by the District's Representative to discuss timing procedures for smooth job progress, items requiring clarification, distribution of documents and correspondence with the District and the District's Representative, and other procedures which are to be followed during performance of the Work.

B. Location: On the Project site, as designated by the District's Representative.

C. Attending shall be:

1. The District.
2. The District's Representative.
3. The Architect and the Architect's Consultants, as appropriate.
4. Inspector of Record (IOR).
5. Contractor.
6. Contractor's Project Manager.
7. Contractor's Superintendent.
8. Subcontractors, as appropriate.
9. Others, as appropriate.

D. Suggested Agenda:

1. Distribution and discussion of:
    a. List of major subcontractors and suppliers.
    b. Projected construction schedules.
2. Critical work sequencing.
3. Major equipment deliveries and priorities.
4. Project coordination.
5. Designation of responsible personnel.
6. Procedures and processing of:
    a. Field decisions.
    b. Submittals.
    c. Modifications (Change Orders and Field Orders).
    d. Proposal Requests, Cost Proposals, Supplemental Information, Requests for Information (RFI).
    e. Applications for Payment.
7. Adequacy of distribution of Contract Documents.
8. Procedures for maintaining Record Documents.

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9. Use of premises for:
    a. Office, work, and storage areas.
    b. The District's Representative's requirements.
10. Construction facilities, controls, and aids.
11. Temporary utilities.
12. Tree protection procedures.
13. Erosion control.
14. The District's Operations and Maintenance Department concerns.
15. Housekeeping procedures.
16. Insurance requirements.
17. Wage and hour compliance.
18. Conducting work in operating facility
19. Noise control.
20. Other subjects as appropriate.

1.02 PROGRESS MEETING

A. During the course of construction, progress meetings will be held to discuss and resolve field problems. The District's Representative shall schedule and administer weekly progress meetings and specially called meetings throughout progress of the Work.
    1. The District's Representative shall:
        a. Prepare agenda for meetings.
        b. Make physical arrangements for meetings.
        c. Preside at meetings.
        d. Record minutes, including significant proceedings and decisions. Items not concluded will be retained on the agenda and in the minutes until conclusion is recorded in subsequent minutes. Format of the minutes shall be as mutually agreed upon by the Contractor and the District's Representative.
        e. Distribute copies of minutes within four (4) working days after each meeting to participants in meeting and to parties affected by decisions made at meeting.
        f. Attendees taking exception to items contained in the minutes shall state their objections, in writing, within one (1) working day prior to the next scheduled meeting.
    2. Representatives of Contractor, subcontractors and suppliers attending meeting shall be qualified and authorized to act on behalf of entity each represents.

B. The weekly time and day of job meetings shall be mutually agreed upon by all parties concerned and once determined the job meeting shall be held every week on the same day and at the same time.

C. Location: As designated by the District's Representative.

D. Attending shall be:
    1. The District.
    2. The District's Representative.
    3. The Architect and the Architect's Consultants, as appropriate.

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4. Inspector of Record (IOR).
5. Contractor.
6. Contractor's Superintendent and Project Manager.
7. Subcontractors, as appropriate.
8. Others, as appropriate.

1.03 BILLING MEETING

A. The Contractor shall conduct the billing meeting each month prior to submittal of the Application for Payment. During this meeting the percentage of completion will be discussed.

B. Location: As designated by the District's Representative.

C. Attending shall be:

1. The District's Representative.
2. The District.
3. The Architect and the Architect’s Consultants, as appropriate.
4. The Inspector of Record (IOR).
5. Contractor.
6. Contractor's Project Manager.

1.04 PRE- ROOFING MEETING

The Contractor’s responsibilities include but are not limited to the following:

A. Schedule job meeting to review each type of roofing work, prior to actual installation, with representatives of Architect, Contractor, Owners Project Representative, Inspector, roofing installer and other installers whose Work may affect the quality of the roofing work and with Testing Laboratory Inspection in attendance.

B. Review in detail manufacturer’s requirements, specifications, roof plan, deck plan, insulation, roofing drainage and flashing details along with any other related Work. Any anticipated or discovered conflict, incompatibility, or inadequacy shall be reviewed and resolved at the conference.

C. Review in detail job conditions, schedule, construction sequence, requirements for application and quality of completed installation, and protection of adjacent Work and property.

D. Review in detail means of protecting the completed Work during the remainder of the construction period.

1.05 OTHER MEETINGS AND PRE-INSTALLATION CONFERENCES (AS REQUIRED IN OTHER SECTIONS OF THE SPECIFICATIONS)

A. The Contractor shall conduct the pre-installation meeting as required in other Sections of the specifications. These meetings are to insure coordination and installation of components are completed in accordance with the Contract documents.

B. Location: As designated by the District's Representative.

C. Attending shall be:

1. The District's Representative.
2. The Architect and the Architect’s Consultants, as appropriate.
3. The Inspector of Record.
4. Contractor.
5. Contractor's Project Manager.

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6. Contractor's Superintendent.
7. Other subcontractors, installers, suppliers, and manufacturers, as specified.

1.06 GUARANTEES, BONDS, AND SERVICE AND MAINTENANCE CONTRACTS REVIEW MEETING

A. Eleven (11) months following the date of Substantial Completion, the District shall conduct a meeting for the purpose of reviewing the guarantees, bonds, and service and maintenance contracts for materials and equipment.

B. Attending shall be:

1. The District.
2. The District's Representative.
3. The Architect and the Architect’s Consultants, as appropriate.
4. Contractor.
5. Subcontractors, as appropriate.
6. Others, as appropriate.

[END OF SECTION 013119]

SECTION 013216

CONSTRUCTION PROGRESS SCHEDULE

1.01 GENERAL

A. Work of this section includes:

1. Format
2. Content
3. Official Contract Schedule (Project Construction Schedule)
4. Recovery Schedule
5. Float Time
6. Submittals
7. Distribution

B. Related Sections

1. General Conditions – Article 7

1.02 FORMAT

The Contractor shall:

A. Prepare Schedules as a horizontal bar chart or Critical Path Method (CPM) chart with separate bar for each major portion of Work operation, identifying first work day of each week.

B. Develop a Critical Path Method Schedule demonstrating fulfillment of all contract requirements. The project schedule shall be kept current to be utilized for scheduling, coordinating, monitoring work progress, and for preparation of the monthly payment application for payment under the Contract including all Work of Subcontractors and equipment and material suppliers.

C. Use Microsoft Project or equivalent for all scheduling activities. Provide all schedule files in .mpp electric file format to Construction Manager.

D. Sequence of Listings: Show the chronological order of the start of each item of Work.

E. Scale and Spacing: Provide space for notations and revisions.

1.03 CONTENT

A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.

1. The Contractor shall develop a Critical Path Method Schedule demonstrating fulfillment of all contract completion milestone requirements. The project schedule shall be kept current to be utilized for scheduling, coordinating, monitoring work progress, and for preparation of the monthly payment application for payment under this Contract including all Work of Subcontractors and equipment and material suppliers.
2. Schedule shall include activities pertaining to long lead delivery items, fabrication items and submittal of shop drawings and product samples.
3. Contractor shall designate a scheduler who is trained and experienced in compiling construction scheduling data, in analyzing scheduling data by use of CPM, and in preparation and issuance of periodic reports as required herein. The Contractor's Scheduling Representative shall have direct control and complete authority to act on behalf of the Contractor in fulfilling all project schedule requirements.

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B. Identify each item by specification Section number.

C. Identify work by separate stages and logically grouped activities.

D. Provide sub-schedules to define critical portions of the entire Schedule.

E. Show accumulated percentage of completion of each item, and total percentage Work completed, as of the first day of each month.

F. Show coordination with District work and other contractors.

G. Provide cost loads for each activity.

H. Show the network schedule logic on the schedule form of a CPM (or table if a bar chart is used).

1.04 OFFICIAL CONTRACT SCHEDULE (aka "Project Construction Schedule")

A. The Critical Path Method Schedule to be prepared by the Contractor pursuant to this section will be a part of a total system for scheduling, reporting work progress, and preparing the monthly payment application.

1. Within ten (10) working days after the Notice to Proceed, the Contractor shall submit to the District's Construction Manager a digital copy of the complete project schedule for approval or disapproval. In the event the complete project schedule is disapproved, the Contractor shall resubmit a correct schedule within five (5) working days after the notice of disapproval is received by the Contractor.

2. Should the Contract Schedule not be accepted within thirty (30) calendar days after Notice to Proceed, the Contractor may be due provisional progress payment(s) on work performed. It is the responsibility of the Contractor to reconcile such cost information and payments with the Contract Schedule. However, no payment shall be approved after the thirty (30) calendar day period, until the Contract Schedule has been accepted by the District.

3. The initial submittal of the Contract Schedule shall not reflect contract changes of delays. These changes shall be added within the first schedule revision.

4. The initial submittal of the Official Project Construction Schedule shall include, in addition to construction activities, the following:

   a. The submittal and approval of construction drawings, shop drawings and materials, the procurement and fabrication of major materials and equipment, and their installation and testing.

   b. Contract requirements dates of all or parts of the Work will be shown including all activities of the Owner that affect the progress of the work.

   c. Activities of completed work ready for use by next trade, etc..

   d. Activities relating to different areas of responsibility, such as sub-contracted Work which is distinctly separate from that being done by Contractor directly.

   e. Different categories of Work as distinguished by craft or crew requirements.

   f. Different categories of Work as distinguished by materials.

   g. Distinct and identifiable subdivisions of Work such as structural slabs, beams, or columns.

   h. Location of Work within the project that necessitates different times or crew to perform.

   i. Outage schedules of limiting times that existing utility services may be interrupted to construct the Project.

   j. Items listed separately in Schedule of Values for payment purposes.

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k. Acquisition and installation of equipment and materials supplied and/or installed by Owner or separate Contractors.

l. Material stored on site.

5. Major Equipment/Materials: For all major equipment and materials fabricated or supplied for Project, the Construction Schedule shall show a sequence of activities including:

   a. Preparation of shop drawings and sample submissions.

   b. Review of shop drawings and samples.

   c. Shop fabrication, delivery, and storage.

   d. Erection or installation.

   e. Test of equipment and materials.

   f. Required dates of completion.

6. Early Completion: Include in Project Construction Schedule an early completion date for the Project that is no later that Project's required date of completion.

7. Construction activities are to be delineated separately for off-site sewer, site development, earthwork, utilities, roads, parking lots, fences and like Work and each building, separately.

8. The network diagrams shall clearly indicate any work that is planned to be accomplished on a work schedule other than eight (8) hours per day and forty (40) hours per week.

9. The basic concept of CPM network diagramming will be followed to show how the start of a given activity is dependent on the completion of preceding activities and its completion restricts the start of following activities. The diagrams shall show a continuous flow from left to right to left sequences.

10. The following information will be provided in a report for each network activity:

    a. Activity description.

    b. Activity duration in work days.

    c. Activity cost. The Contract Price shall be broken down with the appropriate values distributed to the network diagram activities.

    d. Working activities and General Conditions activities shall be identified separately.

    e. Estimated man ours for each activity.

    f. Activity predecessors.

    g. Activity successors.

    h. Activity logic ties.

11. The Contractor shall provide to the District's Representative his schedule data together with associated costs. Schedule information provided by the Contractor shall support completion dates of the contract and the sum of the network activity costs shall equal the total contract price.

12. Schedule review by the District and its agents is limited to ensuring the logic of sequencing is reasonable and Contractor had demonstrated ability to meet contractual milestone and completion dates. Approval of schedule should not be constructed as direction from the District to Contractor on how to schedule the work.

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13. Subsequent to approval of the contract schedule, the Contractor will provide one (1) digital copy of the network diagrams and supporting documents (Contract Price, Schedule of Values, breakdown, etc.) Monthly update data will be submitted in the same form.
14. After Completion and Acceptance of the Official Project Construction Schedule: The Contractor will provide initial computer reports and weekly and monthly reports thereafter, as follows.
15. Schedule Reports: Initial and subsequent Schedule Reports will contain the following minimum information for each activity and shall be produced at a minimum of once a month:
    a. Activity Number;
    b. Activity Description;
    c. Estimated duration in days;
    d. Early and late finish dates;
    e. Percentage of each activity completed as of each report;
    f. Remaining float/days behind schedule;
    g. Responsibility for activity
16. Cost Reports: Initial and subsequent Cost Reports will include the following information for each activity, sorted by trade activity:
    a. Activity Number;
    b. Activity Description;
    c. Percentage of value of Work in place against total value;
    d. Total cost of each activity;
    e. Value of Work in place since last report;
    f. Value of Work in place to date;
    g. Value of incomplete Work.
17. Three-week Window: Weekly, for the progress meeting, the Contractor shall produce a three-week window of the current schedule, indicating activities competed the previous week and activities scheduled for the current and following week.
18. Payment Progress Reporting: District and Contractor shall select a specified time for updating the Project Schedule at the jobsite each month.
    a. The District and Contractor and his/her designated scheduling representatives will attend the meeting to review the project progress.
    b. The schedule shall be the basis for monthly pay requests derived from the joint review of the cost loaded schedule.
    c. All progress and status information provided by the Contractor shall clearly define the reporting period for which the status is provided.
19. At the monthly progress review meeting, the Contractor will provide “actual start” and “actual completion” dates for activities that were started or completed during the reporting period. The Contractor and the District will agree upon and assign percent complete values to activities in progress. In the event of a disagreement, the District, or its designated representative, shall make the final decision as to percent completion of each activity.
20. After joint review, District will process the Contractor’s pay request based on progress from the schedule.

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a. Payment to the Contractor shall be made from the progress reflected by the Interim or the Contract Schedule.

21. Time is of the Essence: Whenever it becomes apparent from the current monthly progress review that phases of Work or the Contract Completion Date will not be met, through no fault of the District, the Contractor will take the following actions with no change in the contract amount:

    a. Increase construction manpower to eliminate an adverse backlog of work.

    b. Increase the number of working hours per shift, shifts per day, working days per week, the amount of construction equipment, or any combination of the foregoing to eliminate the adverse backlog of Work.

22. The Official Project Construction Schedule as approved by the District will be an integral part of the Contract, and will establish interim Contract Completion Dates or milestone dates for the various activities.

23. Should any activity fall fifteen (15) work days or more behind the Official Project Construction Schedule approved by the District, the District will have the right to order the Contractor to expedite completion of that activity using whatever means are appropriate and necessary, without additional compensation to the Contractor.

24. Should any activity fall twenty (20) or more work days behind the Official Contract Schedule approved by the District, through no fault of the District, the District will have the right to perform the activity or have the activity performed by whatever method the District deems appropriate. All costs incurred by the District in connection with expediting such activity under this subparagraph shall be reimbursed promptly to the District by the Contractor.

25. It is expressly understood and agreed that the failure by the District to either order the Contractor to expedite an activity or to expedite the activity by other means, pursuant to the two preceding paragraphs, shall not be considered precedent setting with respect to any other activities which may fall behind the Official Contract Schedule approved by the District; nor will it relieve the Contractor from completion of the Project Work in accordance with the Official Contract Schedule and the Contract Completion Date.

26. District's acceptance of, or its review of, comments about any schedule or scheduling data shall not relieve the Contractor from its sole responsibility to plan for, perform, and complete the Work within the Contract Time. Acceptance of or review of comments about any schedule shall not transfer responsibility for any schedule to District nor imply their agreement with (1) any assumption upon which such schedule is based, or (2) any matter underlying or contained in such schedule.

27. Failure of District to discover errors or omissions in schedules that it has reviewed, or to inform Contractor that Contractor, Subcontractors, or others are behind schedule, or to direct or enforce procedures for complying with the Contract Schedule shall not relieve Contractor form its sole responsibility to perform and complete with Work within the Contract Time and shall not be a cause for an adjustment of the Contract Time or the Contract Sum.

B. Schedule Revisions

    1. General: Revisions to approved Construction Schedule must be approved in writing by the District and Contractor.

    2. Contractor: Submit requests for revision to schedule to the District together with written rationale for revisions and description of logic for researching Work and maintaining Specific Contractual Milestone Dates listed in Contract Documents.

    3. Proposed revisions acceptable to District will be incorporated into next update of Construction Schedule.

C. Acceptance: Acceptance of revised schedule by Owner does not relieve Contractor of meeting contractual milestone and completion dates.

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D. Changes initiated by District and implemented by Change Orders which have potential to affect critical dates will require the Contractor to prepare revised schedule for District's concurrence. Once District agrees to revision, Contractor will incorporate it into updated Construction Schedule. Adjustments in schedule completion dates, either for intermediate activities or for Contract as a whole, will be considered for compensation only to extent that there is not sufficient float to absorb the revisions accepted.

1.05 RECOVERY SCHEDULE

A. General: Should updated Project Construction Schedule show Contractor to be fourteen (14) or more calendar days behind schedule at any time during construction, Contractor will prepare Recovery Schedule displayed on CPM schedule, at no additional costs to District. Prepare Recovery Schedule to show plan for returning to original schedule as expeditiously as possible.

B. Schedule Preparation: Within three (3) days after notice from Construction Manager, prepare and submit to District a Recovery Schedule, incorporating best available information from Subcontractors and others which will permit return to Construction Schedule at earliest possible time. Prepare Recovery Schedule to same level of detail as Construction Schedule and for maximum duration of one (1) month.

C. Schedule Review: Within five (5) days after notice from Construction Manager, participate in conference with District to review and evaluate Recovery Schedule. Submit revisions necessitated by review for Construction Manger's approval within two (2) days of conference. Use approved Recovery Schedule for its planned duration and basis for return to Construction Schedule.

D. Schedule Assessment: Five (5) days prior to expiration of Recovery the District and Contractor will meet with Construction Manager to assess effectiveness of Recovery Schedule. As a result of this conference, District will direct Contractor as follows:

1. Behind Schedule: If District determines Contractor is still behind schedule, District will direct Contractor to prepare another Recovery Schedule for subsequent pay period.
2. On Schedule: If District determines Contractor has successfully complied with provisions of Recovery Schedule, District will direct Contractor to return to use of Project Construction Schedule.

1.06 FLOAT TIME

A. Float or slack time associated with one chain of activities is defined as amount of time between earliest start date and latest start date or between earliest finish date and latest finish date for such activities, as depicted on Project Construction Schedule. Float or slack time is not for exclusive use or benefit of either District or Contractor. However, if float time associated with any chain of activities is expended but not exceeded by any actions attributable to District, Contractor will not be entitled to any extension in the Contract time.

1.07 SUBMITTALS

A. Submit complete electronic Project Construction Schedule within (10) working days after dated of Notice to Proceed.

B. The Construction Manager will review the Project Construction Schedule provided by the Contractor.

C. After the District has approved the Project Construction Schedule, the Project Construction Schedule shall become the basis for determining scheduled completion of the project.

D. Submit updated Progress Schedules with each Application for Payment.

1.08 DISTRIBUTION

A. Distribute copies of Project Construction Schedule 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.

[END OF SECTION 013216]

SECTION 013323

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

1.01 REQUIREMENTS INCLUDED

A. All Shop Drawings, Product Data, and Samples, other than in connection with proposed substitutions, shall be submitted to the District's Representative only when specifically required; and the District's Representative will not review any other such submittals. Product Data and Samples for proposed substitutions shall be submitted to the District's Representative in accordance with Section 012500. Contractor shall be responsible for obtaining such copies of Shop Drawings, Product Data, and Samples as it may require for its own use.

B. All Shop Drawings and Supporting Data, Catalogs, and Schedules shall be prepared in such form that data can be identified with the applicable Specification paragraph. The data shall clearly demonstrate compliance with the Contract Drawings and Specifications and shall relate to the specific equipment to be furnished. Where manufacturer's standard drawings are employed they shall be marked clearly to show what portions of the data are applicable to this Project.

C. All Shop Drawings and Supporting Data, Catalogs, and Schedules shall be submitted as the instruments of the Contractor who shall be responsible for their accuracy and completeness. The Contractor, subcontractors, or suppliers may prepare these submittals, but the Contractor shall ascertain that submittals meet all of the requirements of the Contract Documents, while conforming to structural, space and access conditions at the point of installation. The Contractor shall check all submittals before submitting them to the District's Representative and shall state that the Contractor has done so in the Contractor's letter (or form) of transmittal.

D. No partial submittal shall be accepted.

1.02 RELATED REQUIREMENTS

A. Definitions:

1. The terms "Shop Drawings" and "Product Data" as used herein, also include, but are not limited to, fabrication, erection, layout and setting drawings, manufacturers' standard drawings, descriptive literature, catalogs, brochures, performance and test data, wiring and control diagrams, all other Drawings and description 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 the positions thereof conform to the Contract Documents.

2. As used herein, the term "manufactured" applies to standard units usually mass-produced. The term "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, and amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure.

B. Manufacturers' Instructions: Where any item of work is required by the Contract Documents to be furnished, installed, or performed in accordance with specified product manufacturer's instructions, Contractor shall procure and distribute the necessary copies of such instructions to the District's Representative and all other concerned parties; and Contractor shall furnish, install, or perform the Work in strict accordance therewith.

C. The District's Representative will normally process submittals within ten (10) working days of receipt.

D. Submittal Schedule:

1. A schedule for submission of Shop Drawings, Product Data, and Samples by Contractor (the "Submittal Schedule"), and their processing and return by the District's Representative, shall be agreed upon by both parties in order that the items covered by these submittals will be available when needed by the construction process and so that each party can plan its workload in an orderly manner.

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2. Contractor shall prepare the Submittal Schedule as per the Submittal Schedule outlined in Section 013300 and coordinate it with the Contract Schedule. No submittals will be processed before the Submittal Schedule has been submitted to and accepted by the District's Representative, except in such cases where the processing of submittals is required before the acceptance of the Submittal Schedule.
3. In preparing the Submittal Schedule, Contractor must first determine from the Contract Schedule the date the particular item is needed for the work. Working backwards, Contractor will add the required number of days for shipment, time for fabrication, and similar items to determine the date of the first submittal.
4. The Submittal Schedule shall be adjusted to meet the needs of the construction process and the Contract Schedule. Submit one (1) electronic copy of the Submittal Schedule after it is completed and each time it is updated by Contractor.

1.03 SHOP DRAWINGS

A. Present information required on Shop Drawings in a clear and thorough manner. Identify details by reference to drawing and detail, schedule, or room numbers shown and specified.

B. The Contractor shall submit, at the Contractor's expense, Design and Shop Drawings, Product Data, and details of all construction, fabrications, equipment, installation, and other appurtenances for the District's Representative's review before such items shall be manufactured or used in the work.

C. Supplemental specific requirements for Shop Drawings and details are contained in the applicable technical sections of the Specifications. The amount of reviewed copies of Shop Drawings and details submitted to the District's Representative will be returned as described in paragraph 1.07. The Shop Drawings and details will be returned with the actions as defined in paragraph 1.08.

1.04 PRODUCT DATA

A. Preparation:

1. Clearly mark each copy to identify pertinent products or models.
2. Show performance characteristics and capacities.
3. Show dimensions and clearances required.
4. Show wiring or piping diagrams and controls.

B. Manufacturers' standard schematic drawings and diagrams:

1. Modify the standard schematic Drawings and other diagrams to delete information that is not applicable to the work.
2. Supplement standard information to provide information specifically applicable to the work.

1.05 SAMPLES

A. Office Samples shall be of sufficient size and quality to clearly illustrate the following:

1. Functional characteristics of the products, with integrally related parts and attachment devices.
2. Full ranges of color, texture, and pattern.

1.06 CONTRACTOR'S REVIEW OF SUBMITTALS

A. Prior to submittal, the Contractor shall check submittals thoroughly to ascertain that they comply in detail with the Contract Documents.

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B. Review, mark up as appropriate, and stamp Shop Drawings, Product Data, and Samples prior to submission. Submittals shall clearly show that the Contractor has clearly reviewed them for conformance with the requirements of the Contract Documents and for coordination with other Sections.

C. Determine and verify:

1. Field measurements.
2. Field construction criteria.
3. Catalog numbers and similar data.
4. Conformance with Contract Documents.

D. The Contractor shall stamp the submittal that the above has been complied with, that stamp containing the Contractor's firm's name, date, and approval noted. Submittals received from the Contractor without this stamp will be returned disapproved.

E. All Drawings that are submitted shall be 8-1/2 inches x 11 inches (8-1/2" x 11"), 11 inches x 17 inches (11" x 17"), or the same size as the Contract Drawings.

F. Coordinate each submittal with requirements of the Work and of the Contract Documents.

G. Notify the District's Representative in writing, at time of submission, of any changes in the submittals from requirements of the Contract Documents.

1. Substitutions will only be acceptable in accordance with the provisions of Section 012500, "Substitution Procedures."

H. Begin no fabrication or work which requires submittals until the return of the District's Representative's final reviewed submittals.

1.07 SUBMISSION REQUIREMENTS

A. Make submittals promptly in accordance with the Submittal Schedule and in such sequence as to cause no delay in the Work.

B. Number of Submittals Required:

1. Typically: The Contractor shall submit one (1) electronic copy.
2. Shop Drawings: Submit one (1) electronic copy.
3. Contractor may make prints as it requires for its use and for Subcontractors' use. The Contractor will be billed monthly for reproduction costs incurred for each submission beyond the second submission of data and drawings. Refer to Section 1.08 for the District's Representative's review of submittals.
4. Product Data and Non-Reproducible Submittals: Submit one (1) electronic copy which will be retained by the District and the District's Representative.
5. Samples: Submit the number specified in the Section that requires them. If the number is not specified in the Section, provide two (2) samples.

C. Submittals shall contain:

1. Complete index with the following information:
   a. Project title and Contract identification
   b. Date of submission and dates of any previous submissions. If re-submittal, reference original submittal number and date.
   c. Submittal number, consecutively ordered.
   d. Contractor's identification.

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e. The names of:

i. Subcontractor.

ii. Supplier.

iii. Manufacturer.

2. Identification of the product, with the Specification Section number, title, paragraph and page number or drawing reference where applicable.
3. Field dimensions, clearly identified as such.
4. Item number within each individual submittal.
5. Reference alternate, addendum or change order number as applicable.
6. Relation to adjacent or critical features of the Work or materials.
7. Reference standards, such as ASTM or Federal Specification numbers.
8. Identification of changes from requirements of the Contract Documents.
9. Identification of revisions on re-submittals.
10. An 8-inch x 3-inch (8" x 3") blank space for review stamps.
11. Contractor's stamp, initialed or signed, certifying to the review of the submittal; verification of materials and field measurements and conditions; coordination with related requirements; and compliance of the information within the submittal with requirements of the Work and of the Contract Documents.
12. State clearly where submittal is substitution or otherwise deviates from the Contract Documents; include justification for substitution or other deviation.
    a. Substitutions will only be acceptable in accordance with the provisions of Section 012500, "Substitution Procedures."
13. Nomenclature, legend, symbols and abbreviations used in submittals shall be same as used in Contract Documents.

D. Resubmission Requirements:

1. Shop Drawings and Product Data:
    a. Revise Shop Drawings or Product Data and resubmit as specified for the initial submittal.
    b. Identify any changes that have been made other than those requested.
    c. Note any departures from the Contract Documents or changes in previously reviewed submittals that were not commented upon by the District's Representative.
2. Samples: Submit new Samples as required for initial submittal.

E. Distribution:

1. Distribute electronic copies of Shop Drawings and Product Data, which carry the District’s Representative review stamp, to the following locations:
    a. Contractor's Project site file.
    b. Record documents file maintained by Contractor
    c. Subcontractors
    d. Supplier or manufacturer
2. Distribute Samples that carry the District's Representative review stamp as directed.

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1.08 THE DISTRICT'S REPRESENTATIVE REVIEW OF SUBMITTALS

A. After review of each of the Contractor's submissions, the material will be returned to the Contractor with actions defined as follows (also refer to Article 4.7.3 of the General Conditions):

1. ***No Exceptions Taken***
2. ***Implement Exceptions Noted***
3. ***Revise and Resubmit*** (or Note Markings, or Comment Attached, or Confirm Markings, or Resubmit, must be revised and resubmitted)
4. ***Rejected***
5. "This review is for general conformance with the design concept and with the Contract Documents. Markings or comments shall not be construed as relieving the Contractor from compliance with the Project plans and specifications, or as authorizing departures therefrom. The Contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, and/or selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner."

B. Review completed by the District's Representative will not constitute acceptance by the District's Representative of any responsibility for the accuracy, coordination and completeness of the Shop Drawings or the items of equipment represented on the Drawings. Accuracy, coordination, and completeness of Shop Drawings shall be the sole responsibility of the Contractor, including responsibility to back check comments, corrections, and modifications from the District's Representative review before fabrication. Acceptance of Shop Drawings does not constitute a Change Order to the specification requirements.

C. It is considered reasonable that the Contractor shall make a complete and acceptable submission to the District's Representative at least by the second submission of data and drawings. The District reserves the right to charge the Contractor and withhold payment due the Contractor to cover additional costs of the District's Representative review beyond the second submission.

D. The District's Representative will review the Contractor's submittals, such as Shop Drawings, Product Data, and Samples, for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performances of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents.

[END OF SECTION 013323]

SECTION 013500

SPECIAL PROCEDURES

1.01 ENVIRONMENTAL/POLLUTION PREVENTION REQUIREMENTS

A. Contractor shall comply with all air pollution and environmental control rules, regulations, ordinances, and statutes that apply to the project and any work performed pursuant to the contract.

B. “No person or entity shall discharge or cause to be discharged into the municipal Storm Drain System or waters of the state any materials, including but not limited to Pollutants or waters containing any Pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water…”

1.02 AIR QUALITY (reference CEQA requirements)

C. In an effort to control dust during grading, excavation and construction activities, the Contractor shall comply with the following Monterey Bay Unified Air Pollution Control District (MBUAPCD) dust control measures:

1. Water all active construction areas at least twice daily, or as required to control dust.
2. Cover all trucks hauling dirt, sand, or loose material or require all trucks to maintain at least two feet of freeboard.
3. Sweep streets daily if visible soil material is carried out from the construction site.
4. Apply (non-toxic) chemical soil stabilizers on all unpaved access roads, parking areas and staging areas as well as on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
5. Apply (non-toxic) binders to exposed areas after cut and fill operation and hydroseed area.
6. Cover inactive storage piles.
7. Limit traffic speed on unpaved roads to 15 mph.
8. Plant vegetative ground cover in disturbed areas as soon as possible.

D. All pre-1994 model year and older diesel equipment shall be retrofitted with EPA-certified diesel oxidation catalyst filters. Cont4ractro shall maintain records of all purchases of diesel oxidation catalyst filters or biodiesel fuel until construction is complete. The Monterey Bay Unified Air Pollution Control District shall have the right to inspect all construction and demolition equipment, as well as the Contractor’s records at any time during demolition and construction.

E. The Contractor shall be responsible for obtaining permits, if required from MBUAPCD.

F. Refer to Section 015000 for dust palliative requirements.

1.02 NOISE REDUCTION (reference CEQA requirements)

A. The Contractor shall comply with the following noise reduction measures:

1. Limit construction activity to weekdays between 7 AM and 7 PM and Saturdays and holidays between 9 AM and 7 PM, with no construction on Sundays.
2. Locate all diesel-powered equipment more than 115 feet from any residence if the equipment is to operate for more than several hours per day.
3. All equipment shall be in good mechanical condition so as to minimize noise created by faulty or poorly maintained engine, drive train, and other components.
4. All equipment with internal combustion engines shall be equipped with a type of muffled recommended by the vehicle manufacturer.
5. Dirt berm and stockpile materials whenever possible to help reduce noise to adjacent residences.

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6. The following equipment should be considered to minimize noise in the surrounding area:
    a. Earth Removal: Use scrapers as much as possible for earth removal rather than the noisier loaders and hauling trucks.
    b. Backfilling: Use a backhoe for backfilling, as it is less costly and quieter than either dozers or loaders.
    c. Ground Preparation: Use a motor grader rather than a bulldozer for final grading.
    d. Building Construction: Power saws should be shielded or enclosed where practical to decrease noise emissions. Nail guns should be used where possible as they are less noisy than manual hammering.

B. Refer to Section 013100 and 015000 for noise control and abatement.

1.03 TREE PRESERVATION (reference CEQA requirements)

A. Any conflicts between tree protection areas, or designated environmentally sensitive areas, with the geotechnical report or work by others shall be brought immediately to the attention of the District's Representative and Construction Manager.

B. Preservation and maintenance of trees not designated for removal is essential to the successful completion of the Work. Refer to Section 015639 for requirements for tree protection, identification of trees to be removed, and compensation for loss of trees not designated for removal.

C. All trees and other plant materials on the site or on an adjacent property, except those indicated to be removed shall be protected from all injury. Contractor shall take all necessary precautions to preserve the trees. Refer to requirements of Section 015639.
    1. For trees less than 12 inches in diameter, wrap trunks with protective materials
    2. For trees 12 inches in diameter or greater, install protective fencing .50 – .75 feet from the trunk per inch trunk diameter; work within the protected area shall be overseen by a qualified arborist or biologist.
    3. Bridge or tunnel under roots greater than four inches in diameter where exposed. Smaller roots shall be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root pruning equipment. Any roots damaged during grading or excavation shall be exposed to sound tissue and cut cleanly.

D. No stockpiling, temporary building, or any other temporary obstruction shall be located within the drip line (outside edge of tree branching) of any existing tree that is to remain.

E. No pruning of trees shall be done, except by specific instructions and approval of the District's Representative.
    1. Advance written notice shall be given to the District's Representative if roots of a diameter greater than 1 inch must be cut.
    2. Roots shall be cut by hand pruning, not heavy machinery. They shall be cut cleanly. Exposed roots shall be covered and kept moist by dampened burlap until they are covered by soil.

F. Soil within the spread of the tree branches shall not be disturbed. Avoid soil compaction, parking of vehicles or heavy equipment, stockpiling of construction materials, and / or dumping of material under the drip line of trees.

G. Preservation and maintenance of all areas around existing trees are of utmost importance. Erosion or construction-related disturbances of any of these areas is strictly prohibited, and all measures within the Contract Documents that pertain to protection of these adjacent areas shall be strictly enforced.

H. Refer also to Section 015639.

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1.04 Spill abatement and Erosion control (reference CEQA requirements & SWPP / section 015713)

A. Grading is not allowed within 50 feet of the high water mark of streams on campus. If disturbance is required, obtain a Section 404 permit from the District who will obtain the required permit from the USACE and California Dept of Fish and Game.

B. Prepare a spill abatement plan and arrange for a pre construction worker orientation meeting to discuss the spill management plan. Workers shall be informed of the importance of preventing spills, and of the appropriate measures to take should a pill occur. The materials necessary for the initial response to a spill shall be kept at an easily accessible location on the project site. The erosion plan should include but not be limited to the following Best Management Practices.

1. Temporary mulching, seeding or other suitable stabilization measures to protect exposed erodible area during construction
2. Earth or paved interceptors and diversions installed at the top of cut or fill slopes where there is a potential for erosive surface runoff.
3. Erosion and sediment control devices for all grading and filling. Control devices and measures could include but are not limited to energy absorbing structures or devices to reduce the velocity of runoff water.
4. Within thirty days after completion of grading, all surfaces disturbed by vegetative removal, grading, or other construction activity that alters vegetative cover, should be revegetated to control erosion, unless covered with impervious or other improved surfaces authorized by approved plans. Erosion controls may include any combination of mechanical or vegetative measure, including but not limited to those described in USDA Soil Conservation Service Bulletin 347.

C. Contractor shall prepare and file a Notice of Intent (NOI) to the RWQCB prior to grading activities. Contractor shall propose and implement control measures that are consistent with the State construction Storm Water general Permit and with recommendation and policies of the local agency and the Regional Water Quality Control Board. The Contractor shall provide an acceptable SWPP which incorporates storm water Best Management Practices to control runoff, erosion and sedimentation from the site. The SWPP is intended to include the following objectives.

1. To help identify the sources of sediments and other pollutants that affect the quality of storm water discharges and
2. To describe and ensure the implementation of practices to reduce sediment and other pollutants in storm water discharges.

D. The SWPP must include Best Management Practices, which address source reduction and, if necessary shall include practices which require treatment. The SWPP should be consistent with the terms of the State Construction Storm Water General Permit, policies and recommendation of the local urban runoff program (city and / or county) and recommendation of the Regional Water Control Board.

E. Refer to section 015713 ‘Erosion Control’ for further information.

1.05 HAZARDOUS MATERIAL SPILL PREVENTION (reference CEQA requirements & SWPP / BMP)

A. General

1. All hazardous materials shall be stored so that they are protected from inclement weather and vandalism.
2. Motor vehicles shall not be fueled on the Project site.
3. Spill containment measures must be made prior to fueling when fueling equipment other than motor vehicles.
4. Vehicle maintenance, other than emergency repairs, shall not be performed on the Project site.

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5. The Contractor shall maintain all emergency spill containment supplies.
6. See Section 013300, 1.07, for the requirements for Material Safety Data Sheets (MSDS).

B. Spill Reporting

1. Any spill or discharge of a liquid hazardous substance used on the Project site (paint, solvent, petroleum product, etc.) shall be reported as follows:
2. Spills greater than one quart shall be immediately reported to the District's Representative and the District's Project Inspector.
3. Spills greater than five gallons shall be immediately and simultaneously reported to the District's Representative and the District's Project Inspector.
4. Any spill or discharge of a quantity (or character) of material that is considered to be an emergency shall be immediately reported first by dialing 911 to activate the appropriate emergency response, and next reported to the District's Representative and the District's Project Inspector.

C. Spill Response

1. Spills shall be diked or contained by trained personnel to prevent the spilled hazardous material from entering the storm water system or leaving the Project site.
2. Spills of less than five (5) gallons shall be absorbed using an appropriate material. All contaminated materials shall be containerized and removed from Campus in an acceptable manner.
3. Spills in excess of five (5) gallons shall be absorbed using an appropriate material and placed in containers under the direction of Emergency Response personnel.
4. Any contaminated soil shall be removed by the Contractor and replaced with acceptable fresh soil.
5. Appropriately trained personnel shall respond utilizing safe practices.

1.06 REMOVAL AND DISPOSAL OF WASTE MATERIALS (reference CEQA requirements)

A. Solid Waste: All refuse and debris, combustible and non-combustible, resulting from the process of clearing, demolition and construction, shall be removed from the District's property and disposed of at a legal refuse site. Contractor shall not make use of any refuse container belonging to the District.

B. Toxic Liquid Waste: Solvents, oils and any other material which may be harmful to plant life shall be disposed of in containers and removed from the District's property. At the completion of the work, any contaminated soil shall be removed as directed by the District's Representative and replaced with acceptable fresh soil by Contractor at no expense to the District.

C. Hauling: Hauling over public streets and campus roads shall be done only with vehicles and loads that are normally permitted on State highways. "Off road" type hauling equipment and illegal State loads will not be permitted.

1.07 HAZARDOUS MATERIALS PROCEDURES (reference 007313 / 017310 / 017329)

A. Prior to demolition and / or renovation activities, the contractor shall apply for a demolition permit from the Monterey Bay Unified Air Pollution Control District (MBUACD). The Contractor shall comply with MBUAPCD National Emission Standards for Hazardous Air Pollutants policies and regulation for removal and disposal of contaminated material.

B. During demolition and renovation activities, sheeting or other suitable barriers shall be used to limit release and dispersal of particulate matter in the air. Refuse building material shall be transferred to sealed containers or covered truck beds for transport to prevent blowing or spillage of materials.

C. Any renovation activities requiring lead stripping and lead based paint debris shall be cleaned up and disposed of by properly trained and protected personnel and a licensed Contractor

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D. Except as otherwise specified, in the event Contractor encounters on the Project site material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or other hazardous materials which have not been rendered harmless, Contractor shall immediately stop work in the area affected and report the condition to the District via the District's Representative in writing. The work in the affected area shall not thereafter be resumed except by written agreement of the District and Contractor if in fact the material is asbestos, PCB, or other hazardous materials and has not been rendered harmless. The work in the affected area shall be resumed in the absence of asbestos, PCB, or other hazardous materials, or when such materials have been rendered harmless.

1.08 ARCHAEOLOGICAL REQUIREMENTS (reference CEQA requirements)

A. The District knows of no prehistoric cultural deposits on the Project site, however, if any indicators of the presence of prehistoric cultural deposits are discovered during construction, earth-disturbing work will be halted in an area with a radius of 150 feet (50 meters) around the suspected prehistoric deposits. Notify the District's Representative immediately. The District's Representative will consult with an archaeologist in accordance with applicable laws and regulations. If deemed appropriate, The District will conduct data and artifact recovery during the period when construction work is halted.

B. The District knows of no human remains on the Project site, however, if any human remains are discovered during construction, earth-disturbing work will be halted in an area with a radius of 150 feet (50 meters) around the human remains. Notify the District's Representative in writing immediately. The District's Representative will inform and consult with an appropriate representative of Native American Indian groups and the County Coroner, as required by state law. Work is to stop until authorization to proceed is given

1.09 PUBLICITY RELEASES

Contractor shall not release any information, story, photograph, plan or drawing relating to the Project to anyone, including the press or other public communications media, except as submitted and approved for release by the appropriate public relations authority of the District.

[END OF SECTION 013500]

SECTION 014100

REGULATORY REQUIREMENTS

1.01 GENERAL

A. The Work shall be performed in accordance with applicable code requirements and applicable requirements of all other regulatory agencies, including, but not limited to, the following:

1. Federal Occupational Safety and Health Administration.
2. National Electrical Code 2008; 2010 CEC.
3. Uniform Mechanical Code 2009; 2010 CMC.
4. Uniform Plumbing Code 2009; 2010 CPC.
5. International Building Code 2009; 2010 CBC.
6. California Code of Regulations (CCR), including Title 24 (2009 edition).
7. California Health and Safety Code.
8. State of California Business and Transportation Agency, Department of Transportation (CALTRANS) Standard Specifications.
9. Erosion Control Standards, District.
10. Uniform Federal Accessibility Standards (UFAS). Note: The more stringent provision of the CCR or UFAS shall apply.
11. Coastal Prairie Enhancement and Management Plan.
12. Rules and regulations of private and public utilities.

B. Unless otherwise specified, specific references to codes, regulations, standards, manufacturers' instructions, or requirements of regulatory agencies, when used to specify requirements for materials or design elements, shall mean the latest edition of each in effect at the date of submission of bids, or the date of the Change Order or Field Order, as applicable.

1.02 CONFLICTS

A. If a conflict exists between referenced regulatory requirements or between referenced regulatory requirements and the Contract Documents, Contractor shall notify the District's Representative in writing and request that the conflict be resolved.

B. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations and without such notice to the District's Representative, Contractor shall assume full responsibility therefore and shall bear all costs attributable thereto.

C. The Contract Documents take precedence over statutory requirements or standards when requiring materials of higher quality or performance, or larger sizes or capacity, or greater protection, safety or quantity than required by said codes or standards. This shall not operate to allow deviations from Code requirements.

D. Modifications to published statutory requirements currently adopted or enforced by regulating agencies having jurisdiction shall take precedence over said published requirements.

E. Statutory requirements or standards take precedence over Contract Documents when requiring materials of higher quality or performance, or larger size or capacity, or greater protection, safety or quantity than required in the Contract Documents. This shall not operate to allow deviations from requirements for prior approvals and other provisions specified.

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F. Conflicts within Contract Documents and/or between the specifications, drawings and addendum(s); the more stringent requirement shall govern.

1.03 RULES AND REGULATIONS

A. All standards, rules, regulations and orders concerning this Work, when applicable, are herein included in these Specifications.

1. When the Specifications call for materials or construction of a better quality or larger sizes than required by such laws, ordinances, rules and regulations, the provisions of the Specifications shall govern.
2. Contractor shall furnish without any extra charge any additional material and/or labor when required by compliance with such laws, ordinances, rules and regulations, though the work be neither mentioned in these particular Specifications nor shown on the Drawings.

1.04 THE DISTRICT'S INSPECTION

A. The District's Inspector will make inspections at various times throughout the progress of the Project. These inspections will include all applicable code compliance items and any other items the District deems necessary to assure compliance with the Contract Documents.

B. Contractor shall not proceed to cover up work that has not been inspected by the District's Inspector and has been deemed as being satisfactory. The Contractor without adjustment of the Contract Price or the Contract Time shall provide the District’s Inspector with access to the Work, wherever located and whether in place, in fabrication, in transit or in progress.

1.05 PERMITS AND FEES

A. Contractor shall not be required to obtain or pay for a building permit, electrical permit, plumbing permit, mechanical permit, or grading permit.

B. Deferred Approval items: the Contractor is responsible for engineering fees associated with submittals to DSA for approval of the Contractor’s deferred approval items.

C. No connections to city-owned utilities are required for this Project.

D. Refer also to the General Conditions.

1.06 SAFETY

A. In accordance with State and Federal law and generally accepted construction practices, Contractor shall be solely and completely responsible for conditions of the Project 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.

B. The Contractor is hereby informed that work on this Project could be hazardous. Contractor shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instruction as is necessary to prevent injury to personnel and damage to property. Special care shall be exercised relative to work in trenches and manholes.

C. The Contractor shall comply with all safety standards, regulations and codes. All work, including temporary construction, shall be in full accord with the latest orders of the Division of Industrial Safety of the State of California Occupational Safety & Health Act (Cal-OSHA) and Federal Occupational Safety & Health Act (OSHA). Should more than one standard apply, the Contractor shall adhere to the most stringent. The Contractor shall carefully instruct all personnel of the potential dangers of working in potentially hazardous areas and performing potentially hazardous work The Contractor shall provide appropriate safety equipment sufficient to protect personnel from injury and illness, and property from damage.

D. The services of the District's Representative or the District's Inspector in conducting construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's work methods, equipment, bracing or scaffolding or safety measures, in, on, or near the Project site.

[CONTINUED NEXT PAGE]

E. It shall be the Contractor's responsibility to provide personal protective equipment appropriate to the work being performed such as: Hard Hats (Safety Hats); foot protection; hearing protection; respiratory protection; safety glasses/face protection; hand protection. Other personal protective equipment must be worn at all times when required by the work being performed.

F. Safety Hats: Contractor shall be responsible for enforcing the requirement that safety hats be worn by all persons on the Project site at all times, and Contractor shall provide adequate signs at appropriate locations throughout the Project site setting forth this requirement. In addition, Contractor shall provide an adequate number of safety hats for the use of authorized visitors and shall be responsible for the distribution thereof before allowing any visitor to enter the Project site.

G. Contractor shall provide and maintain all fencing, traffic-rated trench plating, barricades, guard rails, bridges, warning signs, lights, paved paths, and the like as are necessary to protect Contractor's own personnel, PGUSD staff, students, representatives, and outside public from the Project site.

H. The security and safety of the scaffolding, ladders, ramps, temporary stairs, etc., shall be the responsibility of Contractor. Only trained operators shall operate hoists. All such equipment shall meet all applicable safety code requirements.

I. The Contractor shall have a written Hazard Communication Program and instruct all employees and employees of lower tier contractors in its provisions.

J. The Contractor shall have an effective Injury and Illness and Prevention Program and instruct all employees in its provisions.

K. The Contractor shall post and instruct all employees and employees of lower tier contractors in emergency provisions, including telephone numbers, applicable to the particular work-site(s).

L. The Contractor must provide lighting adequate for the work being performed.

M. Compressed gas cylinders must be handled and stored in an upright position, and flammables must be stored separately from oxidizers.

N. Control hazards presented by the work and Project site by providing barricades, fencing, guard rails, bridges, lighting, signage, traffic-rated trench plating, traffic control, dust control, refuse containment, safe material storage, and/or other methods necessary to protect employees, visitors and the public. See Section 015000.

O. Hand held and Portable Powered tools must be maintained, guarded and stored so as not to create a hazard during use or storage

P. Welding and cutting must be planned and performed to eliminate fire, electrical and employee hazards.

Q. All electrical equipment and its use shall be free from recognized hazards that are likely to cause death or serious physical harm to employees.

R. No equipment shall be used without a Ground Fault Circuit Interrupter.

S. Powder actuated tools will be used only by employees who have been trained in their operation. Signs shall be placed about the area alerting other employees and visitors that these tools are in use. Measures shall be taken to prevent injury to other employees in the vicinity. The operator shall wear eye/face and hearing protection. Tools and charges shall be under the control of the operator at all times.

T. Pneumatic tools shall be positively secured to the hose to prevent whip. Safety devices shall be required on all such tools to prevent them from being fired unless in contact with a solid surface. All employees using such tools and all employees in the vicinity shall be provided with eye/face and hearing protection.

U. A safety fastener will be used to secure all compressed air lines against inadvertent uncoupling and whipping.

V. Refer also to the General Conditions.

[CONTINUED NEXT PAGE]

1.07 CONSTRUCTION SAFETY ORDERS

A. Pursuant to Labor Code 6707, Contractor shall include in Contractor's Base Bid all costs incident to the provision of adequate sheeting, shoring, bracing or equivalent method for the protection of life or limb which shall conform to applicable Federal and State safety orders.

B. Before beginning excavation of any trench or trenches five (5) feet or more in depth, Contractor shall submit to the District's Representative a detailed "Project specific" plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation. The proposed plan shall comply with the standards established by the State of California Construction Safety Orders and Title 24 of the California Administrative Code. If the detailed plan varies from such shoring system standards, it shall be prepared by a registered civil or structural engineer whose name and registration number shall be indicated on the Drawing. If a dispute arises as to whether a registered civil or structural engineer must prepare the plan, the District's Representative's determination of the matter shall be final and conclusive on Contractor and the District. The cost of required engineering services shall be borne by Contractor and shall be deemed to have been included in the amount bid for the work as stated in the Agreement. Neither the review nor approval of any plan showing the design of shoring, bracing, sloping, or other provisions for worker protection, shall relieve Contractor from Contractor's obligation to comply with Construction Safety Order Standards and Title 24 of the California Code of Regulations for the design and construction of such protective work, and Contractor shall indemnify the District and the District's Representative from any and all claims, liability, costs, actions and causes of action arising out of or related to the failure of such protective systems. Contractor shall defend the District, its officers, employees and agents and the District's Representative in any litigation or proceeding brought with respect to the failure of such protective systems.

C. Contractor shall not submit for review a shoring, sloping or protective system less effective than required by the Construction Safety Orders of the Division of Industrial Safety.

[END OF SECTION 014100]

SECTION 014100.01

ADDITIONAL REQUIREMENTS FOR DSA-REVIEWED PROJECTS

1.01 GENERAL

A. The following additional requirements apply to this Project if it is being reviewed by the Division of the State Architect (DSA).

B. A copy of Part I and Part II of Title 24 shall be kept and available in the field during construction.

1.02 ADDITIONAL REQUIRMENTS

A. In addition to the duties specified in the Contract Documents, the duties of the Contractor shall be in accordance with the requirements specified in Section 4-343 of Part 1, Title 24, California Code of Regulations (CCR)

B. In addition to the duties specified in the Contract Documents, the duties of the Architect and the Architect's consultants shall be in accordance with the requirements specified in Section 4-333(a) and 4-341 of Part 1, Title 24, CCR.

C. DSA is not subject to arbitration proceedings.

D. Notify DSA at start of construction in accordance with Section 4-341 of Part 1, Title 24, CCR.

E. All addenda and change orders shall be submitted for DSA approval. Do not begin any work under an addendum or change order until DSA approval is obtained. Addenda and change orders shall be in accordance with Section 4-338 of Part 1, Title 24, CCR.

F. Do not begin work under a written order until a change order has been submitted to and approved by DSA in accordance with Section 4-338 or Part 1, Title 24, CCR. Substitutions effecting structural, fire/life/safety or access compliance shall be submitted as change orders for DSA approval. The Contractor will be responsible for the additional architectural, engineering, and construction and/or project management costs associated with the review and regulatory processing of these substitutions.

G. Contractor shall submit verified reports in accordance with Sections 4-341 and 4-343 of Part 1, Title 24, CCR.

H. DSA may supervise construction, reconstruction, or repair in accordance with Section 4-334 of Part 1, Title 24, CCR.

I. Construction shall be observed and inspected by a full-time Project Inspector (IOR) approved by DSA in accordance with Section 4-333(b) and 4-342 of Part 1, Title 24, CCR.

J. Testing requirements of the DSA approved Owner's Testing Laboratory shall be in accordance with Section 4-335 of Part 1, Title 24, CCR.

K. Special Inspection may include, but is not limited to; masonry construction, glued laminated lumber, wood framing using timber connectors, ready-mixed concrete, structural steel, high strength steel bolt installation, welding, pile driving, and mechanical and electrical work shall be as required by Section 4-333(c) of Part 1, Title 24, CCR. The Owner will pay for the costs of special inspection.

[END OF SECTION 014100.01]

SECTION 014213

ABBREVIATIONS AND SYMBOLS

1.01 ABBREVIATIONS

A. The following abbreviations of organizations may be used in the Contract Documents and wherever the following terms are used, the intent and meaning shall be as follows:

AASHTO.....American Association of State Highway and Transportation Officials
ABMA .....American Boiler Manufacturers Association
ACI .....American Concrete Institute
ADA .....Americans with Disabilities Act
AGA.....American Gas Association
AGMA.....American Gear Manufacturers Association
AIA.....American Insurance Association (formerly National Board of Fire Underwriters)
AISI.....American Iron and Steel Institute
AISC .....American Institute of Steel Construction
API.....American Petroleum Institute
AREA.....American Railway Engineering Association
ANSI .....American National Standards Institute (formerly United States of America Standards Institute)
APA .....American Plywood Association
API.....American Petroleum Institute
ASCE.....American Society of Civil Engineers
ASHRAE.....American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME .....American Society of Mechanical Engineers
ASTM .....American Society of Testing and Materials
AWPA.....American Wood Preservers' Association
AWS .....American Welding Society
AWWA.....American Water Works Association
CALTRANS .....State of California Department of Transportation
CBC……..California Building Codes (Title 24)
CBM .....Certified Ballast Manufacturers Association
CBR.....California Bearing Ratio
CSS .....California Department of Transportation Standard Specifications
CTI.....Ceramic Tile Institute of America
DFPA.....Douglas Fir Plywood Association
DOT.....Department of Transportation
ETL.....Electrical Testing Laboratories, Inc.
FCC .....Federal Communications Commission
FM .....Factory Mutual Engineering and Research
FS.....Federal Specification (General Services Administration)
IEEE .....Institute of Electrical and Electronic Engineers
IES.....Illuminating Engineering Society
IESNA.....Illuminating Engineering Society of North America
ISA.....Instrument Society of America
MSS.....Manufacturer's Standardization Society of the Valve and Fittings Industry
NEC.....National Electric Code (by NFPA)
NEMA.....National Electrical Manufacturers Association
NFPA.....National Fire Protection Association
NOAA .....National Oceanographic and Atmospheric Association
OSHA .....Occupational Safety and Health Administration
SMACNA.....Sheet Metal and Air Conditioning Contractors National Association, Inc.
SSPC.....Steel Structures Painting Council

[CONTINUED NEXT PAGE]

UBC.....Uniform Building Code with California Amendments
UFC.....Uniform Fire Code
UL.....Underwriters Laboratories
UMC .....Uniform Mechanical Code
UPC.....Uniform Plumbing Code
WIC .....Woodwork Institute of California

B. Additional abbreviations, used on the Drawings, are listed thereon.

1.02 SYMBOLS

Symbols and graphic symbols, used only on the Drawings, are shown thereon.

[END OF SECTION 014213]

SECTION 014216

DEFINITIONS

1. The following terms, when used on the Drawings or in the Specifications, shall have the following meanings:

TERM	MEANING
ACCESS	Unobstructed and continuous vehicular and pedestrian passage.
APPROVAL / ACCEPTANCE	"The approval and acceptance of the District's Representative."
AS DIRECTED	"As directed by the District's Representative."
AS REQUIRED	"As required by Applicable Code Requirements; by good building practice; by the condition prevailing; by the Contract Documents; by the District; or by the District's Representative."
AS SELECTED	"As selected by the District's Representative."
BY OTHERS	Work on the Project that is outside the scope of Work to be performed by Contractor under the Contract, but will be performed by the District, Separate Contractors, or other means.
CONTRACTOR-INSTALLED	Delivered and installed by Contractor as part of the Work."
COST PROPOSAL	Contractor's cost breakdown in response to a Proposal Request.
DAYS	The word "days" used herein or in other Contract Documents shall mean calendar days unless specifically noted otherwise. A “day” shall mean a calendar day of 24 hours, including each and every day of the year.
THE DISTRICT	The term "the District" refers to "The Pacific Grove Unified School District” as Owner and their designated representative / Project Manager.
THE DISTRICT'S INSPECTOR AND INSPECTOR OF RECORD	Representative of the District who will perform inspections of the work for code compliance and quality assurance reporting in addition to those observations and inspections performed by The District's Representative. The District's Inspector may be the District's Representative or may be another representative of the District. If the District's Inspector and the District's Representative are not the same, the Inspector will have only that authority as specifically stated herein.
DISTRICT-FURNISHED	"To be furnished by the District at the District's cost.”
DISTRICT-FURNISHED, CONTRACTOR INSTALLED	"To be furnished by the District at its cost and installed by the Contractor as part of the Work."

[CONTINUED NEXT PAGE]

DISTRICT'S REPRESENTATIVE ..... The term "District's Representative" refers to the Construction Manager.

FURNISH ..... "Supply only, not install."

INSTALL ..... "Install or apply only, not furnish."

LETTER OF INSTRUCTION ..... A written document (supplemental instruction) prepared by the District's Representative which clarifies or interprets the requirements of the Contract Documents or makes minor changes to the work which do not require a change in the Contract Sum and/or Time and which are not inconsistent with the intent of the documents. A Letter of Instruction is prepared on the District's Representative's standard form.

PROJECT ..... The specific facility to be constructed under these Contract Documents.

PROJECT SITE ..... Geographical location of the Project.

PROPOSAL REQUEST ..... A written document prepared by the District's Representative which requests a quotation for changes in the Contract Sum and/or Time incidental to proposed modifications to the work. A proposal request is prepared on the District's Representative's standard form.

PROVIDE ..... "Furnish and install, including provision of all related work."

REASONABLY REQUIRED ..... The term "reasonably required" shall include those items which may not specifically be indicated or noted in these documents, but which can reasonably be assumed to be necessary to complete the work of a particular system.

REQUEST FOR INFORMATION (RFI) ..... A request made in writing for clarification or additional information to the District's Representative (Refer to Section 012613).

SHOWN ..... "As indicated on the Drawings."

SPECIFIED ..... "As written in the Contract Documents."

SUBMIT ..... "Submit to the District's Representative."

SUBMITTALS ..... Detailed fabrication and setting drawings, samples, material lists, and manufacturer's equipment brochures setting forth in detail the Work as it is to be performed by Contractor.

[CONTINUED NEXT PAGE]

2. Items marked "by the District" or "N.I.C." on the Drawings are not to be furnished or installed as part of this Contract.
3. "As permitted," "permitted", "acceptable", "satisfactory", means by or to the District's Representative.
4. Refer to the General Conditions for additional definitions.

[END OF SECTION 014216]

SECTION 014219

REFERENCE STANDARDS

1.01 STANDARD SPECIFICATIONS

Standard Specifications, such as HUD, ASTM, ANSI, AASHTO, AWWA, AISC, Commercial Standards, Federal Specification, NBFU, NEMA, UL, and the like, incorporated in the Contract Documents by reference, shall be those of the latest edition at the time of receiving bids, unless otherwise specified. Manufacturers, producers and their agents of materials required shall have such specifications available for their reference.

1.02 STANDARDS AND REFERENCES

A. In effect on Date of Invitation for Bids: Any material specified by reference to the number, symbol or title of a specific standard such as commercial standard, a Federal Specification, a trade association standard or other similar standard, shall comply with the requirements in the latest revision thereof and any amendments or supplement thereto in effect on the date of Invitation for Bids.

B. Incorporation into Specifications: The standards referred to except as modified in the Specification shall have full force and effect as though printed in these Specifications. These standards are not furnished to bidders, since manufacturers and trades involved are assumed to be familiar with their requirements. The District's Representative will furnish upon request information as to how copies of the standards referred to may be obtained.

1.03 QUALITY ASSURANCE

A. For products or quality specified by association, trade or Federal 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 the date of receipt of bids, unless otherwise noted.

C. Obtain copies of standards when required by the Contract Documents. Maintain copies at the Project site during submittals, planning, and progress of the specific work, until substantial Completion.

D. Should specified reference standards conflict with the Contract Documents, required clarification from the Construction Manager before proceeding.

E. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or reference otherwise in any reference document.

1.04 "CALIFORNIA STANDARD SPECIFICATIONS"

Wherever in these Specifications reference is made to the "California Standard Specifications," "CSS," or "Standard Specifications" reference shall be made to Specifications entitled "State of California, Department of Transportation, Standard Specifications," latest edition, and which is incorporated herein and made a part hereof by reference thereto.

1.05 AVAILABILITY OF STANDARD SPECIFICATIONS

Where reference is made to standards or references that are published by various associations, institutes, corporations or government agencies, those specifications may be obtained from the publisher. Names and addresses of those publishers are included below. Both names and addresses are subject to change, and are believed to be, but are not assured to be, accurate as of the date of the Contract Documents. Neither the District nor the District's Representative shall assume any responsibility for either errors or omissions in the following list:

American Association of State Highway and Transportation Officials
444 North Capitol St., Suite 225
Washington, DC 20001
(202) 624-5800

[CONTINUED NEXT PAGE]

American Concrete Institute
PO Box 19150
Detroit, MI 48219
(313) 532-2600

American Gas Association
1515 Wilson Blvd.
Arlington, VA 22209
(703) 841-8400

American Insurance Association
85 John Street
New York, NY 10038
(212) 669-0400

American Institute of Steel Construction
400 N. Michigan Ave., 8th Floor
Chicago, IL 60611
(312) 670-2400

American Iron and Steel Institute
1000 16th St., NW
Washington, DC 20036
(202) 452-7100

American National Standards Institute
655 15th Street, NW
Suite 300
Washington, DC 20015
(202) 639-4090

American Plywood Association
PO Box 11700
Tacoma, WA 98411
(206) 565-6600

American Petroleum Institute
1220 L Street, NW
Washington, DC 20005
(202) 682-8000

American Society of Heating, Refrigerating and
Air Conditioning Engineers
1791 Tullie Circle, NE
Atlanta, GA 30329
(404) 636-8400

American Society of Mechanical Engineers
345 East 47th St.
New York, NY 10017
(212) 705-7722

ASTM
1916 Race St.
Philadelphia, PA 19103
(215) 299-5400

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American Wood-Preservers' Association
PO Box 849
Stevensville, MD 21666
(301) 643-4163

American Welding Society
PO Box 350140; 550 Le Jeune Rd., NW
Miami, FL 33135
(305) 443-9353

American Water Works Association
6666 W. Quincy Ave.
Denver, CO 80235
(303) 794-7711

Architectural Woodwork Institute
2310 S. Walter Reed Drive
Arlington, VA 22206
(703) 691-9100

(State of) California Department of Transportation
Publication Distribution Unit
1900 Royal Oaks Drive
Sacramento, CA 95819
(916) 445-3520

Certified Ballast Manufacturers Association
Hanna Building, Suite 772
1422 Euclid Avenue
Cleveland, OH 44115
(216) 241-0711

Ceramic Tile Institute
700 North Virgil Ave.
Los Angeles, CA 90029
(213) 660-1911

Department of Transportation
400 Seventh St., SW
Washington, DC 20590
(202) 426-4000

ETL Testing Laboratories, Inc.
PO Box 2040
Route 11, Industrial Park
Cortland, NY 13045
(607) 753-6711

Factory Mutual Engineering and Research
1151 Boston-Providence Turnpike
Norwood, MA 02062
(617) 762-4300

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Federal Communications Commission
1919 M Street, NW
Washington, DC 20554
(202) 632-7000

Federal Specification (General Services Administration)
Specifications Unit (WFSIS)
7th and D Streets, SW
Washington, DC 20406
(202) 472-2205

Institute of Electrical and Electronic Engineers, Inc.
Illuminating Engineering Society of North America
345 E. 47th St.
New York, NY 10017
(212) 705-7926

Instrument Society of America
PO Box 12277; 67 Alexander Drive
Research Triangle Park, NC 27709
(919) 549-8411

International Society of Aboriculture (ISA)
303 West District
P.O. Box 908
Urbana City, Illinois 61801
(217) 328-2032

Manufacturers Standardization Society of the Valve and Fittings Industry
127 Park Street, NE
Vienna, VA 22180
(703) 281-6613

National Arborist Association (NAA)
P.O. Box 1094
Amherst, New Hampshire 30301
(603) 673-3311

National Electrical Manufacturers Association
2101 L St., NW
Suite 300
Washington, DC 20037
(202) 457-8400

National Fire Protection Association
Batterymarch Park
Quincy, MA 02269
(617) 770-3000

National Oceanographic and Atmospheric Association (NOAA)
Universal Building South
1825 Connecticut Avenue NW
Washington, D.C. 20235
(202) 606-4380

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Occupational Safety and Health Administration
(U.S. Department of Labor)
Government Printing Office
Washington, DC 20402
(202) 783-3238

Sheet Metal and Air Conditioning Contractors' National Association
PO Box 70
Merrifield, VA 22116
(703) 790-9890

Steel Structures Painting Council
4400 5th Ave.
Pittsburgh, PA 15213
(412) 578-3327

Department of Transportation
400 Seventh St., SW
Washington, DC 20590
(202) 426-4000

Underwriters Laboratories
333 Pfingsten Rd.
Northbrook, IL 60062
(312) 272-8800

Woodwork Institute of California
1833 Broadway
Fresno, CA 93773
(209) 233-9035

[END OF SECTION 014219]

SECTION 014339

MOCK-UPS

1.01 SUMMARY

A. Section includes non-technical summary description of mock-ups detailed in the various Sections of the Specifications for review.

B. Related Sections, including, but not limited to:

1. N/A

1.02 SUBMITTALS

A. Procedures: In accordance with Division 1, and the requirements of respective Specification Sections.

B. Mock-ups shall not be fabricated until after acceptance of required submittals.

C. Schedule of Tests: Schedule and account of tests to be performed.

D. Shop Drawings: Submit shop drawings including any required components, footings, and bracing. Clearly identify components and materials to be integrated into the assembly.

E. Samples: Prior to construction of mock-ups, provide samples of concrete (separate sample of each finish), window section and finishes, concrete unit masonry (separate sample for each finish), wood siding, wood veneer (finished and unfinished), and metal flashing.

F. Structural Calculations: Submit structural calculations, as required, to insure the structural integrity of the mock-ups. A State of California licensed structural or civil engineer must sign the calculations.

1.03 QUALITY ASSURANCE

A. Design Concept: Mock-up requirements are intended to establish function, quality, finish, and color for conformance with the architectural design intent.

B. Purpose: To verify suitability of colors, finishes and satisfactory integration of assembly components, such as windows, window panels, concrete unit masonry, topping slab, sheet metal items, and fabrication.

C. Performance: Mock-ups shall be constructed for the District's Representative's review and testing for compliance with the Contract Documents and shall be used as a standard for the final installation.

D. Make necessary additions and modifications to mock-ups as required to comply with performance requirements while maintaining the design concept.

E. Modify mock-ups, or construct or install new components if requested by the District's Representative, until final acceptance is obtained.

F. Work of this section shall serve as the standard for subsequent work of the like kind after approval by the District's Representative. Be prepared, at no additional cost to the District, to make as many modifications as necessary to achieve mock-up that is acceptable to the District's Representative and of sufficient quality to serve as the standard for the complete Project.

G. Following acceptance, mock-ups shall serve as a performance standard of quality and appearance of the work it represents, including the interface with adjacent materials and components as applicable.

H. Coordinate fabrication, delivery, assembly, and installation with related materials to be included in the mock-ups. Construction of the mock-up assemblies shall be under the supervision of the same personnel who will be employed for the subsequent work.

[CONTINUED NEXT PAGE]

I. Approved mock-ups shall not be incorporated into the work.

1. Remove and clear area after approval of the field mock-up as directed by the District's Representative, but not before placement of similar construction to be left in place and for which the mock-up shall serve as a standard.

J. Scheduling:

1. Construct mock-ups in a timely manner to permit review and modifications such that the Work is not delayed.
2. Do not proceed with ordering of components or construction subject to mock-up approval until after approval has been obtained.
3. Provide the District's Representative not less than ten working days notice of the time each component is ready for review.

K. Location

1. At the Contractor's option, but subject to the District's Representative approval.

1.04 MATERIALS

As specified in the respective Sections of the Specifications.

1.05 MOCK-UP DESCRIPTIONS

Sections of the Specifications may require Mock-ups. Refer to each Section for the detailed descriptions and requirements for each Mock-up, if applicable.

[END OF SECTION 014339]

SECTION 014523

TESTING AND INSPECTION

1.01 GENERAL

A. Contractor shall perform all tests as specified herein per all applicable sections of Chapters 18A, 19A, 20A, 21A, 22A and 23 of the 2010 CBC and as may be required to insure and demonstrate proper installation and operation of materials and equipment in this Contract. Refer also to Article 11 of the General Conditions.

B. Definitions:

1. The term "The District's Testing Laboratory" means a testing laboratory retained and paid for by the District for the purpose of reviewing material and product reports and performing other services as determined by the District. The District will select an independent Testing Laboratory to conduct tests. Selection of the material to be tested will be by the Laboratory or the District's Inspector and not by the Contractor.

2. The term "Contractor's Testing Laboratory" means a testing laboratory retained and paid for by Contractor to perform the testing services required by the Contract Documents. Contractor's Testing Laboratory shall be an organization other than the District's Testing Laboratory and shall be acceptable to the District's Representative. It may be a commercial testing organization, the testing laboratory of a trade association, the certified laboratory of a supplier or manufacturer, Contractor's own forces, or other organization. Contractor's Testing Laboratory shall have performed testing of the type specified for at least five (5) years.

3. The term "The District's Inspector" or "Inspector of Record" means an inspector retained and paid for by the District for the purpose of observing the progress of the Work and insuring compliance with the Contract Documents and applicable codes and regulations. The District's Inspector will be approved by the Division of the State Architect (DSA) and will provide continuous inspection of the Work per Group I, Chapter 4, Part 1, Title 24, C.C.R., Section 4-133(b) and 4-342.

C. Tests, inspections, and acceptances of portions of the Work required by the Contract Documents or by Applicable Code Requirements shall be made at the appropriate times. Except as otherwise provided, Contractor shall make arrangements for such tests, inspections, and acceptances with Contractor's Testing Laboratory. Contractor shall give the District's Representative timely notice of when and where tests and inspections are to be made.

D. If such procedures for testing, inspection, or acceptance reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the District's Representative's, the District's Representative's Consultants', and the District's Inspector's services and expenses.

E. If the District's Representative or the District's Inspector is to observe tests, inspections, or make acceptances required by the Contract Documents, the District's Representative or the District's Inspector will do so promptly and, where practicable, at the normal place of testing.

F. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

G. The Work will be available for inspection at any and all times for the District, the District's Representative or the District's Inspector. Contractor will be expected to consult and cooperate with the District's Representative or the District's Inspector in regard to all requirements as set forth in the Contract Documents.

H. The District will select and pay District's Testing Laboratory costs for all test and inspections, but shall be reimbursed by the Contractor for certain cost as specified herein. Any direct payments by the Contractor to the Testing Laboratory on this Project is prohibited.

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1.02 TESTING AND INSPECTION

A. Project Inspectors: The District will employ one or more qualified inspectors, acceptable to the District's Representative, who will be employed at Project site to observe progress of Work and to report to the District's Representative any nonconformance with the Contract Documents.

B. The District will retain and pay the expenses of a Geotechnical Engineer to perform inspection, testing, and observation functions specified by the District. Geotechnical Engineer shall communicate only with the District and the District's Representative. The District's Representative shall then give notice to Contractor, with a copy to the District, of any action required of Contractor.

C. Persons performing testing and inspections shall not be authorized to:

1. Release, revoke, alter or enlarge requirements of the Contract Documents.
2. Stop Work except as may be required to perform testing or inspection operations.
3. Advise on or issue directions relative to any aspect of construction means, methods, techniques, sequences, or procedures.

1.03 CONTRACTOR'S RESPONSIBILITIES

A. Maintain quality control over suppliers, manufacturers, products, services, site conditions and workmanship, to produce work of specified quality. Testing and inspection shall not relieve Contractor of his responsibility for quality of materials in place.

B. Be responsible for scheduling all testing and inspections specified.

1. Schedule work that is to be tested or inspected so that tests can be performed within a reasonable time period.
2. Notify and obtain concurrence of Project Inspector prior to scheduling testing or inspection by Testing Laboratory or Geotechnical Engineer.
3. Notify the District's Representative in writing on the form contained within the Project Manual at least forty-eight (48) hours in advance of operations on site requiring testing or inspection.
4. Notify the District's Representative and the District’s Inspector in writing on the form contained within the Project Manual a minimum of three (3) working days in advance of off-site operations requiring testing or inspection, in order that testing at the source can be arranged without delaying Work.
5. Material shipped by the Contractor from the source of supply before having satisfactorily passed such testing and inspection, or before the receipt of notice from the District’s Inspector that such testing and inspection will not be required, shall not be incorporated into the work.
6. Notify the District's Representative in writing on the form contained within the Project Manual at least four (4) working days prior to commencement or resumption of operations requiring observation or testing by the District's Geotechnical Engineer.
7. When a specified test or inspection is not performed due to Contractor's failure to schedule services, the District's Representative will establish remedial work and Contractor shall bear cost of remedy.
8. Additional tests and inspections not herein specified but requested by the District or Architect, will be paid for by the District, unless results of such tests and inspections are found not in compliance with the Contract Documents, in which case the District will pay all costs for initial testing as well as re-testing and re-inspection, and deduct the costs from the Contract sum.

C. Reimburse the District for the following by deduction from Contract Sum:

1. Costs of testing required because of changes in materials or proportions required by the Contractor.

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2. Where inspections or tests prove unsatisfactory or not in compliance with Contract Documents, costs for further inspection and retesting.
3. Costs attributable to the Contractor's methods of operation, when these methods result in excessive test and inspection costs to the District, and if after warning, costs remain excessive.
4. Premium time fees for testing performed after regular working hours or on Saturday, Sunday, or on legal holidays; except when testing is required for the District's requested overtime work.
5. Tests arising from errors and omissions by the Contractor.
6. Retests of materials that fail; tests required by the lack of required identifications of materials (mill tests, manufacturer's certifications, etc.); and re-inspections.
7. Services required to expedite the Contractor's operations.
8. Testing and inspection fees for travel and per diem expenses, when shops or plants of fabrication are located more than a 50-mile radius from the Project site.

D. Where required by individual Sections of the Specifications, the Contractor shall pay all costs associated with inspection and testing without adjustment of the Contract Price or the Contract Time. For example, but not limited to, the following:
1. Concrete mix designs.
2. Certified mill test reports.
3. Qualification of welding procedures, operators and welders.

E. Repair or replace damage to work made necessary by retesting.

F. Secure and deliver to the District's Testing Laboratory adequate quantities of representative samples of materials proposed for use as specified.

G. Submit to the District's Testing Laboratory the preliminary design mixes proposed to be used for concrete and other materials which require review by the District's Testing Laboratory.

H. Submit copies of product test reports as specified.

I. Furnish incidental labor and facilities:
1. To provide the District's Testing Laboratory access to the Work to be tested.
2. To obtain and handle samples at the Project site or at the source of the product to be tested.
3. To facilitate inspections and tests.
4. For storage and curing of test samples.

J. Provide notice to the District's Representative sufficiently in advance of operations to allow for the District's Testing Laboratory assignment of personnel and scheduling of tests.

K. When tests or inspections are not performed after such notice, Contractor shall reimburse the District for the District's Testing Laboratory personnel and travel expenses incurred.

L. Several Sections of the Specifications require testing by the Contractor's Testing Laboratory. Refer to each Section and the Submittal Schedule, Section 01300.

M. Submit verified reports per. Group I, Chapter 4, Part 1, Title 24, C.C.R., Section 4-336 and 4-343(c).

N. Maintain and keep available at the Project Site, California Code of Regulations, Part I and Part II, Title 24.

1.04 TESTING SERVICES

A. General: The District may retain Testing Laboratories to observe structure excavation, to test compaction of backfill, and to test concrete, masonry, steel, reinforcing and other construction materials and methods as the

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District's Representative may deem necessary and as the Specifications require. The Testing Laboratory will make as many field observations and tests as are required to determine the acceptability of the Work. Contractor shall provide safe access to the Work as required for the Testing Laboratories to perform sampling and tests.

B. Testing and inspection services, which are performed, shall be in accordance with the requirements of the California Building Code (CBC), and as specified herein. Testing and inspection services shall verify that Work meets the requirements of the Contract documents.

C. In general, tests and inspections for structural materials shall include all items enumerated on the Structural drawings as listed for this Project and as prepared and listed by the Architect.

D. Notice to the District's Representative: In instances where the District's Representative requires testing and where the Specifications require work to be specially tested or approved, it shall be tested only in the presence of the District's Representative after timely notice of its readiness for inspection and test, and the Work after testing shall be covered up only upon the consent thereto of the District's Representative.

E. The results of any tests made are for the information of the District. Regardless of any test results, Contractor is solely responsible for the quality of work and materials and for compliance with the requirements of the Drawings and Specifications.

F. Registered Civil Engineer currently licensed in the State of California shall sign test reports.

1.05 ADDITIONAL TESTING AND INSPECTION

A. If initial tests or inspections made by the District's Testing Laboratory, or Geotechnical Engineer reveal that any portion of the Work does not comply with Contract Documents, or if the District's Representative determines that any portion of the Work requires additional testing or inspection, additional tests and inspections shall be made as directed.

1. If such additional tests or inspections establish that such portion of the Work complies with the Contract Documents, all costs of such additional tests or inspections shall be paid by the District.

2. If such additional tests or inspections establish that such portion of the Work fails to comply with the Contract Documents, all costs of such additional tests and inspections, and all other costs resulting from such failure, including compensation for the District's Representative and the District's consultants, shall be deducted from the Contract Sum.

1.06 TEST REPORTS

A. Certification and Copies: The District's Testing Laboratory will furnish certified reports summarizing results of inspection, indicating observations and results of tests and indicating compliance or non-compliance with the Contract Documents, and other equipment as to adequacy and compliance, and results of tests and inspections. The District’s Testing Laboratory will distribute test and inspection reports, via email to the District, the District’s Representative/Construction Manager and the Contractor.:

B. Test reports shall include all tests made, regardless of whether such tests indicate that the material is satisfactory or unsatisfactory. Samples taken but not tested shall also be reported. The reports shall show that the material or materials were sampled and tested in accordance with the requirements of CBC and with the Contract Documents. The reports shall also state definitely whether or not the material or materials tested comply with the requirements.

C. Contractor's Testing Laboratory shall submit all reports via email to the District's Representative, indicating observations and results of tests and indicating compliance or non-compliance with the Contract Documents.

D. Form: Reports will clearly distinguish type of test, material tested, whether original (first) test or retest, and related information.

1.07 SAMPLES AND MATERIALS

Contractor shall furnish samples and materials for testing free of charge, and shall provide job storage facilities.

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1.08 AVAILABILITY OF SAMPLES

A. Contractor shall make materials required for testing available to Laboratory and assist in acquiring these materials as directed by the District's Inspector. The samples shall be taken under the immediate direction and supervision of the Testing Laboratory or Inspector.

B. If Work that is required to be tested or inspected is covered up without prior notice or approval, such Work may be uncovered at the discretion of Architect at no additional cost to the District. Refer to Article 1.05.

C. Unless otherwise specified, Contractor shall notify Testing Laboratory a minimum of 10 working days in advance of all required tests, and a minimum of 2 working days in advance of all required inspections. Extra laboratory expenses resulting from a failure to notify the Laboratory will be paid by the District and back-charged to the Contractor.

D. Contractor shall give sufficient advance notice to Testing Laboratory in the event of cancellation or time extension of a scheduled test or inspection. Charges due to insufficient advance notice of cancellations or time extension will be paid for by the District and back-charged to the Contractor.

1.09 REMOVAL OF MATERIALS

Unless otherwise directed, materials not conforming to the requirements of Contract Documents shall be promptly removed from the Project site.

1.10 INSPECTION BY THE DISTRICT

A. The District's Inspector shall at all times have access for the purpose of inspection to all parts of the Work and to the shops wherein the Work is in preparation, and the Contractor shall at all times maintain proper facilities and provide safe access for such inspection.

B. The District's Inspector shall have the right to reject materials and workmanship that are defective, or to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without cost to the District. If the Contractor does not correct such rejected Work within a reasonable time, fixed by written notice, the District may correct such rejected Work and charge the expense to the Contractor.

C. Should it be considered necessary or advisable by the District at any time before final acceptance of the entire Work to make an examination of Work already completed by removing or tearing out completed Work, the Contractor shall on request promptly furnish necessary facilities, labor and materials. If such Work is found to be defective in any respect because of the fault of the Contractor or Installer, he shall defray all expenses of such examinations and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the additional cost of labor and material necessarily involved in the examination and replacement shall be allowed the Contractor.

D. An Inspector employed by the District and approved by DSA will be assigned to the Work.

E. The Contractor shall notify the Inspector a minimum of 24 hours in advance of execution of all Work that requires special or continuous inspection.

F. The Work of construction in all stages of progress shall be subject to the personal continuous observation of the Inspector. He/She shall have free access to any or all parts of the Work at any time. The Contractor shall furnish the Inspector reasonable facilities for obtaining such information as may be necessary to keep the Inspector fully informed respecting the progress and manner of the Work and the character of the materials. Inspection of the Work shall not relieve the Contractor from any obligation to fulfill this Contract.

1.11 UNDESIRABLE CONDITIONS / NONCONFORMANCE

A. Substandard Test Results: When test or inspection reveals undesirable conditions, nonconformance or failure to meet requirements, the District's Testing Laboratory will notify the District's Representative. The District's Representative will notify Contractor that the Work does not meet requirements and is rejected.

B. Immediately upon Testing Laboratory determination of a test failure, the Laboratory shall telephone the results of the test to the District’s Representative and the Architect. On the same day, the Laboratory shall send written test results via email to those names on the distribution list above.

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C. Correction: Work done or materials delivered that fail to comply with requirements of Specifications or Drawings shall be rejected and shall immediately be made satisfactory at no additional expense to the District.

1.12 MATERIALS AND WORK QUALITY

A. All work under all Sections shall be performed in strict accordance with the highest standards of practice related to the trades involved and shall be complete and properly coordinated with all work adjacent or related to it.

B. All materials must be of the specified quality and equal to approved samples, if samples have been submitted. All work shall be done and completed in a thoroughly high-quality manner, notwithstanding any omission from these Specifications, or the Drawings, and it shall be the duty of Contractor to call the District's Representative's attention to apparent errors or omissions and request written instructions before proceeding with the Work. The District's Representative may, by appropriate instructions, correct errors and supply omissions; such instructions shall be as binding upon Contractor as though contained in the original Specifications or Drawings.

C. All defective work or materials shall be promptly removed from the premises by Contractor, whether in place or not, and shall be replaced or renewed in such manner as the District's Representative may direct. All materials and work quality of whatever description shall be subjected to the inspection of, and rejection by the District's Representative if not in conformance with the Specifications. The decision of the District's Representative is final and conclusive upon the parties.

D. Any defective material or work quality, or any unsatisfactory or imperfect work which may be discovered before the final acceptance of the Work or within the initial (and any extended) warranty period, shall be corrected immediately as required by the District, without extra charge, notwithstanding that it may have been overlooked in previous inspections and estimates. Failure to inspect work shall not relieve Contractor from any obligation to perform sound and reliable work as herein described.

1.13 APPROVAL

Approval of the Work in part or as a whole by the District's Representative shall not relieve Contractor of the responsibility for such compliance with the requirements of the Contract Documents. Such approvals may be withdrawn at any time that subsequent examination reveals that apparently satisfactory Work is, in fact, either defective or otherwise fails to comply. Such work from which approval has been withdrawn shall be replaced or re-executed in accordance with the Contract, at no expense to the District.

1.14 SPECIFIC TESTING REQUIREMENTS

The following tests and inspections as detailed in applicable specification sections, are required, but not limited to (also refer to DSA Form SSS 103-1):

EARTHWORK

A. The Geotechnical Engineer of record or a Geotechnical Engineer selected by the District will provide continuous inspection of earthwork, field test fill and earth backfill as placed and compacted, inspect excavations and sub-grade before concrete is placed, and provide periodic inspection of open excavations, embankment, and other cuts or vertical surfaces of earth. The Geotechnical Engineer will submit a report indicating that he has observed and tested fills and that in his opinion the fills were placed in accordance with the Contract Documents.

B. Contractor shall remove unsatisfactory material, re-roll, adjust moisture, place new material, or in the case of excavations, provide proper protective measures, perform other operations necessary, as approved by the Geotechnical Engineer whose decisions will be considered final.

C. The Architect may require deepening of footings at the recommendation of the Geotechnical Engineer, and so order such deepening in accordance with Section 312000.

D. Soils Test and Inspection Procedure:

1. Allow sufficient time for testing, and evaluation of results before material is needed. The Geotechnical Engineer shall be sole and final judge of suitability of all materials.

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2. Laboratory compaction tests to be used will be in accordance with ASTM D 1557.
3. Field density tests will be made in accordance with ASTM D 1556.
4. Number of tests will be determined by Geotechnical Engineer. Materials in question may not be used pending test results.
5. Excavation and embankment inspection procedure. Geotechnical Engineer will visually or otherwise examine such areas for bearing values, cleanliness and suitability.
6. Earth Work Test Reports: In order to avoid misinterpretations by the reviewing agencies, any retest results shall be reported on the same sheet, immediately following the previous failure test to which it is related. Retests shall be clearly noted as such.

TESTING OF CONCRETE

A. Concrete Mix Design:
   1. Concrete Mix Design shall be stamped and signed by a California registered Civil Engineer.
   2. The District will pay for the sampling of aggregate and preparation of mix design one time for each strength and aggregate size specified. Testing cost for additional mix designs will be paid by the District and back-charged to the Contractor. The District will pay tests of materials, but the Contractor will be back-charged for all tests performed on materials that do not meet requirements. Two copies of the mix designs shall be filed with the Architect for record purposes only, not for review or approval.
   3. Test concrete aggregates for mix design only.
   4. Test suitability of aggregates in accordance with ASTM C 88-90 if material is under suspicion and if so directed by Architect.

B. If compressive test of core specimens fail to show compressive strength specified, remove and replace concrete or adequately strengthen in a manner approved by Architect.

C. Make all tests, take samples, and prepare samples in accordance with the latest standards adopted by American Society for Testing and Materials, referred to as ASTM.
   1. Frequency of Testing: Samples for strength tests of each class of concrete placed each day shall be taken not less than once a day, or not less than once for each 50 cubic yards (38 m^3) of concrete, or not less than once for each 2,000 square feet (186 m^2) of surface area for slabs or walls. In addition, samples for strength tests for each class of concrete shall be taken for seven-day tests at the beginning of the concrete work or whenever the mix or aggregate is changed. For existing concrete structures, sufficient cores shall be taken at representative locations throughout the structure, as designated by the architect or structural engineer, so that knowledge will be had of the in-place strength of the concrete. At least three cores shall be taken from each building for each 4,000 square feet (372 m^2) of floor area, or fraction thereof. Cores shall be at least 4 inches (102 mm) in diameter. Cores as small as 2.75 inches (70 mm) in diameter may be allowed by the enforcement agency when reinforcement is closely spaced and the coarse aggregate does not exceed ¾ inch (19 mm).

D. Concrete shall be mixed at certified automatic concrete batch plants.

E. Waiver of Batch Plant Inspection: Batch plant inspection may be waived if the concrete plant complies fully with the requirements of UBC Standard 19-3, and has been certified to comply with the requirements of the National Ready Mixed Concrete Association. The plant must be equipped with an automatic batcher in which the total batching cycle, except for the measuring and introduction of an admixture, is completed by activating a single starter device.

F. District's Inspector will do the following:
   1. Inspect placing of reinforcing steel and concrete at Project.

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2. Obtain load ticket and identify mix before accepting each load. Keep daily record of concrete placement, identifying each truckload, time of receipt, and location of concrete in structure. Keep record until completion of Project and make available for inspection by DSA field engineer.
3. During progress of work, take reasonable number of test cylinders as directed by Architect, but at least one set of cylinders for each 100 cubic yards or fractional part thereof for each class of concrete and at least one set from each day's pour. Test cylinders need not be made for concrete used in walks.
4. One set of cylinders shall consist of 3 samples all taken from same batch, one to be tested at age of 7 days and two at 28 days. The 28-day test may be omitted if the 7-day compressive strength exceeds 85 percent of the specified 28-day strength.
5. Make and store cylinders according to ASTM C 31-90.
6. Deliver cylinders to laboratory or store cylinders in a suitable protected environment for pick up by laboratory personnel.
7. Make slump test of wet concrete according to test for slump of Portland cement concrete, ASTM C 143-90a, at least at the same frequency that the cylinders are taken.

REINFORCING STEEL

A. Tests:

1. Tests shall be performed before the delivery of steel to Project site. Steel not meeting specifications shall not be shipped to the Project.
2. Testing procedure shall conform to ASTM A615-90.
3. Sample at the place of distribution, before shipment: make one tensile test and one bending test from samples out of 10 tons, or fraction thereof, of each size and kind of reinforcing steel, where taken from bundles as delivered from the mill and properly identified as to heat number. Mill analysis shall accompany report. Where identification number cannot be ascertained, or where random samples are taken, make one series of tests from each 2-1/2 tons, or fraction thereof, of each size and kind of reinforcing steel. Tests on unidentified reinforcing steel will be paid by the District and back-charged to the Contractor. Samples shall include not fewer than 2 pieces, each 18 inches long, of each size and kind of reinforcing steel. Inspection of welding of reinforcing steel shall be done by a specially qualified laboratory inspector and tested in accordance with AWS D1.4-79.

B. District's Inspector will inspect all reinforcement for concrete Work for size, dimensions, locations and proper placement. Inspector shall be present during welding of all reinforcing steel.

MASONRY

A. Inspection:

1. Masonry work shall be continuously inspected during laying and grouting by an Inspector specially approved for that purpose by the Division of State Architect. The Inspector shall make test samples and perform such tests as are required.
2. The Inspector shall check the materials, details of construction and construction procedure. The Construction Inspector shall furnish a verified report that of his own personal knowledge the work covered by the report has been performed and materials used and installed are in accordance with and in conformance to, the duly approved drawings and specifications.

B. Masonry Tests:

1. Concrete Masonry Units: Test each type of unit for strength in accordance with UBC Standard 24-7; absorption in accordance with ASTM C 140-75 (1980); for drying shrinkage in accordance with ASTM C 426-70 (1982); and for staining materials in lightweight concrete in accordance with ASTM C 641-82.

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2. Mortar and Grout Test: At the beginning of all masonry work, at least on test sample of the mortar and grout shall be taken on 3 successive working days and at least at one week intervals thereafter. The samples shall be continuously stored in moist air until tested. They shall meet the minimum strength requirement given in CCR Title 24, Sec 2103A.3 and 2103A.4 for mortar and grout, respectively. Additional samples shall be taken whenever any change in materials or job conditions occur or whenever in the judgment of the Architect or the Division of the State Architect, such tests are necessary to determine the quality of the material. Test specimens for mortar and grout shall be made as set forth in UBC Standard Nos. 21-16 and 21-18. In making the mortar test specimens the mortar shall be taken from the unit soon after spreading. After molding, the molds shall be carefully protected by a covering, which shall be kept damp for at least 24 hours, after which the specimens shall be stored and tested as required for concrete cylinders. In making grout test specimens, an absorbent paper liner shall be used and the mold left in place until the specimen has hardened. The prisms shall be stored as required for concrete cylinders. They shall be tested in the vertical position.
3. Masonry Core Tests: Not less than 3 cores having a diameter of approximately two-thirds of the wall thickness shall be taken from each project. At least one core shall be taken from each building for each four classrooms or equivalent area. The architect in responsible charge of the project or the Inspector shall select the areas for sampling. Core samples shall not be soaked before testing. Materials and workmanship shall be such that for all masonry when tested in compression, cores shall show strength of at least 1500 psi. When tested in shear the unit shear on the cross section of the core shall not be less than 100 pounds per square inch. Shear testing apparatus shall be of a design approved by the Division of the State Architect. Visual examination of all cores shall be made to ascertain if the joints are filled. The Owner Inspector or testing agency shall inspect the coring of the masonry walls and shall prepare a report of coring operations for general distribution. Such reports shall include the total number of cores cut, the location, and the condition of all cores cut on each project regardless of whether or not the core specimens failed during cutting operation. All cores shall be submitted to the laboratory for examination

STRUCTURAL STEEL

A. Mill certificates or affidavits and manufacturers' certification shall be supplied to the Testing Laboratory and Inspector for verification of steel materials. Testing Laboratory shall be notified at least 2 Working days in advance of fabrication and supplied with the reports so that it can make a shop inspection of the steel.

B. Tests of Steel Materials: If structural steel cannot be identified by heat or melt numbers, or if its source is questionable, not less than one tension test and one bend test will be made for each 5 tons or fractional part thereof. Such testing will be paid for by the District and back-charged to the Contractor. Structural steel identified by heat or melt numbers marked at the mill need not be tested, except testing is required of steel with Fy greater than 36 ksi.

C. General Inspection:

1. Testing Laboratory will visit the fabricator's plant to verify that materials used check with the mill tests; affidavits of test reports, and that fabrication and welding procedures meet Specifications.
2. Testing Laboratory will visually check fabricated steel against the Contract Drawings and reviewed shop drawings for compliance, and will make physical tests and measurements as required to meet the Specifications. Single pass fillet welds may be visually checked.
3. Inspection of Shop Fabrication: Inspection of shop fabrication may be required for important work if so designated on the Structural Tests and Inspections list. A qualified inspector approved by the DSA shall make this inspection. He shall furnish the Architect and the DSA a report duly verified by him that the materials and workmanship conform to the approved plans and specifications.
4. Approved Fabricators: In addition to welding inspection, fabrication inspection will be required for all work done on the premises of a steel fabricator who does not hold currently valid certificate CCR Title 24 Part 2, Sec. 306(f), Approved Fabricators. The cost of the fabrication inspection will be paid by the District and back-charged to the Contractor.

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5. Inspection of welding shall be in accordance with the requirements of the 2010 CBC, Sec. 2231-A.
6. Erection Inspection: If so designated on the Structural Tests and Inspections list, Testing Laboratory will visually inspect bolted and field welded connections, perform such additional tests and inspections of field work as are required by the Architect and prepare test reports for the Architect's review.
7. Shop Fabrication Inspection Outside of Area: The added cost of shop fabrication inspection, and material testing outside the State of California or 150 mile radius of the Project site will be paid by the District and back-charged to the Contractor.

D. Corrections:

1. Correct deficiencies in structural steel Work that inspections and test reports indicate to be not in compliance with the specified requirements.
2. Perform additional tests required to reconfirm noncompliance of the original Work and to show compliance of corrected Work. Costs for all additional tests will be paid for by the District and back-charged to the Contractor.

E. DSA Required Documentation

1. DSA 103 Structural Tests and Inspections Form can be found at the following http://www.dsa.dgs.ca.gov/Forms/default.htm

[END OF SECTION 014523]

SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

1.01 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. The Drawings show, if applicable, existing above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water, and other utilities that are known to the District.

B. Locate all known existing installations before proceeding with construction operations that may cause damage to such installations. Existing installations shall be kept in service where possible and damage to them shall be repaired with no adjustment to the Contract Sum.

C. If any other structures or utilities are encountered, request in writing the District's Representative to provide direction on how to proceed with the Work.

D. If any structure or utility is damaged, take all appropriate action to ensure the safety of persons and property.

E. As designated on the Drawings, protect all existing adjacent areas where trees are to remain, taking special care to limit any erosion, material or equipment storage, or disturbance to such areas during construction.

1.02 INTERRUPTION OF BUILDING SERVICES

A. Obtain the District's Representative's approval at least five (5) working days prior to any utility service shutdown, interruption or cutover. The District may authorize overtime if the work must be performed during overtime hours, provided that the Contract Price shall not be increased for the premium costs of labor performing overtime work if work on an overtime basis to complete a shutdown, interruption, cutover or restoration of utility services during non-working days or non-working hours results from the acts, omissions or other conduct of the Contractor.

1.03 PUBLIC SAFETY AND CONVENIENCE

A. Protection and Obstructions: Contractor shall at all times so conduct Contractor's work as to insure the least possible obstruction to traffic and inconvenience to pedestrians in the vicinity of the Work, and to insure the protection of persons and property. No road, street walkway, nor building corridor shall be closed except with the permission of the District's Representative. Minimum prior two (2) week’s written notice to the District's Representative required for road closure.

B. Fire Safety: Fire hydrants on or adjacent to the Work shall be kept accessible to firefighting equipment at all times.

C. Temporary Provisions: Temporary provisions shall be made by Contractor to ensure the use of sidewalks, paths, and the proper functioning of all gutters, sewer inlets, drainage ditches and culverts, and natural water courses.

D. Warning Signs and Barricades: When working in areas that present safety hazards, warning signs and barricades shall be placed in effective locations to prevent unauthorized entry. When aisles or roadways are blocked, detour signs must be installed to clearly designate an alternate route. The Contractor shall provide appropriate barricades and signs. Barricades with blinking lights must be provided in roadways, bikeways, and pathways for barricading overnight. Proper warning signs stating ‘ROAD CONSTRUCTION AHEAD’ must be placed before barricades in roadways and on bike paths. Flag persons may be required to supplement warning signs and barricades.

1.04 FIRE PROTECTION

A. Burning: No burning of any kind will be permitted on the Project site without written permission of the District.

B. All Hot Work: No hot work of any kind will be permitted on the Project site without written permission from the local Fire Department.

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C. Spark Arresters: No person shall use or operate any internal combustion engine which is operated on hydrocarbon fuels on any forest, brush, or grass covered lands without providing, and maintaining in effective working order, a spark arrester approved by the Division of Forestry attached to the exhaust system. Motor trucks, truck tractors, buses and passenger vehicles, except motorcycles, are not subject to the provisions of this paragraph provided the exhaust system is equipped with a muffler as defined in the Vehicle Code. Spark arresters affixed to the exhaust system of engines or vehicles, as described in this Section, shall not be placed or mounted in such a position as to allow flames or heat there from to ignite any flammable material.

D. Shovels for Fire Protection: All mobile equipment, including trucks, tractors, bulldozers, and other mobile equipment, shall be equipped with serviceable shovels for use in fire protection. Common carriers are exempt from this paragraph.

E. Area Fire Protection:

1. No person shall use or operate any motor engine, boiler, stationary equipment, welding equipment, cutting torches or grinding devices from which a spark, fire or flame may originate without first clearing away all flammable material, including snags, from the area around such operation for a distance of 10 feet and without maintaining a serviced 10 lb. multipurpose fire extinguisher ready for use at the immediate area during the operation. In the use of tar pots in roofing operations, two 10 lb. fire extinguishers are required; one on the roof and one in close proximity to the tar pot. The extinguisher(s) must display California State Fire Marshal's extinguisher service tag indicating that the extinguisher(s) have been serviced within the current year.
2. Refer to Section 015100 for other fire protection requirements.

F. Gasoline Powered Saws: No person shall use or operate any gasoline powered saw unless such saw is operated at least 50 feet from any flammable material, without providing and maintaining at locations of use or operation of said equipment for firefighting purposes, one serviceable fire extinguisher, or, in lieu thereof, one serviceable shovel.

G. Access for Firefighting: Access routes for fire-fighting equipment shall be maintained. Fire hydrants and fire department connections shall be kept clear of any obstructions.

H. Fire Extinguishers: Fire extinguishers shall be located on or adjacent to:

1. Storage sites of combustibles.
2. Fuel dispensing vehicles.
3. Sites of hot work operations.
4. The Contractor’s Superintendent’s vehicle.
5. The Contractor’s office or shed.

In addition, at least one approved extinguisher shall be provided in plain sight on each floor at each usable stairway where combustible material could accumulate. Extinguishers shall be placed within the structure so that the maximum travel distance to an extinguisher is no more than 75 feet.

I. Smoking: Smoking is prohibited at or in the vicinity of hazardous operations or combustible or flammable materials. “NO SMOKING” signs shall be posted in these areas. Smoking will be allowed only in designated areas. Where smoking is permitted, safe receptacles shall be provided for smoking materials.

J. Flammable and combustible liquids must be used and stored so as not to create a hazard to employees or property, following all the rules required by the National Fire Protection Association.

K. Outside storage site of Combustibles: All storage of combustibles outside of structures shall be in compliance with OSHA Title 29, Section 1952.12.C., #3 and Title 19, 3.07; California Fire Code (Part 9, Title 24 California Code of Regulations) Articles 11 and 87.

L. Tank Trucks: The use of tank trucks shall be in conformance with NFPA, 385.

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M. Gasoline Storage: No more than 25 gallons of gasoline shall be stored in the Project site outside of an approved storage cabinet. Cabinets shall be constructed of metal and approved by the District's Representative in consultation with the Local Fire Department having jurisdiction. All gasoline storage shall be in conformance with NFPA, No. 30, and Article 79, California Fire Code (Part 9, Title 24, California Code of Regulations).

1.05 TEMPORARY CONSTRUCTION

A. Contractor shall provide, maintain and remove upon completion of Work; temporary construction required for performance of the Work and shall restore disturbed portions of the Project site or other disturbed areas to the satisfaction of the District's Representative.

1.06 CONSTRUCTION AIDS

A. Scaffolding: Provide as required for execution of any part of the Work. The security and safety of the scaffolding, ladders, ramps, temporary stairs, etc., shall be the responsibility of Contractor. Only trained operators shall operate hoists. All such equipment shall meet all applicable safety code requirements.

B. Cranes, Hoists or Chutes: Provide as required for movement of personnel, materials or equipment. The manufacturer’s specifications and limitations shall be followed. Where not available, the Contractor is required to employ a qualified engineer, competent in the field, who shall determine, communicate, and document the crane’s limitations to the District's Representative.

1. The rated loads of all cranes and their components must be plainly marked in full view of the operator. Attachments shall not exceed the crane’s limitations.
2. Adequate safe access must be provided to the operating station(s).
3. All components must be in good working order; appropriate certifications, as required by the local authority having jurisdiction, must be provided; and a record of preventative maintenance, repair and replacement must be available on-site.
4. Hoisting equipment such as sheaves, blocks, hooks, ropes, and slings must be maintained free from undue wear, in good working order and inspected frequently as specified by the local authority having jurisdiction.
5. Any defective equipment must be removed and replaced immediately, or the crane must be taken out of service until repairs have been completed.
6. Loads must not be handled until they have been determined to be within the capacity of the crane; secured and balanced; the pathway of the load is clear of all obstructions; tag lines are available when appropriate; and all personnel are clear of the lift.
7. Fire suppression equipment must be available and in good working order.
8. Crawler and Rubber Tired cranes are to be placed to ensure stability at all boom angles and radii to be used in the lifts.
9. Rated load capacities, recommended operating speeds, any special hazard warnings shall be posted to be visible to the operator from the control station.
10. Only designated personnel are authorized to operate cranes.
11. Unless electrical distribution and transmission lines have been de-energized and visibly grounded, or special insulating barriers have been erected or placed around the lines, no part of the crane or load shall be within a minimum clearance 10 feet from 50 KV or less. For lines exceeding 50 KV, additional clearances shall be provided according to the local authority having jurisdiction.
12. Personnel shall be lifted by crane ONLY if all other means are either more hazardous or impossible due to design or Project site conditions. If personnel must be lifted, the regulations of the authority having jurisdiction must be followed carefully.

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13. The meaning of signals must be thoroughly understood by both the operator and the signal person. Only one person will be designated as the signal operator.
14. The operator is not permitted to leave the controls while a load is suspended.

C. Bracing and Shoring: Provide as adequate for intended use and for loads imposed without excessive settlement, deflection, or deformation. Properly support, wedge and secure to prevent displacement or failure.

1. Shore, brace, sheet, and slope excavations as required to prevent caving, erosion, danger to persons and structures, or interference with construction operations as required to comply with safety laws.

D. Trenching and Excavation: Refer to Section 014100.

E. Moisture Control:

1. Perform pumping, trenching, damming and under-draining necessary to keep the Project site free from water during construction.
2. Dispose of water in manner acceptable to local regulations, taking care to ensure that no existing water disposal facilities are impeded, clogged, damaged or interfered with in any way.
3. Refer also to Section 015713, "Temporary Erosion and Sediment Control."

F. Illumination: When any work is performed at night or where daylight is obscured, provide artificial light sufficient to execute the Work properly and to permit thorough inspection.

1.07 BARRIERS AND ENCLOSURES

A. Contractor shall submit for approval a plan for fencing entire limits of work (Project Site) which coordinates contractor-installed fencing, with owner-installed fencing, if any, designated environmentally sensitive areas, Project boundary, barriers, tree protection, access to and from site and sequencing requirements.

B. All fencing shall be galvanized chain link type, six (6) feet high, with materials and installation conforming to the requirements of the Chain Link Fence Manufacturers Institute (CLFMI) "Product Manual" for Type I fences, with green screen fabric

C. A minimum of two vehicular gates, 10 feet wide, shall be provided at locations acceptable to the Owner and approved by The Owner's Representative. The fencing shall be maintained and relocated by Contractor throughout the Project to the satisfaction of The Owner's Representative as required.

D. The fencing shall be maintained and relocated by Contractor throughout the Project to the satisfaction of the Owner's Representative as required.

1.08 PROTECTION OF PLANT LIFE

A. No trees shall be removed, pruned, or trimmed without prior approval by the District's Representative.

B. Solvents, oils, and any other materials which may be harmful to plant life shall be disposed of in containers as directed by the District's Representative and removed from the site. At completion of the Work, any contaminated soil shall be removed and replaced with good soil by the Contractor at no expense to the District.

1. Refer to soil requirements in Division 31.

C. Drip lines of trees: No diesel or gasoline engine equipment shall be left running under trees or left parked under trees within their drip line.

D. Refer to Section 015639 for tree protection.

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1.09 SECURITY

A. The District will not accept any responsibility for damage or loss of Contractor's equipment or materials stored on any project related site caused by vandalism, nature, or otherwise, suffered by Contractor. Protection of all construction, equipment, stores, and supplies shall be the sole responsibility of Contractor.

1.10 ACCESS ROADS AND PARKING AREAS

A. Construction Access: The District reserves the right to control paths of access to the Work. In general, access to work areas will be permitted only over areas involved in this work from where they connect to existing paved roads.

B. Contractor shall obtain the permission of the District's Representative before pioneering any access. Where additional access is permitted, the limits set by the District's Representative and only types of equipment approved by the District's Representative will be allowed in these areas.

C. Parking:

1. Vehicles belonging to Contractor and persons or firms with whom Contractor is doing business shall be parked within the Project boundary or designated staging areas. Contractor shall exercise complete control over all vehicles entering upon the Project site of the Work and designate and maintain appropriate parking areas within the site. Parking will not be permitted within drip lines of existing trees. Under no circumstances are any vehicles to encroach on open spaces or on parking spaces/areas or streets outside Project boundary or staging areas designated by the District.

2. If the Project boundary will not accommodate Contractor's parking needs, Contractor may have limited use of the District’s parking facilities on campus in conformance with the District’s requirements contractor must requests and receive district representative’s approval prior to parking on Campus.

1.11 TEMPORARY CONTROLS

A. Contractor shall provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for protection of public traffic; provide walks around any obstructions made in public places in carrying on the Work covered by the Contract; maintain from the beginning of twilight through the whole of every night on or near the obstructions, sufficient light and guards to protect travelers from injury to the satisfaction of the District's Representative.

B. Noise Control and Abatement:

1. Provide state-of-the-art mufflers, silencers and noise control features for all equipment.

2. Prohibit vehicles and other gas- or diesel-powered equipment from unnecessary warming up, idling and engine revving.

3. Utilize least noisy procedures or machines such as electric rather than diesel-powered equipment whenever there is a choice.

4. Use of powered construction equipment, except impact tools, which generates noise in excess of 80 dBA measured at a distance of 100 feet is prohibited.

5. Provide impact tools and equipment that have intake and exhaust muffler as applicable; pavement breakers and jackhammers shall be equipped with acoustically attenuating shields or shrouds.

C. Drainage and Erosion Control During Construction:

1. Maintain all portions of Work free from standing water at all times during construction.

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2. Where required, construct temporary drainage ditches, berms, or pumping systems to divert drainage water from Project site; ensure resultant water is carried to nearest natural watercourse and disposed of without erosion to surrounding area.
3. Take care to prevent silting of existing sinkholes and watercourses and designated environmentally sensitive areas.
4. Remove and dispose of silt which is deposited as result of Work of this Project to the satisfaction of the District's Representative at no additional cost to the District.
5. Conform to all requirements of the District's Erosion Control Standards for erosion control.
6. Refer to Section 015713 for further requirements.

1.12 TRAFFIC REGULATION

A. Traffic will be controlled using methods specified by CALTRANS and occur during hours permitted by the District.

B. Traffic may be reduced to one lane during the workday with appropriate use of Contractor-provided flag person with the consent of the District's Representative.

C. Construction Parking Control: Distribution of available parking shall be the Contractor's responsibility.

D. Flag persons at Access Routes: Provide as required to signal and regulate traffic to and from the Project site. All flag persons shall wear blaze orange or similar color vests.

E. Provide flares, lights and temporary traffic signals as may be required to ensure safe traffic conditions on access roads in immediate vicinity of construction.

F. Haul Routes: The District reserves the right to designate haul routes in the event construction traffic conflicts with the District's operations or interferes with normal campus traffic. Truck-trailers may be parked off site in designated Campus areas or locations approved by the District's Representative.

G. All speed limits, stop signs, and other traffic regulations shall be followed at all times.

H. Traffic control routes and site access ways shall be as indicated on the drawings. Sketches for the construction of certain detours in areas not indicated on the drawings shall be submitted to the District's Representative for acceptance.

1.13 DUST PALLIATION

A. The Contractor shall take appropriate steps throughout the term of the Project, such as watering, to prevent air borne dust due to work under this Contract. No chemical palliatives shall be used without permission of the District's Representative. Contractor shall provide, at the Contractor's expense, all water spreading operations for dust palliation. Water for dust palliation will be provided by the District and paid for by the Contractor in accordance with Section 015100.

B. Any chemicals under consideration, and their application methods, must be favorably reviewed by the District's Representative, in consultation with the District's professional Occupational Safety and Health staff.

C. The Contractor will control all runoff so as not to pollute public or private waterways and control all airborne materials as required by the District.

D. The Contractor will be responsible for providing employees applying dust control materials with appropriate personal protective equipment to protect them from injurious exposures.

E. The Contractor will be responsible for training all employees applying chemical palliatives, in the proper application procedures and of the hazards to which they may be exposed.

F. Whenever possible the Contractor shall use alternatives that are less likely to create dusty conditions.

G. The Contractor is responsible to dispose of all contaminated refuse as specified by the Material Safety Data Sheets, local authority having jurisdiction, and/or the District.

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H. Compressed air in excess of 30 psi will not be used for cleaning purposes. Appropriate personal protective equipment, i.e., eye and hearing protection will be used during use of compressed air for cleaning.

I. Any work creating airborne materials that are, or could be, combustible will be performed in such a manner so as not to create a fire or explosion hazard. Such materials will be removed from the Project site and stored or taken off-site by use of methods that will control fire or explosion hazards.

1.14 OVERLOADING

A. If Contractor shall cause, permit or allow any roadway, structure, or utility element to be overloaded by shoring, piling, or setting thereon, any material or equipment, or by performing thereon any of Contractor's work, Contractor shall do so at Contractor's sole risk and Contractor shall be solely responsible for any and all loss, damage and/or injury arising or resulting there from. Improper use of high-energy compaction equipment shall be regarded as a form of overloading as defined under this paragraph.

1.15 HAULING EQUIPMENT AND ROUTES

A. Hauling over existing roads (paved or unpaved) shall be done only with vehicles and loads that are normally permitted on State Highways. "Off road" type haul equipment and illegal State loads will not be permitted.

B. Haul Routes: The Contractor shall comply with all local and regional limitations regarding the use of public roadways for transportation of goods, materials or equipment. The District reserves the right to designate haul routes within the geographic limits of campus and/or the geographic areas adjacent to the project in event construction traffic conflicts with the District's operations or interferes with normal campus traffic or traffic in the geographic areas adjacent the campus.

1.16 CARE OF PRESENT BUILDINGS, GROUNDS AND UTILITIES

A. Contractor shall be held responsible, so far as Contractor's operations are concerned, for the care and preservation of the adjacent premises, plant life, landscaping, utilities walks, streets and coterminous property. Any parts of them injured, damaged, or disturbed because of Contractor's work shall be promptly repaired, replaced, or cleaned to the satisfaction of the District's Representative at Contractor's expense.

B. Any and all existing roads, curbing, utility poles, underground utility lines, etc., damaged by Contractor in the execution of this Contract shall be restored to former condition by Contractor to the satisfaction of the District's Representative at no change in the Contract Price.

C. Known existing underground utilities are shown or noted on the Drawings. It shall be Contractor's responsibility to protect these utilities and Contractor shall repair at Contractor's expense, any such utilities damaged by Contractor's operation.

D. Disrupted utilities shall be restored to service promptly by continuous effort, including overtime, at no cost to the District. Permanent repairs may be delayed to normal hours if temporary service restoration meets health, safety, and campus operational requirements.

1.17 CARE OF CONTRACTOR'S WORK

A. Contractor shall be responsible for damage to any of Contractor's work prior to final acceptance. Contractor shall adequately protect all conduit openings, trenches, ditches, equipment and materials to prevent obstructions, breakage, misuse, or disfigurement during construction, insofar as possible.

B. All surfaces, structural or finish, which are exposed to view in the completed building or structure, and all items of equipment shall be completely protected from damage during the construction phase by Contractor, who shall take all necessary precautions to ensure that the Project is turned over to the District entirely free from scratches, abrasions, dents, drips, gouges, stains, water marks, paint or oil runs, or similar types of damage.

1. Wherever such damage does occur, and before the final inspection of the building by the District's Representative, Contractor shall, at no expense to the District and under the direction of the District's Representative, completely remove the damaged work and replace it in conformance with the Contract Documents.

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C. All methods of protection shall be selected by Contractor, and maintained in good condition, until each element so protected is ready for the next phase of the work, or until it is prepared for final cleaning.

D. All protection shall be carefully removed so as to cause no damage to the protected element or area.

1.18 WEATHER PROTECTION

A. Contractor shall at all times protect the excavation and trenches from damage by rainwater, spring water, or backup up of drains or sewers. Contractor shall provide pumps and equipment and enclosures to provide this protection. The building structures and interior finishes and furnishings shall be protected by Contractor from rain, dew, wind, and all other elements of the weather during periods when roof areas are unprotected by roofing, and when breaches are present in the exterior walls. Such areas shall be covered with weather tight tarpaulins firmly secured or by other approved methods. See Division 31, Site Work, for drainage control requirements.

1.19 MATERIALS STOCKPILING

A. Areas as close as practicable to the work areas will be designated by the District's Representative for stockpiling of materials. Materials shall not be stockpiled except at sites acceptable to, and approved by, the District's Representative.

B. Materials that must be sheltered for proper storage shall be stored in Contractor furnished temporary structures.

1.20 PROJECT IDENTIFICATION AND SIGNS

A. Signboards: No advertising matter shall be attached or painted on surfaces of building, fences, barricades, or canopies.

1.21 FIELD OFFICES AND SHEDS

A. The District will not furnish required office space to Contractor.

B. Field Offices:

1. The Contractor shall provide and maintain at the Project site for the entire construction period temporary accessible field offices as needed for the proper administration of this Work. Location of field offices on the site shall be as acceptable to the District's Representative. Cost of the Contractor’s field office, shall be borne by the Contractor. Responsibility for the cost of utilities for Contractor’s field offices shall be as specified in Section 015100.

C. Storage: Contractor shall provide all structures required at the Project site for safe and proper storage of tools and materials. These structures shall be placed only at locations acceptable to the District and approved by the District's Representative.

D. Contractor shall remove all such structures from the site at completion of the Work.

1.22 HOUSEKEEPING

A. During the course of construction, alteration, or repairs, form and scrap lumber with protruding nails, and all other debris, shall be kept cleared from work areas, passageways, and stairs, in and around buildings or other structures.

B. The Contractor shall provide waste bins for use by all subcontractors and personnel on site. Remove and legally dispose of all surplus, excavated or left over materials and debris, keeping the Project site and public ways clean.

C. Combustible scrap and debris shall be removed at regular intervals during the course of construction. Safe means shall be provided to facilitate such removal. No combustible scrap or debris shall be stacked or placed within ten feet of buildings or structures.

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D. Containers shall be provided for the collection and separation of waste, trash, oily and used rags, and other refuse. Containers used for garbage and other oily flammable, or hazardous waste, such as caustics, acids, harmful dusts, etc., shall be equipped with covers. Garbage and other waste shall be disposed of at frequent and regular intervals, at a minimum of every week.

1.23 MISCELLANEOUS CONTROLS

A. Provide keying different from permanent keying of locks and include organized, locked, and supervised storage for receiving and dispensing items of builder's hardware throughout construction period.

B. The District's Representative's Access: Provide the District's Representative and the District with keys necessary to gain access to locked areas of the Work. The District's Representative will be responsible for such keys and will return them to the Contractor at the time of final inspection. If the District elects to use its own locks and keys, the Contractor shall double-lock gates as required.

C. All accidents involving employees of the Contractor and employees of lower tier contractors must be reported to the District's Representative within 24 hours of the occurrence.

D. Hours of Operation: No Work, including deliveries, is to be performed on the Project site before 7:00 a.m., after 7:00 p.m., or on Saturdays, Sundays or District holidays, without prior written authorization of the District's Representative. Holidays shall be those days designated by the District as District holidays.

E. There are fifteen (15) District holidays from January to December. Provide for one (1) calendar day for each holiday during the Contract Time period. Verify the exact day of each District holiday with the District's Representative.

[END OF SECTION 015000]

SECTION 015100

TEMPORARY UTILITIES

1.01 GENERAL

A. Description:

1. Provide and maintain temporary utilities for construction operations and related necessary temporary structures. Remove them when they are no longer needed.
2. Coordinate and make connections and services for water and electricity to Project site sources.

B. The Contractor shall submit a plan of proposed temporary utilities before installation. Included in this plan shall be a plan of proposed water conservation measures as per 1.02 below.

C. Requirements of Regulatory Agencies:

1. Install and use temporary utilities in accordance with the following:

a. National Electric Code.

b. Federal, State and local codes and regulations.

c. Utility company requirements.

D. The District makes no representation nor guarantee that any utility provided by the District will be adequate in either quantity or quality for Contractor's needs.

1.02 MATERIALS

A. Materials may be new or used but shall be adequate for the required purposes. Their use and methods of installation shall not create unsafe conditions or violate requirements of Applicable Code Requirements.

B. Temporary Utilities:

1. The District shall permit the Contractor to use available existing utilities at the District’s expense, excluding telephone; however, if the Contractor chooses to make use of said utilities, Contractor shall assume full responsibility for any changes made by Contractor related thereto, and for any consequences caused thereby. Upon completion of the work, Contractor shall remove any modifications to existing utilities made by Contractor and shall restore existing utilities to conditions existing at time of award.
2. Provide all equipment, including metering, connections, transformers, and other materials as shown in the Contract Documents for extending the utility lines to where they will be used.
3. Contractor will not be charged for water or electricity.
   a. Water: Connect to the campus water system at a designated hydrant. The Contractor shall submit a plan of proposed water conservation measures for approval prior to commencement of construction. All prevailing Monterey County ordinances governing water use and conservation shall be used as a guide for minimum water use by the Contractor. In lieu of connecting to the campus water system, the Contractor shall make arrangements for water from other sources acceptable to the District’s Representative at no additional cost to the Contract.
   b. Electricity: Connect to campus electrical system as designated. Electrical power used by the Contractor will be provided by the District at no cost.
4. Contractor shall provide all distribution lines, wiring, switches, outlets, service piping, fittings, valves and other appurtenances necessary for the connection and distribution of temporary power, including temporary phone lines, within the Project site. Written approval by the District,

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via the District's Representative, is required. Temporary water shall be separated from domestic water supply by an above ground reduced pressure principle backflow prevention device approved by the District, via the District's Representative, and governing jurisdictions. All excavations and trenches for temporary utilities shall be backfilled and compacted. The District shall approve all temporary utilities prior to installation. On completion of work, all temporary utilities shall be removed, trenches backfilled and compacted as specified in Division 31, and all areas restored to natural condition.

5. Points of connection for temporary power, telephone, and water are as follows:

    a. Water: With the installation of a water meter, the Contractor may obtain temporary water from any available hydrant within the Project Site. Coordinate with the District via the District's Representative.

    b. Power: 208/120 VAC power available from existing distribution gear located within the Project site. Connect to the source with a fused disconnect switch, and transformer (if required). Route overhead power to temporary field offices via utility grade poles properly installed and braced. Provide sufficient clearance for service vehicle access to the transformer. Schedule power connection and disconnection to avoid impact to existing facilities. Coordinate with the District via the District's Representative.

    c. Telephone: The Contractor shall coordinate connection with phone service provider of their choosing. Contractor will provide any and all temporary measures required by phone service provider to make connection to contractor’s temporary field offices. Contractor is responsible for all associated costs with no additional costs to the owner.

C. Temporary Heat and Ventilation:

1. Provide ventilation adequate for the work in progress.

2. Provide temporary heat and ventilation as required to maintain adequate environmental conditions to meet specified minimum conditions for installation of materials and to protect equipment, materials, and finishes from damage due to temperature or humidity.

3. Provide adequate forced ventilation of enclosed areas to cure installed materials, to prevent excessive humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases.

D. Temporary Telephone Service:

1. Contractor shall provide, pay for, and maintain at least one telephone at the Project site for the entire construction period as follows:

    a. Minimum of one telephone in Contractor's field office for Contractor's own business use. The Contractor shall pay their own phone charges.

    b. Provided other telephones as required, including coin-operated telephones for general use.

E. Temporary Water: Install piping with taps located so that water is available throughout the Project site by the use of hoses. Protect piping and fittings against freezing.

F. Drinking Water: Contractor shall provide clean, sanitary, and adequate drinking water facilities for the entire period of construction. The Contractor must make potable water and individual drinking containers available to all employees.

G. Temporary Accessible Sanitary Facilities:

1. Contractor shall install and maintain in a sanitary condition, suitable toilets for use of workers. These toilets shall be placed in location acceptable to the District's Representative. Contractor to provide a minimum of (2) toilets and (1) hand wash station at all times and no less than required by law. At least one Sanitary Facility shall be accessible.

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2. There shall be a minimum number as noted above but no less than one (1) toilet for each multiple of twenty (20) Contractor's employees, or fractional part thereof, working at the Project site. At least one Sanitary Facility shall be accessible.

H. Temporary Fire Protection:

1. Provide and maintain fire protection equipment including extinguishers, fire hoses, and other equipment as necessary for proper fire protection during the course of the Work.
2. Use fire protection equipment only for fighting fires.
3. Locate fire extinguishers in field offices, storage sheds, tool houses, temporary structures, and other buildings throughout the Project site, and/or as directed by the Campus Fire Marshal. Refer to Section 015000, 1.04, for additional requirements and locations.
4. Assign a qualified person with authority to maintain fire protection equipment, institute fire prevention measures, and direct the prompt removal of combustible and waste material.
5. Refer to Section 015000.

1.03 EXECUTION

A. General:

1. Comply with applicable requirements specified in Division 22 – Plumbing, Division 23 - HVAC and Division 26 Electrical.
2. Maintain and operate systems to provide continuous service.
3. Modify and extend systems as required.

B. Removal and Reconditioning:

1. Remove all temporary services installed as a requirement of the Contract Documents. Restore utilities to their original condition at the completion of the Work.
2. Legally and properly dispose of all debris resulting from removal and reconditioning operations.

[END OF SECTION 015100]

SECTION 015713

TEMPORARY EROSION AND SEDIMENT CONTROL

1.01 GENERAL

This section includes procedures, requirements and guidelines for Contractor designed, constructed, and maintained erosion and sediment control measures.

1.02 RELATED SECTIONS

A. Section 015000 –Temporary Facilities and Temporary Controls

B. Division 31 — Earthwork

1.03 EROSION CONTROL

A. General:

1. Be responsible for erosion and sediment control within the Project site or anywhere that Project construction disturbs the surface vegetation or soil.
    a. Prevent erosion of graded areas during construction and until permanent planting will provide protection and permanent drainage and erosion control measures are installed.
    b. Prevent any sediment from leaving the Project site, either water-borne, air-borne, on the tires of vehicles, or by spillage from off-site hauling of soils.
2. Include the cost of all erosion and sediment control measures in the price bid.

B. Work Restrictions:

1. No clearing, brushing, or grading shall begin until temporary desilting facilities are in place at each watercourse leaving the Project site, and any portion of the site which slopes toward the perimeter has adequate perimeter control facilities in place.
2. Submit an Erosion and Sediment Control Plan to the District's Representative for review prior to scheduled implementation. Refer to Section 013300. At the completion of the District's Representative review, a meeting will be conducted by the District's Representative with the Contractor to discuss and agree upon the implementation of the plan.
3. Agreement to the plan by other parties does not relieve the Contractor from full responsibility for its effectiveness.

C. Winter Erosion and Sediment Control Plan:

1. Whenever construction is planned during the period October 15 through April 15, submit an erosion and sediment control plan prepared by a registered civil engineer for any denuded soil area within the Project site or any other area where the soil surface will be disturbed by construction operations.
2. Implement the plan by October 15 or by the date scheduled for commencing construction after October 15, with all required features in place.
3. Submit an Erosion and Sediment Control Plan to the District's Representative for review prior to scheduled implementation. Refer to Section 013300 - Submittals. At the completion of the District's Representative review, a meeting will be conducted by the District's Representative with the Contractor to discuss and agree upon the implementation of the plan.
4. Agreement to the plan by other parties does not relieve the Contractor from full responsibility for its effectiveness.

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D. Erosion and Sediment Control Plan Requirements:

1. Regardless of project size, the Contractor shall submit a site-specific Erosion and Sediment Control Plan or Storm Water Pollution Prevention Plan for District review and approval prior to start of work. The Contractor shall effectively implement and properly maintain storm water best management practices (BMPs) during construction to prevent discharges of pollutants, and including trash, to local drainages and waterways. Contractor shall comply with all water quality regulations as prescribed by the State Water Resources Control Board (SWRCB) and Central Coast Regional Water Quality Control Board (RWQCB) regulations for the prevention of construction site discharges of pollutants, illicit discharges, and enforcement of prohibited and illicit discharges. The contractor shall employ at all times storm water runoff controls and BMPs at the site, including but not limited to erosion prevention, sediment controls, site stabilization, good housekeeping practices, proper materials storage, handling, and waste management, and similar pollution prevention measures to prevent dumping or illegal discharges during construction into the street and/or storm drain system. Storm water management and control practices shall result in the following outcomes on all construction sites, regardless of size:

   a. Protection of storm drain inlets and adjacent waterways must be implemented at all times to prevent illicit discharges of sediment, construction debris and fluids, and waste of any kind.

   b. No release of hazardous substances, such as oils, paints, thinners, fuels, and other chemicals; if such a spill occurs that may threaten local water quality, contractor must call 911 immediately and notify the District;

   c. Minimization of site disturbance shall be kept to that portion necessary for construction only, and perimeter controls shall be implemented at all times during all weather conditions;

   d. Soil stabilization of graded areas shall be in place at all times where construction activities have temporarily and/or permanently ceased;

   e. No deposit of mud, soil, sediment, concrete washout, trash, dewatering, or other similar construction-related material or waste shall occur on or into public rights of way, private streets, or into the District's storm water system and related natural resources, either by direct deposit, dropping, discharge, erosion, or tracking by construction vehicles. Any such discharge shall be cleaned-up promptly if an immediate threat to water quality exists, or if not immediate, at the end of the current work shift or workday in which the deposit occurred, whichever comes first;

   f. No runoff from graded areas or stockpile areas shall contain sediments and/or pollutants. Stockpiles shall be adequately and securely covered to avoid contact with rainfall and wind to prevent soil and stockpile movement by water and/or wind;

   g. Runoff containing sediments shall be captured in secondary containment structures and either treated to remove sediments prior to discharge or infiltrated in the soil on-site;

   h. No exposure of graded areas and stockpile areas to storm water run-on shall occur. Run-on shall be controlled by diversion structures such as dikes, secondary containment, or stockpile covers; and,

   i. All hard-surfaced areas are to be swept regularly and free of dirt and construction debris such that the surface of the pavement is clearly visible at all locations, and construction entrance/exist(s) shall be adequately stabilized to prevent tracking of soil/sediment from reaching streets/paved surfaces and drainage pathways.

2. Temporary soil stabilization measures installed on graded slopes steeper than a ratio of three (horizontal) to one (vertical), and/or greater than 10 feet in height.

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3. Desilting facilities at all drainage outlets from the graded site, designed for 25-year storm intensity. They must be detailed on the plans. Submit design and specific recommendations for the following:
    a. Desilting basin volume based on gradient and nature of soils.
    b. The actual extent of all graded areas and identification of any temporary soil stabilization measures.
    c. Size of desilting basin outlet pipe and overflow.
    d. Dike requirements. Show minimum wall width, slope of walls, percent compaction, etc.
4. Show the placement of devices to reduce erosion damage within the Project site.
5. Outlet conditions from the desilting basin shall not exceed downstream limitations, with the exception of overflow that is to be designed to provide capacity of 1.5 times the maximum design flow.
6. Provide for:
    a. Adjustment of the plan as grading progresses.
    b. Control of the grading work so as not to violate assumptions of the plan.
7. Include the following notes on the plan:
    a. In case of emergency call

        _____
        (Responsible person)

        at__(____)_____
        (24 hour phone no.)

    b. The undersigned civil engineer will review the erosion control work.

        _____ _____
        (Signature) (Date)

        _____
        California Registered Civil Engineer No.

    c. A standby crew for emergency work shall be available at all times during the rainy season, October 15 through April 15. Necessary materials shall be available on the Project site and stockpiled at convenient locations to facilitate rapid construction of temporary devices or to repair any damaged erosion control measures when rain is imminent.
    d. Do not move or modify devices without the approval of the District's Representative.
    e. All removable protective devices shown shall be in place at the end of each working day when the five-day rain probability forecast exceeds 40 percent.
    f. After a rainstorm, remove all silt and debris from check berms and desilting basins. Immediately repair any graded slope surface protection measures damaged during a rainstorm.
    g. Fill slopes at the Project perimeter must drain away from the top of the slope at the conclusion of each working day.
    h. Whenever the depth of water in any device exceeds two feet, barricade or guard the Project site for public safety until the water has subsided.

[CONTINUED NEXT PAGE]

i. Do not pump or otherwise drain unfiltered water from the basins until sediment has settled.

j. Do not fill sand bags with gravel; use only sand or granular soil.

k. Do not use perforated risers as pond outlets.

l. Do not use filtering devices as a means of control.

m. Completely cover any pipe outlet from a desilting basin with sandbags filled with coarse sand as a final means of protection.

E. Best Management Practices (BMPs)

1. BMPs are required to be illustrated in construction Plans and employed on all construction sites as applicable to the construction activity and shall provide for, and not be limited to: inlet protections, perimeter protections, erosion prevention and soil control measures, soil stabilization measures, spill prevention and discharge control measures; solid waste containment; concrete waste management; proper vehicle and equipment cleaning, fueling, and maintenance; and proper materials management and storage.

2. Activities to be performed by Contractor include, but are not limited to:

a. Development and submittal of an Erosion and Sediment Control Plan or Storm Water Pollution Prevention Plan for District review and approval prior to construction start.

b. At all times, Contractor shall implement and maintain the temporary and permanent vegetation (if any), erosion and sediment control measures, and other protective BMP measures in good and effective operating condition by performing routine inspections to determine condition and effectiveness of BMPs, restoration needs for destroyed vegetative cover, and by repair of erosion, sediment, and other protective measures.

c. Contractor shall inspect the following areas at least once every seven (7) calendar days, unless otherwise necessary based on current weather conditions or as directed by District , and always within 24 hours prior to and after any predicted storm:

i. Inlet protections and perimeter controls;

ii. Vehicle entry and exist locations;

iii. Vehicle parking and storage areas;

iv. Disturbed areas of the construction site,

v. Areas that have not been finally stabilized,

vi. Areas used for storage of materials that are exposed to wind or precipitation,

vii. Equipment and staging areas that are exposed to wind or precipitation; and,

viii. All waste storage and handling devices and areas.

ix. Where sites have been finally stabilized, such inspection shall be conducted at least once every month.

x. Areas noted above shall be inspected for proper BMP implementation and necessary BMP maintenance, as well as evidence of, or the potential for:

xi. Erosion, or

xii. Sediments entering waterways or the drainage system, or

xiii. Pollutants entering waterways or the drainage system.

[CONTINUED NEXT PAGE]

d. Erosion and sediment control measures shall be observed and maintained to ensure that they are operating correctly. Discharge locations or points shall be inspected regularly to ascertain whether erosion control measures are effective in preventing sedimentation and subsequent degradation of receiving water quality in violation of receiving water quality standards. Vehicle entry and exist locations shall be inspected for evidence of offsite sediment and pollutant tracking and need for cleanup and improved BMP protection measures

e. Deficiencies observed during inspections shall be noted and rectified before the end of the workday.

f. Additionally, the Contractor shall comply with the State Water Resources Control Board's Construction General Permit (CGP), as applicable to the project. Projects subject to the CGP include those that disturb one or more acres of soil, are less than one acre and are part of a common plan of development or sale, or applicable Linear Underground/Overhead Projects, and are required to obtain coverage under the State's CGP for Discharges of Storm Water associated with Construction Activity Construction General Permit Order 2009-0009-DWQ, and subsequent amendments thereto. Construction activities subject to this permit include clearing, grading, and disturbances to the ground such as stockpiling, or excavation, but do not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. Application for CGP coverage is made by the Contractor through a Notice of Intent (NOI) to the SWRCB and involves much interaction with the applicable RWQCB as CGP regulator. The Contractor shall develop and supply the District with NOI and associated Storm Water Pollution Prevention Plan (SWPPP) for review and records purposes.

g. CGP coverage requires the development and implementation of a SWPPP. The SWPPP contents are mandated by the SWRCB and are subject to change, and typically contain site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must illustrate the placement of BMPs for the construction project and list pollution prevention BMPs the discharger will use to protect storm water runoff. Additionally, applicable SWPPPs must contain a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to be implemented. All SWPPPs must be developed by a Qualified SWPPP Developer (QSD) and implemented by a Qualified SWPPP Practitioner (QSP) and supplied to the District for review and comment. Additional CGP information on can be found at the State Water Resources Control Board CGP website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.html

h. Construction site storm water management and control measures shall be implemented year-round regardless of "season". All construction site BMPs shall be implemented at the appropriate level for the construction activity at hand and in a proactive manner during all seasons while construction is ongoing

F. Use of Permanent Drainage Facilities:

1. Any drainage structures, or detention devices that appear in the contract documents may be utilized in the Erosion and Sediment Control plan on the condition that they are temporarily modified to serve the Contractor's purposes and cleaned before Project completion.

2. Such facilities have been designed for the District's use in drainage control upon completion of the Project and shall not be considered as adequate for control during construction except by the independent determination of the Contractor.

[CONTINUED NEXT PAGE]

G. Planted Areas:

1. For the purpose of this Section, planted areas indicated on the drawings are not considered to be installed until one year has elapsed since the time of planting, or until released by the District's Representative as being substantially established. Therefore:
    a. Maintain planting, and erosion control measures around the planted area for at least one (1) year.
    b. Make repairs to any damaged areas during that time.
    c. Where planting is lost due to erosion, replace it and begin the one-year period for that portion at the time of replacement.

[END OF SECTION 015713]

SECTION 017123

FIELD ENGINEERING

1.01 GENERAL

A. The work of this section includes:

1. Quality control
2. Submittals
3. Project record documents.
4. Examination
5. Survey Reference Points
6. Survey Requirements.
7. Laying out the work

B. Related Sections

1. General Conditions – Article 4
2. Section 017700 – Closeout Procedures

1.02 QUALITY CONTROL

A. Employ a professional Engineer of the discipline required for specific service on project, licensed in the State of California.

1.03 SUBMITTALS

A. Submit name, address, and telephone number of Engineer before starting survey work.

B. Submit evidence of Engineer's errors and omissions insurance coverage in the form of an Insurance Certificate.

C. On request, submit documentation verifying accuracy of survey work.

D. Submit a copy of registered site drawing and certificate signed by the Engineer, that the elevations and locations of the work are in conformance with Contract Documents.

1.04 PROJECT RECORD DOCUMENTS

A. Maintain complete, accurate log of control and survey work as it progresses. Indicate dimensions, locations, angles, and elevations of construction and site work

B. Submit Record Documents under provisions of Section 017700.

1.05 EXAMINATION

A. Verify locations of survey control points prior to starting work.

B. Promptly notify District's Representative of any discrepancies discovered.

1.06 SURVEY REFERENCE POINTS

A. Contractor to locate and protect survey control and reference points.

B. Control datum for survey is that indicated on Drawings.

C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

[CONTINUED NEXT PAGE]

D. Promptly report to District's Representative the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to District Representative.

1.07 SURVEY REQUIREMENTS

A. Provide field engineering services. Utilize recognized engineering survey practices.

B. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on Project Record Documents.

C. Establish 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, and ground floor elevations.

D. Periodically verify layouts by same means.

1.08 LAYING OUT THE WORK

A. Contractor shall employ a Registered Civil Engineer or Licensed Land Surveyor (hereafter referred to as Surveyor) to lay out the entire work and set grades, lines, levels, and positions throughout the site.

B. Prior to beginning work, locate or set all general reference points, bench marks, establish monuments and take action as necessary to prevent their destruction, then layout all lines, elevations and measurements for entire work.

C. Verify figures and dimensions shown on the Drawings, notify the District's Representative immediately of any discrepancies and re-direct work to avoid delay. Contractor shall accept responsibility for all errors resulting from failure to notify District's Representative of known discrepancies.

D. Establish monuments on curbs, manholes or pavements with concrete embedded steel pipe with lead plug and/or brass nail with washer, as acceptable to the District's Representative.

E. Show exact locations of the monuments if any are disrupted or destroyed on the Project Record Drawings.

[END OF SECTION 017123]

SECTION 017310

SELECTIVE DEMOLITION

1 GENERAL

1.1. RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. SUMMARY

A. This Section includes the following:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.

B. Related Sections include the following: Division 1 Section "Summary of Work" for use of premises and phasing.

1. Division 1 Section "Cutting and Patching" for cutting and patching procedures.
2. Division 31 Section "Site Clearing and Demolition" for site clearing and removal of above- and below-grade improvements.

1.3. DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

2 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Standards: Comply with ANSI A10.6 and NFPA 241.

3 PROJECT CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Comply with requirements specified in Division 1 Section "Summary of Work."

C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

D. Before selective demolition, Owner will remove the following items:

1. Miscellaneous materials stored in existing buildings.

E. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

[CONTINUED NEXT PAGE]

3.1. HAZARDOUS MATERIALS

A. It is to expected that asbestos hazardous materials may be encountered in the site Work.

B. Contractors bidding for renovation work involving asbestos-containing materials shall comply with the requirements of the Cal/OSHA Asbestos Construction Standard (Title 8 CCR 1529), including contractor registration and notification under Title 8 CCR 341.6–341.17.

C. If materials suspected of containing asbestos / hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will dispose of asbestos hazardous materials under a separate contract

3.2. LEAD PAINTED SURFACES

A. It is expected that there may be lead-painted materials on the site

B. Contractors bidding for renovation work should be compliant with the requirements of the Cal/OSHA Lead in Construction Standard (Title 8 CCR 1532.1) and Asbestos Construction Standard (Title 8 CCR 1529).

C. If materials suspected of containing lead / hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will dispose of lead painted hazardous materials under a separate contract.

3.3. STORAGE OR SALE OF REMOVED ITEMS OR MATERIALS ON-SITE IS NOT PERMITTED.

3.4. UTILITY SERVICE: maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

4 PRODUCTS (Not Used)

5 EXECUTION

6 EXAMINATION

6.1. Verify that utilities have been disconnected and capped.

6.2. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

6.3. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

6.4. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.

6.5. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

7 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

7.1. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.

7.2. Comply with requirements for existing services/systems interruptions specified in Division 1 Section "Summary of Work."

8 PREPARATION

8.1. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

8.2. Strengthen or add new supports when required during progress of selective demolition.

[CONTINUED NEXT PAGE]

9 SELECTIVE DEMOLITION, GENERAL

9.1. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

9.2. Proceed with selective demolition systematically, from high to low.

9.3. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

9.4. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.

9.5. Maintain adequate ventilation when using cutting torches

9.6. Remove dangerous or unsuitable materials and promptly dispose of off-site.

9.7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.

9.8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

9.9. Dispose of demolished items and materials promptly.

9.10. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition.

10 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

10.1. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

10.2. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.

11 DISPOSAL OF DEMOLISHED MATERIALS

11.1. General: Except for items or materials indicated to be re-used and reinstalled, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

11.2. Do not allow demolished materials to accumulate on-site.

11.3. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

11.4. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

11.5. Burning: Do not burn demolished materials.

11.6. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

12 CLEANING

12.1. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

[END OF SECTION 017310]

SECTION 017329

CUTTING AND PATCHING

PART 1 GENERAL

1.1. RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. SUMMARY

A. This Section includes procedural requirements for cutting and patching.

B. Related Sections include the following:

1. Division 1 Section "Selective Demolition" for demolition of selected portions of the building.

2. Divisions 2 through 33 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.3. DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.

B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4. QUALITY ASSURANCE

A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

B. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 PRODUCTS

2.1. MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 EXECUTION

3.1. EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed

1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.

2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

[CONTINUED NEXT PAGE]

3.2. PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

3.3. PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces. Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

3. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.

4. NOTE: existing painted surfaces on this project are presumed to contain lead.

a. Contractors bidding for renovation work should be compliant with the requirements of the Cal OSHA lead Construction Standard (Title 8 CCR 1532.1).

b. Contractor is to perform all cutting, demolition and disposal of existing painted surfaces in accordance with Cal OSHA and all relevant Local, State and Federal codes.

c. Contractor shall use lead trained workers where necessary using appropriate worker protection and engineering controls.

d. Construction activities impacting existing painted surfaces shall not include the use of wore brushing, flame torching, dry scraping, sanding, stripping abrasive methods or heat guns unless proper engineering controls and worker protection are in place which are compliant with Cal OSHA and all relevant codes.

C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

[CONTINUED NEXT PAGE]

3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

[END OF SECTION 017329]

Section 017800

Closeout Submittals

1.01 GENERAL

Guarantees from Subcontractors shall not limit Contractor's warranties and guarantees to the District. Whenever possible, Contractor shall cause warranties of Subcontractors to be made directly to the District. If such warranties are made to Contractor, Contractor shall assign such warranties to the District prior to final payment.

1.02 WARRANTIES

Warranty of Title:

No material, supplies, or equipment for the Work under this Contract shall be purchased subject to any chattel mortgage, security agreement, or under a conditional sale or other agreement by which an interest therein or any part thereof is retained by the seller or supplier. Contractor warrants good title to all material, supplies and equipment installed or incorporated in the Work and agrees upon completion of all Work to deliver to the premises together with all improvements and appurtenances constructed or placed thereon by him to the District free from any claim, liens, security, and/or interest. No corporation shall have any right to a lien upon the premises or any improvement or appurtenances thereon, provided that this shall not preclude Contractor from installing metering devices and other equipment of utility companies of municipalities, the title of which is commonly retained by the utility company or the municipality. In the event of the installation of any such metering device or equipment, Contractor shall advise the District as to the legal District thereof. Nothing contained in this paragraph, however, shall defeat or impair the right of such persons furnishing materials or labor under any law permitting such persons to look to funds due to Contractor in the hands of the District. The provisions of this Paragraph shall be inserted in all subcontracts to all persons furnishing materials for the Work when no formal contract is entered into for such materials.

1.03 GUARANTEES

Responsibility:

The General Conditions of the Contract cover the Contractor's responsibility to remedy defects due to faulty workmanship and materials which shall appear within the initial (or any extended) warranty periods from the date of Project acceptance. This requirement is also included in the Performance Bond.

1.04 FORM OF GUARANTEE

Submit written guarantees, in the form contained at the end of this Section.

1.05 SUBMITTAL REQUIREMENTS

A. Assemble required guarantees, bonds, and service and maintenance contracts.

B. Number of electronic copies required: One (1) each.

C. Number of hard copies required: One (1) each.

D. Table of Contents: Neatly typed and in orderly sequence. Provide complete information for each item as follows:

1. Product or Work item.
2. Firm name, address, and telephone number; and name of principal.
3. Scope.
4. Date of beginning of guarantee, bond, or service and maintenance contract.
5. Duration of guarantee, bond, or service and maintenance contract.
6. Contractor's name, address, and telephone number; and name of principal.
7. Provide information for the District's personnel:

a. Proper procedure in case of failure.

b. Circumstances that might affect the validity of guarantee or bond.

1.06 FORM OF SUBMITTALS

A. Prepare in duplicate packets.

B. Format:

1. Size 8-1/2" x 11" sheets punched for 3-ring binder. Fold larger sheets to fit into binders.
2. Identify each packet on the cover with typed or printed title, "GUARANTEES AND BONDS," and the following:
   a. Title of Project.
   b. Name of Contractor.

C. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers.

1.07 TIME OF SUBMITTALS

A. Within ten (10) days after date of Substantial Completion, prior to request for final payment.

B. For Work activities, where Final Completion is delayed materially beyond the date of Substantial Completion, provide updated submittal within ten (10) days after Final Completion, listing the date of Final Completion as the start of the Guarantee to Repair Period.

1.08 SUBMITTALS REQUIRED

A. Submit guarantees, bonds, and service and maintenance contracts specified in the individual Sections.

B. Form: Guarantees or warranties for more than the twelve months indicated herein shall be in the form of a guarantee written on the letterhead of Contractor, subcontractor or supplier doing the Work and/or supplying the item to be guaranteed.

C. Any guarantee form that has not been copied identically from the District's form (sample at end of this Section) and is not on letterhead will not be accepted.

D. Several Sections of the Specifications require special guarantees and/or extended warranties. Refer to each Section.

E. See following pages for contractor closeout and guarantee forms.

[CONTINUED NEXT PAGE]

Contract Closeout Forms

CONTRACTOR'S CERTIFICATE OF SUBSTANTIAL COMPLETION

OWNER CONSTRUCTION MANAGER ARCHITECT

TO:

PROJECT:

ATTENTION: On site Construction Manager: _____

FROM: _____
Firm or Corporation

This is to certify that I, _____ am an authorized official

of_____ working in the capacity of _____ and have been properly authorized by said firm or corporation to sign the following statements pertaining to the subject contact:

I know of my own personal knowledge, and do hereby certify, that the work of the contract described above has been substantially performed in accordance with, and in conformity to, the contract drawings and specifications. A list of all incomplete work is attached.

The Contractor hereby releases the Owner and its agents from all claims of and liability to the Contractor for anything done or furnished for or relating to the work, as specified in the Project Manual, except demands against the owner for the remainder of progress payments retained to date, and unresolved written claims prior to this date.

The contract work is now substantially complete, ready for its intended use, and ready for your inspection. You are requested to issue a Certificate of Substantial Completion.

Signature_____

Date _____

[CONTINUED NEXT PAGE]

CONTRACTOR'S CERTIFICATE OF FINAL COMPLETION

OWNER CONSTRUCTION MANAGER ARCHITECT

TO:

PROJECT:

ATTENTION: On site Construction Manager:_____

FROM:

Firm or Corporation

This is to certify that I, _____ am an authorized official

of_____ working in the capacity of _____ and have been properly authorized by said firm or corporation to sign the following statements pertaining to the subject contact:

I know of my own personal knowledge, and do hereby certify, that the work of the contract described above has been substantially performed, and materials used and installed to date in accordance with, and in conformity to, the contract drawings and specifications.

The contract work is now complete in all parts and requirements, excepting the attached list of minor deficiencies and the reasons for each being incomplete to date, for which exemption from final payment requirements is requested (if no exemptions requested, write "none") _____. The work is now ready for your final inspection. The following items required from the Contractor prior to application for final payment are submitted herewith, if any:

I understand that neither the issuance by the Construction Manager of a Notice of Completion, nor the acceptance thereof by the Owner, shall operate as a bar to claim against the Contractor under the terms of the guarantee provisions of the contract documents.

Signature: _____

Date: _____

[CONTINUED NEXT PAGE]

FINAL WAIVER OF LIEN

TO ALL WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by _____

to furnish labor and materials for (A) _____ work, under a contract for the in the City of_____, County of_____, State of California, of which the _____is the Owner.

NOW THEREFORE, this _____ day of_____, 20_____, for and in consideration of the sum of (B) _____ dollars paid simultaneously herewith, the receipt whereof is hereby acknowledged by the undersigned, the undersigned does hereby waive and release any lien* rights to, or claim of lien with respect to and on said above-described premises, and the improvements thereon, and on the monies or other consideration due or to become due from the Owner, on account of labor, services, materials, fixtures, apparatus or machinery heretofore or which may hereafter be furnished by the undersigned to or for the above-described premises by virtue of said contract.

(C)

(Name of sole ownership, corporation or partnership)

(Signature of Authorized Representative)

Title:

INSTRUCTIONS FOR FINAL WAIVER:

(A) Fill in nature and extent of work, strike the word labor or the word materials if not in your contract.

(B) Amount shown should be the amount actually received and equal to total amount of contract as adjusted.

(C) If waiver is for a corporation name should be used, and title of officer signing waiver should be set forth; if waiver is for a partnership, the partnership name should be used, partner should sign and designate himself as partner.

* The word lien as used herein shall include Stop Orders, Stop Notices, or Freeze Orders on monies or other consideration of the Owner which are due or to become due on the Contract referenced above.

[CONTINUED NEXT PAGE]

CONSENT OF SURETY FOR FINAL PAYMENT

PROJECT NAME:

LOCATION: _____

TYPE OF CONTRACT: _____

AMOUNT OF CONTRACT: _____

In accordance with the provisions of the above-named contract between_____

and the Contractor, the following named Surety:_____

on the Payment Bond of the following named Contractor:_____

hereby approves of final payment to the Contractor, and further agrees that said final payment to the Contractor shall not relieve the Surety Company named herein of any of its' obligations to the following named Owner (as set forth in said Surety company's bond):

IN WITNESS WHEREOF, the Surety Company has hereunto set its hand and seal this _____day of

_____, 20_____.

_____
(Name of Surety Company)

(Seal Here)

_____
(Signature of Authorized Representative)

_____
Title:

[CONTINUED NEXT PAGE]

AFFIDAVIT OF PAYMENT

TO ALL WHOM IT MAY CONCERN:

WHEREAS, the undersigned has been employed by the _____to furnish labor and materials under a contract dated _____ for the_____ in the County of_____, State of California, of which the _____is the Owner.

NOW, THEREFORE, this _____ day of _____, 20___, the undersigned, as the Contractor for the above-named Contract pursuant to the Conditions of the Contract, hereby certifies that, except listed below, he has paid in full or has otherwise satisfied all obligations 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 his property might in any way be held responsible.

EXCEPTIONS: (If none, write "None." If required by the Owner, the Contractor shall furnish a bond satisfactory to the Owner for each Exception.) _____.

_____
Contractor (Name of sole Ownership, corporation or partnership)

_____
(Signature of Authorized Representative)

_____
Title

[CONTINUED NEXT PAGE]

AFFIDAVIT OF RELEASE OF LIENS BY THE CONTRACTOR

TO ALL WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by the _____to furnish labor and materials for Bid #_____under a contract dated
for the _____ in the County of_____, State of California, of which the _____ is the Owner.

NOW, THEREFORE, this _____ day of _____, 20__, the undersigned, as the Contractor for the above-named Contract pursuant to the Conditions of the Contract, hereby certifies that to the best of his knowledge, information and behalf, 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 against any property of the Owner and on the monies or other considerations due or to become due from the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS: (If none, write "None." If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each Exception.) _____.

ATTACHMENTS:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.

2. Separate Release or Waiver of Liens from Subcontractors and material and equipment suppliers.

_____
Contractor (Name of sole ownership corporation or partnership)

_____
(Signature of Authorized Representative)

_____
Title

* The work lien as used herein shall include Stop Orders, Stop Notices, or Freeze Orders on the monies other consideration of the Owner which are due or to become due on the Contract referenced above.

[CONTINUED NEXT PAGE]

HAZARDOUS MATERIALS STATEMENT

THE FORM BELOW IS FURNISHED FOR THE CONVENIENCE OF EQUIPMENT OR MATERIALS MANUFACTURERS, DISTRIBUTORS, SUPPLIERS AND THE CONTRACTOR AND MAY BE REPRODUCED AS NECESSARY TO COMPLY WITH SUBMITTAL DOCUMENTATION AS DEFINED IN "SUPPLEMENTARY CONDITIONS".

I, _____ ,
(Name) Please Print or Type (Title)

of _____, do hereby declare

that in completing the work of the Bid #_____ no manufactured materials assembly/device or item of construction will contain, or in itself is composed of, any materials listed (by Federal or State EPA or Federal or State health agencies) as a hazardous material.

_____
Name

_____
Title

_____
Date

THIS STATEMENT MUST BE NOTARIZED.

Attach the "California All-Purpose Acknowledgement" duly notarized.

[CONTINUED NEXT PAGE]

WARRANTY FORM

We hereby warrant that the _____ which we have

provided in the _____ has been completed in accordance with the

requirements of Specification Section _____ and the Contract Documents.

We agree to repair or replace any or all of our work, together with any other adjacent work which may be displaced by so doing, that may prove to be defective in its workmanship or material within a period of 1 year from the date of acceptance of the above named project by the Owner; and we also agree to repair any and all damages resulting from such defects, all without additional expense to the Owner, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of our failure to comply with the above mentioned conditions within five (5) day after being notified in writing by the Owner, we collectively or separately do hereby authorize the Owner to proceed to have such defective work repaired or replaced and made good at our expense, and we will honor and pay the costs and charges therefore upon demand.

Signed: _____ Date _____

Subcontractor's name:
Address:
License Number:

Countersigned: _____ Date _____
Contractors name:
Address:
License Number:
or
Manufacturer's Name
Address:

OR
Signed: _____ Date _____
Contractors name:
Address:
License Number:

THIS STATEMENT MUST BE NOTARIZED.
Attach the "California All-Purpose Acknowledgement" duly notarized.

[CONTINUED NEXT PAGE]

(CONTRACTOR LETTERHEAD)

GUARANTEE

Project Name: _____ Date: _____

Project Location: _____

Project Number: _____

GUARANTEE FOR _____
(Specification Section and Contract No.)

(The "Contract"), between The District ("The District") and

_____ (Contractor)

_____,
(Name of Contractor or Subcontractor)

hereby guarantees to The District that the portion of the Work described as follows:

_____

_____

_____

_____

_____

which it has provided for the above-referenced project, is of good quality; free from defects; free from any liens, claims, and security interests; and has been completed in accordance with Specification Section ____ and the other requirements of the Contract.

The undersigned further agrees that, if at any time within _____ months after the date of the guarantee the undersigned receives notice from The District that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the undersigned will, within five (5) calendar days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

In the event the undersigned fails to commence such correction, repair, or replacement within five (5) calendar days after such notice, or to diligently and continuously prosecute the same to completion, the undersigned, collectively and separately, do hereby authorize The District to undertake such correction, repair, or replacement at the expense of the undersigned; and Contractor will pay to The District promptly upon demand all costs and expenses incurred by The District in connection therewith.

[CONTINUED NEXT PAGE]

SUBCONTRACTOR

Signed:_____ Title:_____

Typed Name: _____

Name of Firm: _____

Contractor License Classification: _____

License Number: _____

Address: _____

_____

_____

Telephone Number: _____

CONTRACTOR

Signed: _____ Title:_____

Typed Name: _____

Name of Firm: _____

Date: _____

[END OF SECTION 017800]

PACIFIC GROVE
UNIFIED SCHOOL DISTRICT

Pacific Grove Adult School &
Co-op Preschool

Site Improvements Project

DSA File: 27-H4
DSA Application No.: 01-122937

Construction Documents
Project Manual

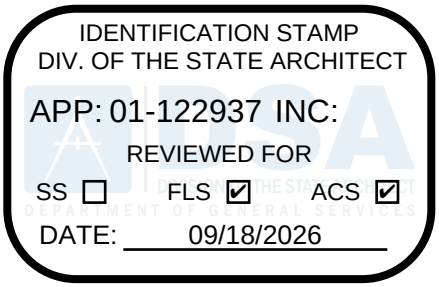
Issue Date: 9/10/2026

DOCUMENT 000107 - SEALS PAGE

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<td>Electrical Engineer:

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<td>Civil Engineer:

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END OF DOCUMENT 000107

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END OF SECTION

SECTION 01 10 00 - SUMMARY

1.1 PROJECT INFORMATION

A. Project Identification: Pacific Grove Adult School & Co-op Pre-School Paving Site Improvements Project

1. Project Location: 1025 Lighthouse Ave., Pacific Grove, California 93950

B. Owner: Pacific Grove Unified School District
1. Address: 435 Hillcrest Ave, Pacific Grove, CA 93950
2. Telephone: 831-645-1200

C. Owner's Representative: BRAILSFORD & DUNLAVEY, Inc.

1. Project Manager: Cody Carpino
2. Address: 101 Metro Drive, Suite 330, San Jose, CA 95110
3. Telephone: Direct 510-858-6317 | Mobile 530-320-7083

D. Architect: Derivi Castellanos Architects
1. Address: 95 S. Market St. San Jose, CA 95127
2. Telephone: 408-320-4871
3. Architect of Record: Ramon Gomez, CA license: C-31014
4. Project Manager: Ronnie Lee

E. Architect's Consultants: Architect has retained the following design professionals who will prepare designated portions of the Contract Documents:

1. Civil: Carroll Engineering Inc.
   a. Address: 1101 S. Winchester Blvd. Suite #H-184, CA 95128-3903
   b. Telephone: 408-261-9800 Ext 101
   c. Civil Engineer of Record: Matt Martus, CA License C 68770

2. Landscape Design: Carroll Engineering Inc.
   a. Address: 1101 S. Winchester Blvd. Suite #H-184, CA 95128-3903
   b. Telephone: 408-261-9800; cell 408-313-9943
   c. Landscape designer: Mike Harrington

3. Electrical: AURUM Consulting Engineers
   a. Address: 60 Garden Court Suite 210, Monterey CA. 93940
   b. Telephone: 831-646-3330
   c. Electrical Engineer of Record: Eldridge Bell, CA License 17789

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project:

The scope of this project consists of site work.

Pacific Grove Adult School site work scope includes regrading and replacement of the existing asphalt existing parking lot for accessible path of travel compliance, replacement of concrete paving to meet accessibility compliance, new chain link trash enclosure fencing, and minor landscaping / irrigation work. Work also includes installation of site lighting to meet accessibility compliance.

Pacific Grove Co-op Pre-School site work scope includes expansion of the existing asphalt parking lot, Parking restriping, concrete paving for accessible path of travel compliance, replacement of existing chain link gates and fencing with new chain link fencing and vehicle / pedestrian gates, and minor landscaping / irrigation work. Work also includes installation of site lighting to meet accessibility compliance.

Type of Contract: Design Bid Build

B. Work by Owner:

1. Preceding Work: None
2. Concurrent Work: None
3. Subsequent Work: None

C. Use of Site: Limited to work in areas indicated.

END OF SECTION 011000

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Where applicable, general provisions of the Contract, including General and Supplementary Conditions as related to product substitutions, shall supersede conflicting requirements within this section.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use form acceptable to Architect.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size,

durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

   a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
   b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
b. Substitution request is fully documented and properly submitted.
c. Requested substitution will not adversely affect Contractor's construction schedule.
d. Requested substitution has received necessary approvals of authorities having jurisdiction.
e. Requested substitution is compatible with other portions of the Work.
f. Requested substitution has been coordinated with other portions of the Work.
g. Requested substitution provides specified warranty.
h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.4 SUBMITTAL SCHEDULE

A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.

2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.

    a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

4. Format: Arrange the following information in a tabular format:

    a. Scheduled date for first submittal.
    b. Specification Section number and title.
    c. Submittal Category: Action; informational.
    d. Name of subcontractor.
    e. Description of the Work covered.
    f. Scheduled date for Architect's final release or approval.

    g. Scheduled dates for purchasing.
    h. Scheduled date of fabrication.
    i. Scheduled dates for installation.
    j. Activity or event number.

1.5 SUBMITTAL FORMATS

A. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.
3. Name of Architect.

4. Name of Construction Manager.
5. Name of Contractor.
6. Name of firm or entity that prepared submittal.
7. Names of subcontractor, manufacturer, and supplier.

8. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.
9. Category and type of submittal.
10. Submittal purpose and description.
11. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
12. Drawing number and detail references, as appropriate.
13. Indication of full or partial submittal.
14. Location(s) where product is to be installed, as appropriate.
15. Other necessary identification.
16. Remarks.
17. Signature of transmitter.

B. Options: Identify options requiring selection by Architect.

C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

D. PDF Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number as follows:
1. Section number_contractor’s submittal number.PDF

1.6 SUBMITTAL PROCEDURES

A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Email: Prepare submittals as PDF package, and transmit to Architect by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Architect.

    a. Architect, through Construction Manager, will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.

4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 15 days for review of each resubmittal.

4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.

D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

1.7 SUBMITTAL REQUIREMENTS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

    a. Manufacturer's catalog cuts.
    b. Manufacturer's product specifications.
    c. Standard color charts.
    d. Statement of compliance with specified referenced standards.
    e. Testing by recognized testing agency.
    f. Application of testing agency labels and seals.
    g. Notation of coordination requirements.
    h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

    a. Wiring diagrams that show factory-installed wiring.
    b. Printed performance curves.
    c. Operational range diagrams.
    d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before Shop Drawings, and before or concurrent with Samples.

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

    a. Identification of products.
    b. Schedules.
    c. Compliance with specified standards.
    d. Notation of coordination requirements.
    e. Notation of dimensions established by field measurement.
    f. Relationship and attachment to adjoining construction clearly indicated.
    g. Seal and signature of professional engineer if specified.

C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Permanently attach label on unexposed side of Samples that includes the following:

    a. Project name and submittal number.
    b. Generic description of Sample.
    c. Product name and name of manufacturer.
    d. Sample source.
    e. Number and title of applicable Specification Section.
    f. Specification paragraph number and generic name of each item.

3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics, and identification information for record.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

    a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

    a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

    a. Number of Samples: Submit three sets of Samples. Architect will retain one Sample set; remainder will be returned.

        1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
        2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.

E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.

G. Certificates:

1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.

2. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

H. Test and Research Reports:

1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

    a. Name of evaluation organization.
    b. Date of evaluation.
    c. Time period when report is in effect.
    d. Product and manufacturers' names.
    e. Description of product.
    f. Test procedures and results.
    g. Limitations of use.

I. SCHEDULE OF VALUES

1. Provide cost breakdown of the Contract Price, itemizing estimated cost of each class of Work.
2. Include line item amounts for mobilization, bonds and insurance. Mobilization shall be limited to one percent of the total contract amount.
3. An amount equal to one percent of the total contract amount shall be designated for punch list work. Values will be assigned to individual punch list items as the punch list is compiled. If the aggregate value of these items is less than the one percent designated for this work, the difference will be included in the next payment to the Contractor.
4. An amount equal to one percent of the total contract amount shall be assigned to the Contract Closeout items specified in Section 017700.

1.8 CONTRACTOR'S REVIEW

A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

    1. Architect will not review submittals received from Contractor that do not have Contractor's review and approval.

1.9 ARCHITECT'S REVIEW

A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required.

    1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action

B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Architect will return without review submittals received from sources other than Contractor.

F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - **PRODUCTS** (Not Used)

PART 3 - **EXECUTION** (Not Used)

END OF SECTION 013300

SECTION 013516 - ALTERATION PROJECT PROCEDURES

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 special procedures for alteration work.

1.3 DEFINITIONS

A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.

B. Consolidate: To strengthen loose or deteriorated materials in place.

C. Design Reference Sample: A sample that represents the Architect's prebid selection of work to be matched; it may be existing work or work specially produced for the Project.

D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.

F. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.

H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.

I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.

J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.

K. Retain: To keep existing items that are not to be removed or dismantled.

L. Strip: To remove existing finish down to base material unless otherwise indicated.

1.4 COORDINATION

A. Alteration Work Subschedule: A construction schedule coordinating the sequencing and scheduling of alteration work for entire Project, including each activity to be performed, and based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for alteration work.

1. Schedule construction operations in sequence required to obtain best Work results.
2. Coordinate sequence of alteration work activities to accommodate the following:

    a. Owner's continuing occupancy of portions of existing building.
    b. Owner's partial occupancy of completed Work.
    c. Other known work in progress.
    d. Tests and inspections.

3. Detail sequence of alteration work, with start and end dates.
4. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
5. Use of elevator and stairs.
6. Equipment Data: List gross loaded weight, axle-load distribution, and wheel-base dimension data for mobile and heavy equipment proposed for use in existing structure. Do not use such equipment without certification from Contractor's professional engineer that the structure can support the imposed loadings without damage.

B. Pedestrian and Vehicular Circulation: Coordinate alteration work with circulation patterns within Project building(s) and site. Some work is near circulation patterns. Circulation patterns cannot be closed off entirely and in places can be only temporarily redirected around small areas of work. Access to restricted areas may not be obstructed. Plan and execute the Work accordingly.

1.5 PROJECT MEETINGS FOR ALTERATION WORK

A. Preliminary Conference for Alteration Work: Before starting alteration work, Construction Manager will conduct conference at Project site.

1. Attendees: In addition to representatives of Owner, Construction Manager, Architect, and Contractor,testing service representative, Project Inspector shall be represented at the meeting.
2. Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:

    a. Alteration Work Subschedule: Discuss and finalize; verify availability of materials, specialists' personnel, equipment, and facilities needed to make progress and avoid delays.
    b. Fire-prevention plan.
    c. Governing regulations.
    d. Areas where existing construction is to remain and the required protection.
    e. Hauling routes.
    f. Sequence of alteration work operations.
    g. Storage, protection, and accounting for salvaged and specially fabricated items.

h. Existing conditions, staging, and structural loading limitations of areas where materials are stored.
i. Qualifications of personnel assigned to alteration work and assigned duties.
j. Requirements for extent and quality of work, tolerances, and required clearances.
k. Embedded work such as flashings and lintels, special details, collection of waste, protection of occupants and the public, and condition of other construction that affects the Work or will affect the work.

3. Reporting: Record conference results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from conference.

B. Coordination Meetings: Conduct coordination meetings specifically for alteration work at weekly intervals. Coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: In addition to representatives of Owner, Construction Manager, Architect, and Contractor, each specialist, supplier, installer, and other entity concerned with progress or involved in planning, coordination, or performance of alteration work activities shall be represented at these meetings. All participants at conference shall be familiar with Project and authorized to conclude matters relating to alteration work.
2. Agenda: Review and correct or approve minutes of previous coordination meeting. Review other items of significance that could affect progress of alteration work. Include topics for discussion as appropriate to status of Project.

a. Alteration Work Subschedule: Review progress since last coordination meeting. Determine whether each schedule item is on time, ahead of schedule, or behind schedule. Determine how construction behind schedule will be expedited with retention of quality; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities are completed within the Contract Time.
b. Schedule Updating: Revise Contractor's Alteration Work Subschedule after each coordination meeting where revisions to schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
c. Review present and future needs of each entity present, including review items listed in the "Preliminary Conference for Alteration Work" Paragraph in this article and the following:

1) Interface requirements of alteration work with other Project Work.
2) Status of submittals for alteration work.
3) Access to alteration work locations.
4) Effectiveness of fire-prevention plan.
5) Quality and work standards of alteration work.
6) Change Orders for alteration work.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.6 MATERIALS OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to

Owner that may be encountered or uncovered during the Work, regardless of whether they were previously documented, remain Owner's property.

1. Carefully dismantle and salvage each item or object in a manner to prevent damage and protect it from damage, then promptly deliver it to Owner where directed at Project site.

1.7 INFORMATIONAL SUBMITTALS

A. Alteration Work Subschedule:

1. Submit alteration work subschedule within seven days of date established for commencement of alteration work.

B. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements that are to remain, including finish surfaces, that might be misconstrued as damage caused by Contractor's alteration work operations.

C. Alteration Work Program: Submit 7 days before work begins.

D. Fire-Prevention Plan: Submit 7 days before work begins.

1.8 QUALITY ASSURANCE

A. Specialist Qualifications: An experienced firm regularly engaged in specialty work similar in nature, materials, design, and extent to alteration work as specified in each Section and that has completed a minimum of five recent projects with a record of successful in-service performance that demonstrates the firm's qualifications to perform this work.

1. Field Supervisor Qualifications: Full-time supervisors experienced in specialty work similar in nature, material, design, and extent to that indicated for this Project. Supervisors shall be on-site when specialty work begins and during its progress. Supervisors shall not be changed during Project except for causes beyond the control of the specialist firm.

a. Construct new mockups of required work whenever a supervisor is replaced.

B. Title X Requirement: Each firm conducting activities that disturb painted surfaces shall be a "Lead-Safe Certified Firm" according to 40 CFR 745, Subpart E, and use only workers that are trained in lead-safe work practices.

C. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.

1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.

2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.

D. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and requirements. Include fire-watch personnel's training, duties, and authority to enforce fire safety.

E. Safety and Health Standard: Comply with ANSI/ASSE A10.6.

1.9 STORAGE AND HANDLING OF SALVAGED MATERIALS

A. Salvaged Materials:

1. Clean loose dirt and debris from salvaged items unless more extensive cleaning is indicated.
2. Pack or crate items after cleaning; cushion against damage during handling. Label contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

B. Salvaged Materials for Reinstallation:

1. Repair and clean items for reuse as indicated.
2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.

C. Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after alteration and other construction work in the vicinity is complete.

D. Storage: Catalog and store items within a weathertight enclosure where they are protected from moisture, weather, condensation, and freezing temperatures.

1. Identify each item for reinstallation with a nonpermanent mark to document its original location. Indicate original locations on plans, elevations, sections, or photographs by annotating the identifying marks.
2. Secure stored materials to protect from theft.
3. Control humidity so that it does not exceed 85 percent. Maintain temperatures 5 deg F (3 deg C) or more above the dew point.

E. Storage Space:

1. Owner will arrange for limited on-site location(s) for free storage of salvaged material. This storage space does not include security and climate control for stored material.

2. Arrange for off-site locations for storage and protection of salvaged material that cannot be stored and protected on-site.

1.10 FIELD CONDITIONS

A. Survey of Existing Conditions: Record existing conditions that affect the Work by use of preconstruction photographs or preconstruction videotapes.

B. Discrepancies: Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.

C. Size Limitations in Existing Spaces: Materials, products, and equipment used for performing the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within existing spaces, areas, rooms, and openings, including temporary protection, by 12 inches or more.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.

1. Use only proven protection methods, appropriate to each area and surface being protected.
2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
3. Erect temporary barriers to form and maintain fire-egress routes.
4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
5. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.

8. Provide supplemental sound-control treatment to isolate demolition work from other areas of the building.

B. Temporary Protection of Materials to Remain:

1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.
2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.

C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.

D. Utility and Communications Services:

1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.

E. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is functioning properly.

1. Prevent solids such as adhesive or mortar residue or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from alteration work.
2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

3.2 PROTECTION FROM FIRE

A. General: Follow fire-prevention plan and the following:

1. Comply with NFPA 241 requirements unless otherwise indicated.
2. Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.

    a. If combustible material cannot be removed, provide fire blankets to cover such materials.

B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or combustible materials, including welding, torch-cutting, soldering, brazing, removing paint with heat, or other operations where open flames or implements using high heat or combustible solvents and chemicals are anticipated:

1. As far as practicable, restrict heat-generating equipment to shop areas or outside the building.
2. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
3. Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from reaching surrounding combustible material.
4. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.

5. Fire Watch: Before working with heat-generating equipment or combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows:

    a. Train each fire watch in the proper operation of fire-control equipment and alarms.
    b. Prohibit fire-watch personnel from other work that would be a distraction from fire-watch duties.
    c. Cease work with heat-generating equipment whenever fire-watch personnel are not present.
    d. Have fire-watch personnel perform final fire-safety inspection each day beginning no sooner than 30 minutes after conclusion of work in each area to detect hidden or smoldering fires and to ensure that proper fire prevention is maintained.

    e. Maintain fire-watch personnel at each area of Project site until 60 minutes after conclusion of daily work.

C. Fire-Control Devices: Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire-watch personnel are trained in fire-extinguisher and blanket use.

3.3 PROTECTION DURING APPLICATION OF CHEMICALS

A. Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm or spillage resulting from applications of chemicals and adhesives.

B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.

C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.

D. Neutralize alkaline and acid wastes and legally dispose of off Owner's property.

E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

3.4 GENERAL ALTERATION WORK

A. Have specialty work performed only by qualified specialists.

B. Ensure that supervisory personnel are present when work begins and during its progress.

C. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs or video recordings.

D. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.

E. Notify Architect of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.

1. Do not proceed with the work in question until directed by Architect.

END OF SECTION 013516

SECTION 01 56 39 – TEMPORARY TREE AND PLANT PROTECTION

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. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.

B. Description of Work:

1. Protection of existing trees and vegetation to remain.
2. Trimming of existing trees.
3. Maintenance of existing trees during construction.
4. Removal and re-installation of existing trees.
5. Contractor shall retain the services of a certified arborist to perform routine visits and oversee the protection of the existing trees within the project area during demolition, construction and maintenance and to especially review and recommend treatment when roots are encountered and to perform routine maintenance during the construction phase.

C. Traffic:

1. Do not interfere with or close public ways without permission of the Owner's Representative.
2. Do not interfere with adjacent private properties without permission of the Owner's Representative.

D. Site Utilities:

1. Advise utility companies of excavation activities before starting excavations.
2. Locate and identify underground utilities passing through work area before starting work.

3. In event unidentified underground utilities are encountered during work, advise utility owner immediately before proceeding. Add any new utility information to project record drawings for actual location.

4. Protect all existing-to-remain utilities.

5. Do not interrupt existing utilities without advance notice to and approval from the Owner's Representative.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified arborist and tree service firm.

B. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damage.

C. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work and for removal and re-installation of existing trees.

D. Existing Conditions: Documentation of existing trees and plantings indicated to remain and/or relocate, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.

1. Use sufficiently detailed photographs.

2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

1.4 QUALITY ASSURANCE

A. Arborist Qualifications: Certified Arborist as certified by the International Society of Arboriculture (ISA) and having performed similar services for a minimum of five (5) years.

B. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed temporary tree and plant protection work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.

C. Contractor shall be liable for the loss in value due to damaged trees and for the repair costs resulting as determined by the Owner's Representative. Due to the irreplaceable nature of many existing trees and vegetation, the liability to the General Contractor (Contractor in charge) shall be set at $500.00 minimum per tree. The Trunk Formula method for Northern California established by the International Society of Arboriculture will be used to compute the actual value. Other vegetation lost due to construction activity and/or neglect shall be replaced by the General Contractor (Contractor in charge) in kind with similar size, potted plant stock to match existing plant material prior to construction.

1.5 PROJECT CONDITIONS

A. The following practices are prohibited within protection zones:

1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

B. Do not direct vehicle or equipment exhaust toward protection zones.

C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

1.6 Definitions

A. Caliper: Caliper on young trees is taken six (6) inches above the soil level and measured by a diameter across the tree trunk. For a tree exceeding a four (4) inch caliper, the diameter measurement is then taken at twelve (12) inches above the soil level. For a mature tree, the caliper is taken at chest height, generally 4-1/2 to 5 feet above the soil level. The measurement is taken using a tree caliper, a utensil in the shape of an “F” with an adjustable cross arm to slide and rest up against the trunk to measure the precise distance of the trunk width.

B. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.

C. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by a circle concentric with each tree with a radius equal to the diameter of the drip line unless otherwise indicated.

D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

PART 2 - PRODUCTS

2.1 TREE PROTECTION PROTECTIVE FENCE

A. Existing shrubs and/or trees to remain on the project site shall be protected with a five (5) foot high orange plastic snow fence erected and installed around the perimeter dripline of each shrub, tree or groups of shrubs or trees to remain.

1. Snow Fence: Orange, UV resistance, 3-inch thickness, 48-inches in width, oval mesh, extruded thermal plastic polymer, Tenax or equal, fence fabric.

2. Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated Douglas Fir or lodgepole pine, free of knots, holes, cross grain, and other defects, two (2) inches in diameter by length required and pointed at one end.

B. During planting and irrigation operations, protective fencing is not required beneath existing to remain trees and shrubs that fall within the newly landscaped and/or irrigation area.

2.2 TOPSOIL

A. Natural or cultivated top layer of the soil profile or manufactured topsoil; containing organic matter and sand, silt, and clay particles; 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 one (1) inch in diameter; and free of weeds, roots, and toxic and other non-soil materials.

2.3 ORGANIC MULCH

A. Refer to specification section 32 90 00 “Planting” and match organic mulch material to use in non-bio-retention planting areas.

B. If specification section 32 90 00 “Planting” is not issued as part of this project, provide organic mulch for non-bio-retention planting areas: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of organic bark from Republic Services (contact Jennifer White at (408) 687-1928 or jwhite5@RepublicServices.com) Pro-Chip decorative mulch, Republic Services, Newby Island Recyclery, Milpitas, CA (408) 945-2836. Color to be mahogany. Submit sample to Owners Representative’s for review and approval.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

B. For the record, prepare written report, endorsed by arborist, listing conditions detrimental to tree and plant protection.

3.2 PREPARATION

A. Inspections: Engage a qualified arborist to direct plant protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain, to over-see removal and re-installation of existing plant material and to prepare inspection reports.

B. Locate and clearly identify trees, shrubs, and other vegetation to remain. Tie a 1-inch blue-vinyl tape around each tree trunk at 54 inches above the ground.

C. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

D. Tree-Protection Zones: Mulch areas inside tree-protection zones and other areas if indicated within Drawings.

1. Apply 3-inch minimum thickness of organic mulch. Do not place mulch within 6 inches of tree trunks.

3.3 PROTECTIVE FENCE INSTALLATION

A. Protection-Zone Fencing: Install protection-zone fencing along edges of protection zones before materials or equipment are brought on the site and construction operations begin. Install fencing in a manner that will prevent people from easily entering protected area except by entrance gates. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives, or other vehicular circulation.

1. Plastic Protection Zone Fencing: Neatly install protection zone plastic fabric by securing to posts with plastic bands or steel wires, a minimum of two per post, additionally if required to withstand typical construction activity.

2. Posts: Set or drive posts into ground at least two (2) feet without concrete footings and no more than six (6) feet on center spacing. Where a post is located on existing paving or concrete to remain, provide appropriate means of post support acceptable to Owner's Representative.

3. Access Gates: Install as necessary; adjust 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. Protection-Zone Signage: Install protection-zone signage in visibly prominent locations in a manner approved by Owner's Representative. Install one sign spaced approximately every 50

feet on protection-zone fencing, but no fewer than two signs with each facing a different direction.

C. Maintain protection zones free of weeds and trash.

D. 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 the Owner's Representative.

E. Maintain protection-zone fencing and signage in good condition as acceptable to Owner's Representative and remove when construction operations are complete and equipment has been removed from the site.

1. Do not remove protection-zone fencing, even temporarily, to allow deliveries or equipment access through the protection zone.

2. Temporary access is permitted subject to preapproval in writing by arborist if a root buffer effective against soil compaction is constructed as directed by arborist. Maintain root buffer so long as access is permitted.

3. Temporary access is permitted for landscape irrigation and planting operations.

3.4 ARBORIST SUPERVISION

A. For construction within ten (10) horizontal feet of a tree and/or shrub to remain, with a trunk diameter of twelve (12) inches or larger measured three (3) feet above original finish grade, Contractor shall retain the services of a reputable Arborist certified by the International Society of Arboriculture (ISA) to review the tree(s) and/or shrubs(s), the work to be performed and provide written recommendations to minimize the impact on existing trees and/or shrubs to remain. Submit recommendations to Owner's Representative for review.

B. Contractor shall implement Arborist recommendations.

C. Contractor shall consult Arborist for further recommendations if tree(s) and/or shrub(s) appear in failing health until final completion and acceptance of landscape work.

3.5 EXCAVATION

A. General: Excavation and trenching shall be performed at a minimum, in accordance with these specifications and per Drawings and Details and in accordance with recommendations from project Arborist retained by Contractor.

B. Trenching near Trees: Where utility trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots as required for root pruning.

C. Redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If

encountered immediately adjacent to location of new construction and redirection is not practical, cut roots approximately 3 inches (75 mm) back from new construction and as required for root pruning.

D. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

3.6 REGRADING

A. Lowering Grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

B. Lowering Grade within Protection Zone: Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist unless otherwise indicated.

1. Root Pruning: Prune tree roots exposed by lowering the grade. Do not cut main lateral roots or taproots; cut only smaller roots. Cut roots as required for root pruning.

C. Raising Grade: Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

D. Minor Fill within Protection Zone: Where existing grade is 2 inches or less below elevation of finish grade, fill with topsoil

3.7 ROOT PRUNING

A. Prune roots that are affected by temporary and permanent construction. Prune roots as follows:

1. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.

2. Cut Ends: Coat cut ends of roots more than 1-1/2 inches in diameter with an emulsified asphalt or other coating formulated for use on damaged plant tissues and that is acceptable to arborist.

3. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.

4. Cover exposed roots with burlap and water regularly.

5. Backfill as soon as possible.

B. Root Pruning at Edge of Protection Zone: Prune roots flush with the edge of the protection zone, by cleanly cutting all roots to the depth of the required excavation.

C. Root Pruning within Protection Zone: Avoid cutting trenches within shrub and/or tree protection zone. If trenching is unavoidable, cut trenches with an air spade tool to expose roots without cutting them. Roots encountered smaller than two (2) inches in diameter may be cut, not torn for removal. Cleanly cut roots as close as possible to excavation. Roots larger than two (2) inches in diameter shall remain.

3.8 CANOPY PRUNING

A. General Pruning Procedures:

1. Prune trees according to ANSI A300 (Part 1).

2. Cut branches with sharp pruning instruments; do not break or chop.

3. Do not apply pruning paint to wounds.

B. Pruning Goals (Prune as follows and under the direction of Certified Arborist):

1. Prune trees to remain to compensate for root loss caused by construction damage. Provide subsequent maintenance during landscape irrigation and planting maintenance period and until “final completion” as recommended by Certified Arborist.

2. Prune to remove dead wood, promote proper structure, thin and open canopy, and for general health for the specific tree species.

3. Prune for clearance from structures, pathways and driveways and streets and for a balanced canopy.

C. Shrubs, Vines, and Ground Covers:

1. Prune, thin, and shape shrubs according to standard horticultural practices.

2. Prune to remove injured or dead branches from shrubs.

3. Cleaning: Chip removed branches and dispose of off-site.

3.9 IRRIGATION

A. Irrigate existing vegetation and/or trees to remain and those relocated during hot and/or dry periods and as required to maintain material in a healthy, vigorous condition.

3.10 REMOVE AND RE-INSTALL EXISTING TREES

A. Plant material noted on Drawing to be transplanted shall be carefully removed from planting area and planted in new location indicated on Planting Plan. Removal shall consist of digging around the dripline of each plant to be transplanted and to the depth where roots are present. Plant and rootball shall be carefully moved to new planting pit.

B. Re-install transplanted plant material to location indicated on Drawing as follows:

1. Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation. Excavate approximately planting pit sizes twice the width of the planting pot and equal to the depth of the planting pot.

2. Carefully install root ball without damaging root ball or plant.

3. Set rootball onto compacted native soil so the rootball sits one (1) inch above adjacent finish grade.

4. Amend backfill soil per tree planting detail and landscape planting specifications.

5. Place planting soil around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil.

6. Stake tree(s) per tree planting detail.

3.11 REPAIR AND REPLACEMENT

A. General: 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 the Owner's Representative.

1. Submit details of proposed root cutting and tree and shrub repairs.

2. Have arborist perform the root cutting, branch pruning, and damage repair of trees and shrubs.

3. Treat damaged trunks, limbs, and roots according to arborist's written instructions.

4. Perform repairs within 24 hours.

5. Replace vegetation that cannot be repaired and restored to full-growth status, as determined by the Owner's Representative.

B. Trees: Remove and replace trees indicated to remain that are more than 25 percent dead or in an unhealthy condition before the end of the maintenance period or are damaged during

construction operations that the Owner's Representative determines are incapable of restoring to normal growth pattern.

1. Provide new trees of same size and species as those being replaced for each tree that measures three (3) inches or smaller in caliper size.

2. Provide new trees of 48" box size and species as those being replaced for each tree that measures greater than three (3) inches. In addition, the liability to the General Contractor shall be set at $500.00 minimum per tree. The Trunk Formula method for Northern California established by the International Society of Arboriculture must be used to compute the actual value.

3. Plant and maintain new trees as specified in Section 32 90 00 "Planting."

C. Soil Aeration: Where directed by the Owner's Representative, aerate surface soil compacted during construction. Aerate 10 feet beyond drip line and no closer than 36 inches to tree trunk. Drill two (2) inch diameter holes a minimum of 12 inches (300 mm) deep at 24 inches o.c. Backfill holes with an equal mix of augured soil and sand.

3.12 REMOVAL OF EXISTING TREES:

A. Contractor shall remove and demolish from the site trees and vegetation indicated on the Drawings. Additional trees and vegetation conflicting with work require written approval by Owner or Architect.

B. Tree removal shall include branches, leaves, roots, stumps and stump grindings to a minimum depth of 18" below proposed subgrade. Exact depth shall be determined in accordance with and as required for building and hardscape work included under this contract.

C. Contractor shall fill depressions caused by tree removal with topsoil or site soil.

D. Properly dispose of any vegetation debris in a legal and acceptable manner off project/site property.

END OF SECTION 01 56 39 (Revised 09/04/2024)

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

1.3 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved by Architect through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.

C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications. Submit a comparable product request, if applicable.

1.4 ACTION SUBMITTALS

A. Comparable Product Request Submittal: Submit request for consideration of each comparable product. Identify basis-of-design product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within [**seven**] days of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within [**15**] days of receipt of request, or [**seven**] days of receipt of additional information or documentation, whichever is later.

    a. Form of Architect's Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
    b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.

1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is not conspicuous.
2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:

    a. Name of product and manufacturer.
    b. Model and serial number.
    c. Capacity.
    d. Speed.
    e. Ratings.

3. See individual identification sections in Divisions 21, 22, 23, and 26 for additional identification requirements.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

    a. Submit additional documentation required by Architect in order to establish equivalency of proposed products. Evaluation of "or equal" product status is by the Architect, whose determination is final.

B. Product Selection Procedures:

1. Sole Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.

    a. Sole product may be indicated by the phrase: "Subject to compliance with requirements, provide the following: …"

2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.

    a. Sole manufacturer/source may be indicated by the phrase: "Subject to compliance with requirements, provide products by the following: …"

3. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.

    a. Limited list of products may be indicated by the phrase: "Subject to compliance with requirements, provide one of the following: …"

4. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, which complies with requirements.

    a. Non-limited list of products is indicated by the phrase: "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following: …"

5. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.

    a. Limited list of manufacturers is indicated by the phrase: "Subject to compliance with requirements, provide products by one of the following: …"

6. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, which complies with requirements.

    a. Non-limited list of manufacturers is indicated by the phrase: "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following: …"

7. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

    a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.

C. Visual Matching Specification: Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.

D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with

requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant product qualities include attributes such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
2. Evidence that proposed product provides specified warranty.
3. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
4. Samples, if requested.

B. Submittal Requirements: Approval by the Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.
5. Repair of the Work.

1.3 ACTION SUBMITTALS

A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

B. Certified List of Incomplete Items: Final submittal at final completion.

1.4 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

C. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Construction Manager. Label with manufacturer's name and model number.

    a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Construction Manager's or Owner's signature for receipt of submittals.

5. Submit testing, adjusting, and balancing records.

6. Submit sustainable design submittals not previously submitted.
7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
6. Advise Owner of changeover in utility services.
7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
9. Complete final cleaning requirements.
10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of

Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."
2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report.
5. Submit final completion photographic documentation.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect or Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.

3. Submit list of incomplete items in one of the following formats:

    a. MS Excel electronic file. Architect will return annotated file.
    b. PDF electronic file. Architect will return annotated file.

1.9 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

D. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

1. Submit on digital media acceptable to Architect by email to Architect.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Remove snow and ice to provide safe access to building.
f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
h. Sweep concrete floors broom clean in unoccupied spaces.
i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
k. Remove labels that are not permanent.

l. Wipe surfaces of mechanical and electrical equipment**[, elevator equipment,]** and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.

1) Clean HVAC system in compliance with NADCA ACR. Section 230130.52 "Existing HVAC Air-Distribution System Cleaning." Provide written report on completion of cleaning.

p. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
q. Leave Project clean and ready for occupancy.

C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

    a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.

3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - **GENERAL**

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for project record documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.
4. Miscellaneous record submittals.

B. Related Requirements:

1. Section 011200 "Multiple Contract Summary" for coordinating project record documents covering the Work of multiple contracts.
2. Section 017300 "Execution" for final property survey.
3. Section 017700 "Closeout Procedures" for general closeout procedures.
4. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.3 CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:

1. Number of Copies: Submit one Insert number set(s) of marked-up record prints.
2. Number of Copies: Submit copies of record Drawings as follows:

a. Initial Submittal:

1) Submit PDF electronic files of scanned record prints and one of file prints.
2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.

b. Final Submittal:
1) Submit PDF electronic files of scanned record prints
2) Include each drawing, whether or not changes and additional information were recorded.

c. Final Submittal:
1) Submit record PDF digital data files

B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.

C. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories of each submittal.

1.4 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.

    a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    b. Accurately record information in an acceptable drawing technique.
    c. Record data as soon as possible after obtaining it.
    d. Record and check the markup before enclosing concealed installations.
    e. Cross-reference record prints to corresponding photographic documentation.

2. Content: Types of items requiring marking include, but are not limited to, the following:

    a. Dimensional changes to Drawings.
    b. Revisions to details shown on Drawings.
    c. Depths of foundations.
    d. Locations and depths of underground utilities.
    e. Revisions to routing of piping and conduits.
    f. Revisions to electrical circuitry.
    g. Actual equipment locations.
    h. Duct size and routing.
    i. Locations of concealed internal utilities.

    j. Changes made by Change Order or Construction Change Documents (CCD)
    k. Changes made following Architect's written orders.
    l. Details not on the original Contract Drawings.
    m. Field records for variable and concealed conditions.
    n. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:

1. Format: Annotated PDF electronic file with comment function enabled.
2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
3. Refer instances of uncertainty to Architect for resolution.
4. Architect will furnish Contractor with one set of digital data files of the Contract Drawings for use in recording information.

    a. See Section 013100 "Project Management and Coordination" for requirements related to use of Architect's digital data files.
    b. Architect will provide data file layer information. Record markups in separate layers.

C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Format: Annotated PDF electronic file with comment function enabled.
2. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
3. Identification: As follows:

    a. Project name.
    b. Date.
    c. Designation "PROJECT RECORD DRAWINGS."
    d. Name of Architect and Construction Manager.
    e. Name of Contractor.

1.5 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
5. Note related Change Orders, record Product Data, and record Drawings where applicable.

B. Format: Submit record Specifications as annotated PDF electronic file.

1.6 RECORD PRODUCT DATA

A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

3. Note related Change Orders, record Specifications, and record Drawings where applicable.

C. Format: Submit record Product Data as annotated PDF electronic file.

1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

1.7 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

B. Format: Submit miscellaneous record submittals as PDF electronic file.

1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

1.8 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store record documents in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's and Construction Manager's reference during normal working hours.

PART 2 - **PRODUCTS** – (NOT USED)

PART 3 - **EXECUTION**– (NOT USED)

END OF SECTION 017839

SECTION 024119 - SELECTIVE DEMOLITION

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. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

B. Related Requirements:

1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Section 013516 "Alteration Project Procedures" for general protection and work procedures for alteration projects.

1.3 DEFINITIONS

A. Remove or Demolish: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.

B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.

C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For refrigerant recovery technician.

B. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's and occupant on-site operations are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Use of elevator and stairs.
5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

C. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations.

D. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

E. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

1.6 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

1.7 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.8 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: Present in buildings and structures to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.

1. Hazardous material remediation is specified elsewhere in the Contract Documents.
2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

3. Owner will provide material safety data sheets for suspected hazardous materials that are known to be present in buildings and structures to be selectively demolished because of building operations or processes performed there.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

1.9 COORDINATION

A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ASSE A10.6 and NFPA 241.

C. CA Fire Code Chapter 33 – Fire Safety During Construction and Demolition.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

C. Verify that hazardous materials have been remediated before proceeding with building demolition operations.

D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.

1. Comply with requirements specified in Section 013233 "Photographic Documentation."
2. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.

3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 PREPARATION

A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Owner will arrange to shut off indicated services/systems when requested by Contractor.

2. Arrange to shut off utilities with utility companies.
3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.

    a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
    c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
    f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
    g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

3.4 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furniture, furnishings, and equipment that have not been removed.
5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."

B. Remove temporary barricades and protections where hazards no longer exist.

3.5 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
5. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
6. Maintain adequate ventilation when using cutting torches.
7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
10. Dispose of demolished items and materials promptly.

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

C. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 031000 - CONCRETE FORMWORK

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Formwork for cast-in-place concrete.
B. Form openings for mechanical and electrical work.
C. Coordinate installation of items supplies under other specification sections.

1.2 RELATED SECTIONS

A. Section 03 30 00: Cast-in-Place Concrete
B. Section 03 20 00: Concrete Reinforcing
C. Mechanical and electrical items to be embedded in concrete.

1.3 QUALITY ASSURANCE

A. Design Requirements:

1. All work shall be done in accordance with the California Code of Regulations. Title 24, 2025 edition, also known as California Building Code (CBC).
2. Responsibility: Design of formwork is the Subcontractor's responsibility. Comply with the following, except as modified by the Building Code or these specifications.
   a. ACI 301 - "Specifications for Structural Concrete for Buildings."
   b. ACI 347 - "Recommended Practice for Concrete Formwork."
   c. ACI 303R - "Guide to Cast-in-Place Architectural Concrete Practice."
3. Allowable Tolerances:
   a. Construct formwork to provide completed cast-in-place concrete surfaces complying with the tolerances specified in ACI 347.
   b. Note special tolerance requirements for locations of drains where indicated on drawings.

1.4 SUBMITTALS

A. Product Data: Submit Manufacturer's data and installation instructions for proprietary materials such as form coatings, manufactured form systems, ties and accessories.
B. Submit manufacturer's certification that form release agent will provide clean, stain free surfaces of concrete and not interfere with bond of applied finishes.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver form release agents in manufacturer's sealed and trademarked containers.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

A. General: Form material shall be as required to produce continuous, straight, smooth exposed surfaces. Materials selected shall be satisfactory to Architect for effect on finished appearance of concrete. Architectural concrete formwork shall be of one material throughout the work, for all similar types of concrete surfaces.

B. Exposed Non-Architectural Concrete:

1. Metal or APA graded Plyform, Grade BB, Class I or II, or HDO plywood exterior type, each piece graded, no mill oiling. Use one form face material throughout the project for similar types of concrete surfaces.
2. Provide material and bracing with sufficient thickness to withstand pressure of newly placed concrete without bow or deflection.

C. Concealed Concrete: Plywood, lumber, metal, or other acceptable material. Provide lumber that is dressed on at least 2 edges and 1 side. "Concealed" means not visible in the completed structure. (Painted concrete is not to be considered "concealed".)

D. Form Ties:

1. Provide snap ties with plastic cones of same size and shape and of same manufacturer as cement cone hole plugs provided under Concrete Section.
2. Wire ties and site fabricated ties and wood separators are not acceptable.

E. Form Coatings: Commercial formulation resin-based form-coating compounds that will not bond with, stain, nor adversely affect concrete surfaces, and will not impair subsequent treatment of concrete surfaces requiring bond, or adhesion, nor impede the wetting of surfaces to be cured with water or curing compounds. Oils and petroleum distillates are not acceptable. Verify compatibility of form coating with proposed surface finish.

F. Metal Inserts: Provide metal inserts for anchorage of materials or equipment to concrete construction, where not supplied by other trades and required for the work.

G. Earth forms permitted for footings.

2.2 FORMWORK SYSTEMS

A. Design, erect, support, brace and maintain formwork so that it will safely support vertical and lateral loads that might be applied, until such loads can be supported by the concrete structure. Construct formwork so that concrete members and structures are of correct size, shape, alignment, elevation and position.

B. Design forms to include assumed values of live load, dead load, weight of moving equipment operated on formwork, concrete mix, height of concrete drop, vibrator frequency, ambient temperature, foundation pressures, stresses, lateral stability, and other factors pertinent to safety of structuring during construction.

C. Design formwork to be readily removable without impact, shock or damage to cast-in-place concrete surfaces and adjacent materials.

D. Provide formwork sufficiently tight to prevent leakage of cement past during concrete placement. Solidly butt and gasket joints and provide backup material at joints to prevent leakage and fins.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine surfaces and conditions receiving or affecting the work. Do not proceed until unsuitable conditions have been corrected.

3.2 FORM CONSTRUCTION

A. General: Construct forms complying with ACI 347 and ACI 303R, as applicable to the sizes, shapes, lines and dimensions shown, and to accurate alignment, location, grades, levels, and plumbness. Provide for openings, sleeves, offsets, recesses, reglets, chamfers, inserts, and other features required. Use selected materials to obtain required finishes. Before placing concrete, check the lines and levels of erected formwork. Make corrections and adjustments to ensure proper size and location of concrete members and stability of forming system.

B. Ties:

1. Spacing: Space ties in a uniform pattern satisfactory to the Architect. Rest cones firmly against forms and seal to prevent leakage.

C. Corner Treatment:

1. Make all corners chamfered.
2. Form chamfers with 3/4" x 3/4" strips, unless otherwise shown, accurately formed and surfaced to produce uniformly straight lines and tight edge joints. Extent terminal edges to required limit and miter chamfer strips at changes in direction.
3. Concealed corners may be formed either square or chamfered.

D. Provision for Other Trades: Provide openings in concrete formwork to accommodate work of other trades. Size and location of openings, recesses and chases are the responsibility of the trade requiring such items. Accurately place and securely support items built into forms. Openings for doors and windows shall be formed with a tolerance of minus 0" and plus 1/2" from indicated dimensions.

E. Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt or other debris just before concrete is to be placed. Retighten forms immediately after concrete placement as required to eliminate mortar leaks.

F. Earth Forms:

1. Construct wood edge strips at top sides of excavations.
2. Provide forms for footings wherever concrete cannot be placed against solid earth excavation.
3. Remove loose dirt and debris prior to concrete pours.
4. Foundation concrete may be placed directly into neat excavations provided the foundation trench walls are stable as determined by the Geotecthnical Engineer.
   a. The horizontal dimensions of unformed concrete footings shall be increased 1 inch at every surface at which concrete is placed directly against the soil.

b. The minimum formwork shown on the drawings is mandatory to ensure clean excavations immediately prior to and during the placing of concrete.

G. Footings and Grade Beams:

1. Provide forms for footings and grade beams if soil or other conditions are such that earth trench forms are unsuitable.

H. For slabs-on-grade, secure edge forms in such a manner as to not move under weight of construction loads, construction and finishing equipment, or workers

3.3 INSTALLATION OF EMBEDDED ITEMS

A. General: Set and build into the work anchorage devices and other embedded items required for other work that is attached to, or supported by, concrete. Use top and bottom templates, setting drawings, diagrams, instructions and directions provided by suppliers of the items to be attached thereto.
B. Coordinate and schedule the work of this Section with the work of other Sections required to be set in, on, or contiguous with forms.
C. Anchor bolts out of position or plumb by more than 1/4" shall be reinstalled in correct position and plumb at no increase in Contract Price.

3.4 REMOVAL OF FORMS

A. Remove forms completely. Exposed surfaces of concrete shall be clean, smooth and free of irregularities.
B. Form Ties:

1. Do not remove ties until concrete has hardened sufficiently to permit removal without damaging concrete. Do not spall concrete on exposed surfaces. Pull ties of type that are wholly withdrawn from the wall toward the inside face. Cutting ties back from face of wall will not be permitted. Plug tie rod holes as specified in Concrete Section.

C. Do not pry against face of concrete. Use wooden wedges only.
D. Forms:

1. Remove forms in manner to ensure safety of members. Do not disturb supporting forms until concrete has hardened sufficiently to permit removal with safety and without damage to concrete surface. Construct forms to permit their removal without disturbing the original shoring.
2. Time of Removal: Time of removal will depend on weather conditions, the results of cylinder tests and effectiveness of curing. The following periods between depositing of concrete and removal of forms shall be considered a minimum, which may be extended if deemed necessary by the Architect. Subject to the requirements of paragraph A above, forms for walls may be removed after 8 hours of completing concrete placement.

END OF SECTION 031000

SECTION 032000 - CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Reinforcing steel bars for cast-in-place concrete, complete with tie wire.
B. Support chairs, bolsters, bars support, spacers, and other accessories for reinforcing.

1.2 RELATED SECTIONS

A. Section 03 10 00: Concrete Formwork.
B. Section 03 30 00: Cast-in-Place Concrete.

1.3 QUALITY ASSURANCE

A. Perform concrete reinforcing work in accordance with CRSI 63 and 65 and ACI 301, 315 and 318, unless specified otherwise in this Section.
B. The Owner's Testing Agency will:

1. Provide tests in accordance with the California Building Code (CBC) Section 1903.2.
2. Collect mill test reports for reinforcement.
3. Take samples from bundles at fabricators:
   a. When bundles are indentified by the heat number and accompanied by mill analysis, two specimens shall be taken from each ten (10) tons, or fraction thereof, of each size and grade.
   b. When reinforcement is not positively identified by the heat numbers or when random sampling is intended, two specimens shall be taken from each 2-1/2 tons, or thereof, of each size and grade.
   c. All costs associated with the test of reinforcing that not have mill test reports will be at the contractor's expense.
4. Test for tensile and bending strengths.

1.4 REFERENCES

A. California Code of Regulations. Title 24, 2025 edition, also known as California Building Code (CBC).
B. ACI 301 - American Concrete Institute - Specification for Structural Concrete for Buildings
C. ACI 315 - American Concrete Institute - Details and Detailing of Concrete Reinforcement.
D. ACI 318 - Building Code Requirements for Reinforced Concrete.
E. CRSI 63 - Recommended Practice for Placing Reinforcing Bars.
F. CRSI 65 - Recommended Practice for Placing Bar Supports, Specifications and Nomenclature.

1.5 SUBMITTALS

A. Submit shop drawings including appropriate plans and details. Indicate bar sizes, spacings, locations, and quantities of reinforcing steel, bending and cutting schedules, and supporting and spacing device.

PART 2 - PRODUCTS

2.1 REINFORCING

A. Reinforcing Steel: 60 ksi yield grade; deformed type as indicated on drawings.

1. Bars: Billet steel, ASTM 615; as indicated.
2. Finish: Plain unless indicated galvanized on drawings or so specified.

2.2 ACCESSORY MATERIALS

A. Tie Wire: Minimum 16-gage annealed type, or patented system accepted by Architect.
B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcing during construction conditions.

2.3 FABRICATION

A. Fabricate concrete reinforcing in accordance with ACI 315.
B. Locate reinforcing splices, not indicated on drawings, at points of minimum stress. Location of splices shall be reviewed by Architect.

PART 3 - EXECUTION

3.1 PLACEMENT

A. Place reinforcing supported and secured against displacement. Do not deviate from true alignment.
B. Place reinforcing to obtain at least minimum coverage for concrete protection. Arrange, space and securely tie bars and bar supports to hold reinforcing in position during concrete placement operations.
C. Before placing concrete, ensure reinforcing is clean, free of loose scale, dirt, or other foreign coatings, which would reduce bond to concrete.

3.2 FIELD QUALITY CONTROL

A. General: The Owner's Testing Laboratory shall test and inspect concrete reinforcement and embedded assemblies as Work progresses. Failure to detect any defective work or material shall not in any way prevent later rejection when such defect is discovered nor shall it obligate the Design Professionals for final acceptance.

B. Owner's Testing Laboratory shall provide qualified personnel at site to inspect reinforcement and embeds using the latest Drawings and reviewed shop drawings, as follows:

1. Prior to placement, inspect reinforcement and embeds for grade, quality of material, absence of foreign matter, and for suitable storage.
2. Provide continuous inspection of reinforcement and embedded assemblies during placement and immediately prior to concreting operations for: size,

quantity, vertical and horizontal spacing and location, correctness of bends and splices, mechanical splices, clearances, compliance with specified tolerances, security of supports and ties, concrete cover, and absence of foreign matter.

3. Inspect epoxy-coated reinforcement for coating damage and required applied coatings.

C. Owner's Testing Laboratory shall submit inspection, observation, and/or test reports to the Design Professionals as required herein and shall provide an evaluation statement in each report stating whether or not concrete reinforcement and embedded assemblies conforms to requirements of Specifications and Drawings and shall specifically note deviations there from.

D. Immediately report deficiencies to the Contractor. Contractor shall prepare proposed remedy for deficiency. Contractor shall present proposal to the Design Professionals for approval. After an approved proposal is accepted by the Design Professionals, the Contractor shall correct the deficiency at no cost to the Owner.

END OF SECTION 032000

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Cast-in-place concrete footings, foundations and grade beams.
B. Floors and slabs on grade.
C. Cast-in-place equipment pads.
D. Surface finish of floors.

1.2 RELATED WORK

A. Section 03 10 00: Concrete Formwork.
B. Section 03 20 00: Concrete Reinforcement.
C. Mechanical and electrical items to be cast in concrete.

1.3 QUALITY ASSURANCE

A. Perform cast-in-place concrete work in accordance with ACI 318, unless specified otherwise in this Section.
B. Inspection and testing will be performed by owner's testing laboratory.
C. Owner's testing agency shall check the first batch at the start of the day to verify materials and proportions conform to the approved mix design.

1.4 SUBMITTALS

A. Submit proposed mix design of each class of concrete to inspection and testing firm and Architect and Engineer for review prior to commencement of work.
B. Three concrete test cylinders will be taken not less than once for every 50 cubic yards of concrete placed or not less than once a day for each class of concrete placed by special inspector.
C. The cement supplier shall submit certification of compliance in accordance with CBC Section 1910.1.
D. One additional test cylinder will be taken during cold weather concreting and be cured on job site under same conditions as concrete it represents.
E. One slump test will be taken for each set of test cylinders taken.
F. The manufacturer of transit-mix concrete shall deliver to job inspector a certificate with each mixer truck. Certificate shall bear signature of representative of Testing Laboratory, stating quantity of cement, fine aggregate, coarse aggregate, and admixtures contained in load. Certificates shall indicate time, to the nearest minute, that batch was mixed.
G. A licensed weighmaster shall positively identify the quantity and weight of materials and certify each load delivered to job site by a batch ticket. The batch tickets shall be transmitted to the Inspector of Record by truck driver with each load identified thereon. The load shall not be placed without a batch ticket identifying the mix. The Inspector of Record shall keep a daily record of placements, identifying each truck, its load, and time of receipt at the jobsite, and approximate location of deposit in structure, and shall maintain a copy of the daily record as required by the enforcement agency.

1.5 REFERENCES

A. American Concrete Institute (ACI):

1. ACI 318 - Building Code Requirements for Reinforced Concrete
2. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing concrete.
3. ACI 301 - Specifications for Structural Concrete for Buildings.
4. ACI 305 - Hot Weather Concreting.
5. ACI 306 - Cold Weather Concreting.

B. All work shall be done in accordance with California Code of Regulations. Title 24, 2025 edition, also known as California Building Code (CBC).

PART 2 - PRODUCTS

2.1 CONCRETE MATERIALS

A. Cement: Portland, Type II; ASTM C150. Gray, except where noted, supplement with the following:

1. Fly Ash: 25 percent maximum; Fly Ash shall conform to ASTM C618 Class N or F.
2. Combined Fly Ash and Pozzolan: 19 percent maximum
3. Ground Granulated Blast Furnace Slag: 50 percent maximum
4. Combined Fly Ash or Pozzolan and Ground Granulated Blast Furnace Slag: 50 percent maximum with combined Fly Ash and Pozzolans not exceeding 25 percent

B. Fine and Coarse Aggregates: ASTM C33 for normal weight concrete. Aggregate shall be from established sources with proven history of successful use in producing concrete with minimum shrinkage. The average drying shrinkage after 28 days shall not exceed 0.045 percent for hardrock concrete.
C. Water: Clean, and free from injurious amounts of oil, alkali, organic matter, or other deleterious material.
D. Source of aggregate shall remain constant for the duration of the work, as practical.

2.2 ADMIXTURES

A. Air Entrainment: ASTM C260.
B. Water-Reducing Admixture: ASTM C494, Type A, and containing not more than 0.1 percent chloride ions.
C. Water-Reducing, Retarding Admixture: ASTM C494, Type D, and containing not more than 0.1 percent chloride ions.
D. Pozzolan: ASTM A618, containing not more than 0.1 percent chloride ions.
E. Calcium Chloride: Not permitted.
F. ASTM C 494, Type C, 30% + 2% solution of Calcium Nitrite

2.3 ACCESSORIES

A. Bonding Agent: “Anvil Bond" as manufactured by Master Builders or approved equal.

B. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2400 psi in two days and 6000 psi in 28 days.
C. Absorptive Mats: Cotton fabric or burlap-polyethylene, minimum 8oz./sq. yd; bonded to prevent separation during handling, placement and curing.
D. Liquid Membrane-Forming Curing Compound: Conforming to ASTM C309, Type I, and which will not discolor concrete or affect bonding or other finish applied thereover, and which restricts loss of water to not more than 0.500 grams per sq. cm. of surface when tested per ASTM C156.
E. Provide Fly Ash or other reclaimed cementitious materials as indicated in Section 2.01.A.
F. Slab-Leveling Compound. Provide leveling compound where required to meet floor flatness and levelness requirements. Acceptable products include Ardex SD-L, Burke 300 Durock or approved equal.

2.4 PROPORTIONING AND DESIGN OF MIXES

A. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301. If trial batch method used, use an independent testing facility acceptable to Engineer and Architect for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing unless otherwise acceptable to Architect.
B. Except as otherwise specified, submit written reports to Architect and Engineer of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until mixes have been reviewed by Architect and Engineer.
C. Unless lower limits are stated in the contract documents, all concrete exposed to freezing and thawing in moist condition and/or required to be watertight or used in slabs-on-grade shall have a maximum W/cm ratio of 0.45.
D. Provide concrete of following strength:

1. Compressive strength (28 day) shall be as shown on Structural Drawings.
2. Select proportions for normal weight concrete in accordance with ACI 301 by Method 1, 2 or 3 as applicable. Add air-entraining agent to concrete to entrain air as indicated in ACI 301.

E. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, water, test results, or other circumstances warrant; at no additional cost to Owner and as accepted by Architect. Laboratory test data for revised mix design and strength results must be submitted to and accepted by architect before using in work.
F. Admixtures:

1. Use water-reducing admixture or high-range, water-reducing admixture (super plasticizer), may be used in concrete subject to approval by Architect.
2. Use accelerating admixture in concrete slabs placed at ambient temperatures below 50 degrees F (10 degrees C).
3. Use air-entraining admixture in exterior exposed concrete, unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having air content of 4 percent to 6 percent.

2.5 CONCRETE MIXES

A. Ready-Mix Concrete: All concrete shall be ready-mix concrete unless otherwise approved by the Engineer and Architect.

B. Self-Leveling Concrete Topping - Underlayment for Interior Applications:

1. Topping for epoxy terrazzo flooring application shall include latex modifier, such as “TERA-GEM III, Revocoat Latex #1 Additive”. Follow manufacturer’s recommendations and flooring installation requirements.
2. Use self-leveling underlayment concrete formulated to level concrete floors without shrinking, cracking or spalling, and capable of being placed from feathered edge to 1" thickness without aggregate in one pour. If greater than 1" thickness is required, aggregate shall be used in accordance with manufacturer's requirements. Appropriate primer shall be utilized for all underlayment applications.
3. Example acceptable product: Ardex Engineered Cements "ARDEX K-15"
4. Example acceptable product: Euclid Chemical’s “Flo-Top or Super Flo-Top”
5. Example acceptable product: Sika Corporation “Sika Level Series”
6. Example acceptable product: BASF “MasterTop 110SL”

PART 3 - EXECUTION

3.1 PLACING CONCRETE

A. Pre-placement Inspection: Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast-in. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work. Moisten wood forms immediately before placing concrete where form coatings are not used.
B. Place concrete in accordance with ACI 304, and as herein specified.
C. Notify Structural Engineer minimum 48 hours prior to placing of concrete.
D. Ensure anchors, seats, plates, and other items to be cast into concrete are placed, held securely, and will not cause problems in placing concrete. Rectify misplacements and proceed with work.
E. Maintain records of poured concrete items. Record date, location of pour, quantity, air temperature and test samples taken.
F. Ensure reinforcement, embedded parts, formed expansion and contraction joints, and other inserts are not disturbed during concrete placement.
G. Prepare previously placed concrete by blowing joints and provide keyway.
H. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified only with prior approval of the Architect. Deposit concrete as nearly as practicable to this final location to avoid aggregation.
I. Placing Concrete in Forms: Deposit concrete in forms in horizontal layers not deeper than 24 inches and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.
J. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand- spading, rodding or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI recommended practices.
K. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.

L. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
M. Bring slab surfaces to correct level with straight-edge and strike off. Use bull floats or derbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.
N. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer and Architect immediately on discovery.
O. Conform to ACI 305 when concreting during hot weather.
P. Conform to ACI 306 when concreting during cold weather.
Q. Unless otherwise permitted, time for completion of discharge shall comply with ASTM C94/C94M. When discharge is permitted after more than 90 minutes have elapsed since batching or after the drum has revolved 300 revolutions, verify that air content of air-entrained concrete, slump, and temperature of concrete are as specified. When discharge is permitted after more than 90 minutes have elapsed since batching or after the drum has revolved 300 revolutions, no water may be added.

3.2 FINISH OF FORMED SURFACES

A. Rough Form Finish: For all formed concrete surfaces except as noted below. This is the concrete surface having texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projects exceeding 1/4" in height rubbed down or chipped off.
B. Smooth Form Finish: For formed concrete surfaced exposed-to-view or to be covered with a material such as waterproofing that requires a smooth surface. This is as cast arranged orderly and symmetrically with a minimum of seams. Repair and patch defective areas, with fins or other projects completely removed and smoothed.

3.3 MONOLITHIC SLAB FINISHES

A. General: finish slab surfaces in accordance with one of the finishes noted below, as designated in the Contract Documents. Finish all joints and edges with proper tools as approved.
B. Placement: Place concrete at rate that allows spreading, straight-edging, and darbying or bull floating before bleed water appears. Screed all slabs, topping fills to true levels and slopes. Work surfaces as required to produce specified finish. Do no finishing in areas where water has accumulated; drain and re-screed. In no case use a sprinkling of cement and sand to absorb moisture.
C. Tolerances: Measure slabs-on-grade to verify compliance with the tolerance requirements of ASTM E 1155 and ACI 117. Measure floor finish tolerances within 72 hours after slab finishing and before removed of supporting formwork or shoring.
    1. Concrete slab flatness and levelness tolerances to meet ACI 117, Section 4.5.6.
    a. Minimum requirements at slab-on-ground: Flatness overall min Ff = 20 and levelness overall min Fl = 17.

D. Scratch Finish:

1. Apply scratch finish to monolithic slab surfaces that are to receive mortar setting beds for tile, where mortar set tile is indicated on drawings.
2. After placing slabs, plane surface to a tolerance not exceeding ¼” in 10’ when tested with a 10’ straightedge. Slop surfaces uniformly to drains where required. After leveling, roughen surface before final set, with staff brushes, brooms, or rakes.

E. Float Finish:

1. Apply float finish to monolithic slab surfaces scheduled to receive trowel finish and other finishes as hereinafter specified.
2. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating when surface water has disappeared or when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Consolidate surface with power-driven floats, or by hand floating if area is small or inaccessible to power units. Check and level surface plane to a tolerance not exceeding 1/4" in 10' when tested with a 10' straightedge. Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, re-float surfaces to a uniform, smooth, granular texture.

F. Trowel Finish:

1. Unless otherwise noted, apply trowel finish to monolithic slab surfaces to be left exposed-to-view, or scheduled to receive floor finishes other than setting bed types.
2. After floating, begin first trowel finish operation using a power-driven trowel. Begin final troweling when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks, uniform in texture and appearance, and with a surface plane tolerance not exceeding those called out above in section C. Grind smooth surface defects, which would telegraph through applied floor covering system.

G. Non-Slip Broom Finish:

1. Apply non-slip broom finish to exterior concrete platforms, walkways, steps and ramps, and elsewhere as indicated.
2. Immediately after trowel finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

3.4 CONCRETE CURING AND PROTECTION

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

1. Start curing procedures as soon as free water has disappeared from concrete surface after placing and finishing.
2. Continue curing as directed by Architect and in accordance with ACI 301 procedures. Avoid rapid drying at end of final curing period.

B. Curing Methods: Perform curing of concrete by either moist curing, by moisture retaining cover curing, membrane curing, or by combinations thereof, as herein specified.
1. Provide moisture curing by following methods:
   a. Keep concrete surface continuously wet by covering with water.
   b. Continuous water-fog spray.
   c. Covering concrete surface with specified absorptive cover, thoroughly saturating cover with water and keeping continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with 4-inch lap over adjacent absorptive covers.

2. Provide moisture-cover curing as follows: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed at widest practicable width with sides and ends lapped at least 3 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
3. Provide liquid membrane curing as follows:
   a. Apply the specified membrane-forming curing compound to damp concrete surfaces as soon as possible after final finishing operations are complete, but not later than 2 hours. Apply uniformly in a continuous operation by power spray equipment or roller equipment in accordance with the manufacturer's directions. Recoat areas that are subjected to heavy rainfall within three hours after initial application. Maintain the continuity of the coating and repair damage to the coat during the entire curing period.
   b. Verify compatibility of membrane curing compounds on surfaces that are to be covered with a coating material applied directly to the concrete or with a covering material bonded to the concrete, such as other concrete, liquid floor hardener, waterproofing, dampproofing, membrane roofing, flooring, painting, and other coatings, and finish materials, unless otherwise acceptable to the Architect.
   c. Do not use curing compounds that will diminish bond of subsequent materials.

4. Curing Formed surfaces: Cure formed concrete surfaces, including walls with forms in place for full curing period or until forms are removed. If forms are removed, continue curing by methods specified above, as applicable.
5. Curing Unformed surfaces: Cure unformed surfaces, such as slabs, floor topping, and other flat surfaces by any of the methods specified herein, as applicable.

3.5 PATCHING

A. Allow Architect/Structural Engineer to inspect concrete surfaces immediately upon removal of forms. Patch imperfections as directed.

3.6 FIELD QUALITY CONTROL

A. Contractors Testing Laboratory: As specified in Article 1.03 above.

3.7 DEFECTIVE CONCRETE

A. Modify or replace concrete not conforming to required lines, details, and elevations.
B. Repair or replace concrete not properly placed resulting in excessive honeycombing and other defects. Patch, fill, touch up, repair, or replace exposed architectural concrete for each individual area in accordance with Architect’s particular directions.

END OF SECTION 033000

SECTION 10 14 00 - SIGNAGE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Room and door signs.

B. Interior directional and informational signs.

C. Dimensional Building Lettering

D. Building identification signs.

E. Plaque.

F. Emergency Evacuations Signs

1.2 NOT USED

1.3 REFERENCE STANDARDS

A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities

B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

C. 2025 California Building Code.

1.4 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, 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. 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 the 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.

D. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.

E. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.

F. Verification Samples: Submit samples showing colors specified.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.6 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

2.1 MANUFACTURERS

A. Flat Signs:

1. Garnet Sign Studio (San Francisco, CA)
2. Classic Signs & Awards (Concord, CA)
3. Designer Sign Systems (San Jose, CA)
4. Substitutions: See Section 01 60 00 - Product Requirements.

B. Dimensional Letter Signs

C. Other Signs:

D. Plaques:

2.2 SIGNAGE APPLICATIONS

A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1 and CBC 11B-703, 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.

    a. Engraved Plastic Laminate: Engrave through exposed face ply of plastic-laminate sheet to expose contrasting core ply. Sign inserts shall be routed form Rowmark “Ultramattes” reverse engravable laminate acrylic plastic, colors to be selected from Rowmark’s standard color chart. Letters, numbers and symbols shall be either laser cut or machine profile cut from Rowmark “ADA Alternative Appliqué” material and applied to the surface using 3M 467MP Hi Performance Adhesive Sheeting.
2. Provide "tactile" signage, with letters raised minimum 1/32 inch and contracted Grade II braille complying with CBC table 11B-703.3.1
3. Character Height: 1 inch.
4. Sign Height: 4 inches, unless otherwise indicated.
5. Office Doors: Identify with room numbers to be determined later, not the numbers shown on the drawings .
6. Conference and Meeting Rooms: Identify with room numbers to be determined later, not the numbers shown on the drawings .
7. Service Rooms: Identify with room names and numbers to be determined later, not those shown on the drawings.
8. Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", room numbers to be determined later, and braille.

C. Interior Directional and Informational Signs:

1. Sign Type: Same as room and door signs.
2. Sizes: As indicated on the drawings.
3. Wording of signs is scheduled on the drawings.

D. Building Identification Signs:

1. Use individual metal letters.
2. Mount on outside wall in location shown on drawings.

E. Other Dimensional Letter Signs:

1. Exterior: Allow for total of 80 letters, 18 inches high, cast aluminum
2. See drawings.

F. Plaque: See Drawings.

2.3 SIGN TYPES

A. Flat Signs: Signage media in aluminum frame. Include room signs, identifications signs, room capacity, toilet room signs, symbol for accessibility signs, etc.

1. Corners: Square.
2. Frame Finish: Natural (clear) anodized.
3. Wall Mounting of One-Sided Signs: Vandal Proof Exposed Fasteners through the face of the sign.

B. Color and Font: Unless otherwise indicated:

1. Character Font: Helvetica, Arial, or other sans serif font.
2. Character Case: Upper case only.
3. Background Color: As selected from manufacturer's full range of available colors.
4. Character Color: Contrasting color.

C. Toilet Room Signs:

1. Material: Cast-acrylic sheet, ¼ inch thick.
2. Perimeter: Unframed at door mounted signs. Aluminum framed at wall mounted signs.
3. Copy: Raised. (Contracted Grade 2 Braille)
4. Character Style: Univers 55.
5. Text: According to requirements indicated on drawings.
6. Message: Fixed.
7. Sizes:
   a. Sign:
      1) “Men” or “Boys” - Equilateral triangle, 12 inches on a side. Door mounted.
      2) “Women” or “Girls” - Circle, 12 inches diameter. Door mounted.
      3) “Unisex”: Equilateral triangle superimposed over a 12 inch circle.
      4) ADA signage: 4 inches by 6 inches or 10 inches by 12 inches. Mounted at plus 5 feet, on wall, on latch side of door.
   b. Character: Minimum 1-inch high characters. Contracted Grade 2 Braille at accessible facilities.
8. Colors:

a. Frame at wall mounted signage: Aluminum.
b. Character: Non-glare contrasting color to door as selected by Architect.
c. Background: Non-glare contrasting color to door as selected by Architect.

D. Accessible Parking Signs:

1. Material: 0.080-inch aluminum or other noncorrosive reflectorized material.
2. Size: Minimum of 70 square inches in area. Provide additional sign at bottom for Van Accessible spaces.
3. Background Color: Blue.
4. Copy Material: White silk-screen, with reflective white border.
5. Mounting: Pole mounted at each accessible parking space.
6. Spaces complying with CBC 703.7.2.1 shall have an additional sign stating "Van Accessible" mounted below the symbol of accessibility.

E. Unauthorized Vehicles:

1. Material: 0.080-inch aluminum or other noncorrosive reflectorized material.
2. Size: 18 inches by 24 inches.
3. Character: Black.
4. Background: White.
5. Text: As shown on the Drawings.

F. Symbols of Accessibility: Provide 6-inch by 6 inch by ¼ inch reverse silk screen international symbol of accessibility in white on blue background. Provide aluminum frame.

G. Evacuation Sign: Provide 12-inch by 11 with .060 inch White Poly Backing and scratch Resistant printed plastic with a clear insert window for 8 ½"X11" paper print insert.

1. Content of the printed insert shall be a simplified version of the Egress Plans on drawing sheets A0.12 and A0.13.
2. Sign Manufacture shall propose map content for the Architect's review and approval.

2.4 TACTILE SIGNAGE MEDIA

A. Engraved Panels: Laminated colored matt finished plastic; engraved through face to expose core as background color:
1. Total Thickness: 1/16 inch.

2.5 NON-TACTILE SIGNAGE MEDIA

A. Silk Screened Plastic Panels: Letters and graphics silk screened onto reverse side of matt finished plastic surface:

1. Sign Color: Clear.
2. Total Thickness: 1/8 inch.

2.6 DIMENSIONAL LETTERS

A. Metal Letters:
   1. Metal: Steel
   2. Finish: Factory Kynar Coated
   3. Mounting: Welded, See Drawings

2.7 ACCESSORIES

A. Exposed Mechanical Fasteners: Use nonremovable exposed stainless steel vandal proof mechanical fasteners placed *through predrilled holes in aluminum frames and through face of sign into solid backing*.

B. Where panel signs are scheduled or indicated to be mounted on glass, provide matching plate on opposite side of glass to conceal mounting materials.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install neatly, with horizontal edges level.

C. Locate signs where indicated:

   1. Room and Door Signs: Locate on wall at latch side of door with centerline of sign at heights indicated on drawings.

D. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable and as indicated on drawings.

E. Protect from damage until Substantial Completion; repair or replace damage items.

F. Prior to the 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 ensure proper size and spacing of Braille dots, and proportion and type of raised characters are in conformance.

END OF SECTION

SECTION 31 05 13 – SOILS FOR EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

A. All grading, earthwork, excavations, backfills, compaction, and other grading operations shall be accomplished in accordance with the soils report (which shall be a part of the contract documents). Contractor shall be responsible for securing a copy of the soils report. The project soils engineer shall be present during all grading operations. The soils engineer shall direct samples to be submitted and tests to be taken. Contractor shall cooperate with the requirements of the soils engineer.

B. Related Sections:

1. Section 31 22 13 – Rough Grading.
2. Section 31 23 00 – Excavation and Fill.
3. Section 31 23 23.13 – Backfill.
4. Section 31 23 16.13 – Trenching.
5. Section 32 12 16 – Asphalt Pavement.
6. Section 32 11 23 – Aggregate Base Course.
7. Section 32 96 00 – Planting.

1.2 REFERENCES

A. The project Soils Report and any supplements to the Soils Report.

PART 2 - PRODUCTS

2.1 TOPSOIL MATERIALS

A. Topsoil materials shall meet to the requirements of Section 32 96 00 Planting.

B. Class II Permeable Material shall meet the requirement of Caltrans Standard Specifications 68-1.025.

PART 3 - EXECUTION

3.1 SOIL REMOVAL

A. Conduct earthwork operations in accordance with the provisions of the Soils Report and any supplements to the Soils Report, and as directed by the Soils Engineer.

END OF SECTION 31 05 13

SECTION 31 10 00 – SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes removal of surface debris; removal of paving, curbs, sidewalks; removal of trees, shrubs, and other plant life; removal of underground storage tanks; and removal of abandoned utilities.

B. Related Sections:

1. Section 31 05 13 – Soils for Earthwork.
2. Section 31 22 13 – Rough Grading.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 PREPARATION

A. Verify that existing plant life designated to remain is tagged or identified.

B. Removed materials are to be removed from the site and disposed of in a lawful manner.

3.2 PROTECTION

A. Locate, identify, and protect utilities from damage that are to remain.

B. Protect trees, plant growth, and features designated to remain.

C. Protect benchmarks, survey control points, and existing structures from damage or displacement.

3.3 CLEARING

A. Clear areas required for access to site and execution of Work.

B. Remove trees and shrubs indicated and in a manner specified on the drawings or in these specifications. Remove tree and shrub root bulbs in their entirety and to a maximum root diameter of one inch.

3.4 REMOVAL

A. Remove debris, rock, and extracted plant life from site to the limits indicated on the drawings.

B. Remove paving, curbs, and concrete from the site to the limits indicated on the drawings.

C. Neatly saw cut edges at limits indicated for all pavement, curbs, and walkways to be removed.

D. Excavate and remove any underground storage tanks and associated plumbing piping, as indicated on the drawings.

3.5 TOPSOIL EXCAVATION

A. Excavate topsoil from areas to be further excavated, relandscaped, or regraded, without mixing with foreign materials for use in finish grading.

B. Stockpile on site and protect from erosion.

C. Remove excess topsoil not intended for reuse, from site.

END OF SECTION 31 10 00

SECTION 31 22 13 – ROUGH GRADING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes removal of topsoil and cutting, grading, filling, rough contouring, and compacting as indicated on the drawings.

B. Related Sections:

1. Section 31 05 13 – Soils for Earthwork.
2. Section 31 10 00 – Site Clearing.
3. Section 31 23 00 – Excavation and Fill.
4. Section 31 23 16.13 – Trenching.
5. Section 31 23 23.13 – Backfill.
6. Section 32 96 00 – Planting.

1.2 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Topsoil: as specified in Section 32 96 00 Planting.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 06 00 - Regulatory Requirements.

B. Verify site conditions.

C. Verify that survey benchmark and intended elevations for the Work are as indicated.

3.2 PREPARATION

A. Identify required lines, levels, contours, and datum.

B. Stake and flag locations of known utilities.

C. Locate, identify, and protect from damage utilities that are to remain.

D. Notify affected utility companies to remove or relocate public utilities indicated on the plans to be removed or relocated by the utility company.

E. Protect above and below grade utilities that are to remain.

F. Protect plant life, lawns, and other features remaining as a portion of final landscaping.

G. Protect bench marks, survey control point, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

3.3 SOIL EXCAVATION

A. Excavate soil from areas to be further excavated, relandscaped, or regraded. as shown on the drawings.

B. When excavating through roots, for trees to remain, perform work by hand and cut roots with sharp axe.

C. Remove excess soil from site.

D. Benching Slopes: Horizontally bench existing slopes steeper than 1:4 (vertical:horizontal) to key placed fill material to slope to provide firm bearing. Minimum horizontal bench shall be 2 feet wide.

E. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.

3.4 FILLING

A. Fill areas to contours and elevations with suitable materials.

B. Place fill material on continuous layers and compact.

C. Maintain optimum moisture content of fill materials to attain required compaction density.

D. Slope grade away from buildings at a minimum slope of two (2%) percent unless noted otherwise.

E. Make grade changes gradual. Blend slope into level areas.

F. Remove surplus fill materials from site.

3.5 TOLERANCES

A. Section 01 40 00 - Quality Control Requirements.

B. Top Surface of Subgrade: Plus or minus 0.05 feet from required elevation on paved or walkway areas and zero (0) feet to minus 0.10 foot in building pad areas.

3.6 FIELD QUALITY CONTROL

A. Testing and inspection shall be provided by the project soils engineer.

B. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at the Contractor's sole expense.

END OF SECTION 31 22 13

SECTION 31 23 00 – EXCAVATION AND FILL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes excavating for building foundations, roads, parking areas, site grading, slabs-on-grade, landscaping areas, and for site structures.

B. Related Sections:

1. Section 31 05 13 – Soils for Earthwork.
2. Section 31 22 13 – Rough Grading.
3. Section 31 23 16.13 – Trenching.
4. Section 31 23 23.13 – Backfill.

1.2 REFERENCES

A. Local utility standards when working within 24 inches of the respective utility lines.

PART 2 - PRODUCTS

A. Bio-Retention Soils

1. Permeable Class II Aggregate Base or crushed drain rock.

2. Planting soil is 60% sand, 40% compost mix allowing 5”/hour percolation.

PART 3 - EXECUTION

3.1 PREPARATION

A. Identify required lines, levels, contours, and datum locations.

3.2 EXCAVATING & FILL

A. Underpin adjacent structures which may be damaged by excavating work.

B. Excavate subsoil to accommodate building foundations, slabs-on-grade, paving and site structures.

C. Compact disturbed load bearing soil in direct contact with foundations to original bearing capacity; perform compaction in accordance with Section 31 23 23.13 and 31 23 16.13.

D. Slope banks with machine to angle of repose or less until shored.

E. Do not interfere with 45 degree bearing splay of foundations.

F. Grade top perimeter of excavating to prevent surface water from draining into excavation.

G. Hand trim excavation. Remove loose matter.

H. Remove lumped subsoil, boulders, and rock per Geotechnical engineer present during the construction.

I. Notify Architect/Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume Work.

J. Correct areas over excavated with backfill and compact replacement as specified for authorized excavation.

K. Remove excess excavated material from site.

L. Imported fill and aggregate baserock placed within the building footprints should be virgin/non-recycled and free of ground-up asphalt.

3.3 FIELD QUALITY CONTROL

A. The project Soils Engineer shall provide testing and inspection services.

3.4 PROTECTION

A. Prevent displacement or loose soil from falling into excavation; maintain soil stability.

B. Protect structures, utilities and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth operations.

END OF SECTION 31 23 00

SECTION 31 23 16.13 – TRENCHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes excavating trenches for utilities from outside building to final connection point or public right-of-way or utility; compacted fill from top of utility bedding to subgrade elevations; and backfilling and compaction.

B. Related Sections:

1. Section 31 05 13 – Soils for Earthwork.
2. Section 31 22 13 – Rough Grading.
3. Section 31 23 00 – Excavation and Fill.
4. Section 31 23 23.13 – Backfill.
5. Section 32 96 00 – Planting.
6. Section 33 30 00 – Sanitary Sewerage Utilities.
7. Section 33 40 00 – Storm Drainage Utilities.
8. Section 03 30 00 – Cast-in-Place Concrete.

1.2 DEFINITIONS

A. Utility: Any buried pipe, duct, conduit, or cable.

1.3 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.4 COORDINATION

A. Section 01 06 00 - Regulatory Requirements.

B. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.

C. Verify elevations of existing facilities prior to placing new Work.

PART 2 - PRODUCTS

2.1 ACCESSORIES

A. Filter Fabric: Non-biodegradable, woven as manufactured by TC Mirafi, Tenax Corp., Tensar

Earth Technologies, Inc. or equal.

PART 3 - EXECUTION

3.1 LINES AND GRADES

A. Grades:

1. Pipes shall be laid true to the lines and grades indicated.

2. The grade alignment of the pipe shall be maintained by the use of a string line parallel with the grade line and vertically above the centerline of the pipe. This line shall be established on level batter boards at intervals of not more than 25 feet. Batter boards shall span the trench and be rigidly anchored to substantial posts driven into the ground on each side of the trench. Three adjacent batter boards must be set before laying pipe to provide a check on the grades and line. Elevation and position of the string line shall be determined from the elevation and position of offset points or stakes located along the pipe route. Pipe shall not be laid using side lines for line or grade.

3. As an alternative means of establishing alignment and grade, a "Laser-Beam" instrument may be utilized with a competent operator.

B. Location of Pipe Lines:

1. The location and approximate depths of the proposed pipe lines are shown on the Drawings.

2. An underground locate service shall be enlisted to discover the location of existing utilities regardless if they are shown on the drawings.

3. The Architect/Engineer reserves the right to make changes in lines, grades, and depths of pipe lines and manholes when such changes are necessary.

3.2 PREPARATION

A. Identify required lines, levels, contours, and datum locations.

B. Protect plant life, lawns, and other features remaining as a portion of final landscaping.

C. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

D. Maintain and protect above and below grade utilities which are to remain.

E. Cut out soft areas of subgrade not capable of compaction in place. Backfill and compact to density equal to or greater than requirements for subsequent backfill material.

3.3 EXCAVATING

A. Excavate subsoil required for utilities.

B. Cut trenches sufficiently wide to enable installation and allow inspection. Remove water or materials that interfere with Work.

C. Do not interfere with 45 degree bearing splay of foundations.

D. Hand trim excavation. Hand trim for bell and spigot pipe joints. Remove loose matter.

E. Remove lumped subsoil, boulders, and rock as directed by the Soils Engineer or other inspector.

F. Correct over excavated areas with backfill and compact replacement as specified for authorized excavation.

G. Stockpile excavated material on site. Remove excess material not being used from site.

3.4 TRENCHING

A. Excavations:

1. Excavation shall be dug so that the pipe can be laid and jointed properly. The trench shall be made so that the pipe can be laid to the alignment and depth as shown on the Drawings, and it shall be excavated only so far in advance of pipe laying as permitted by the Architect/Engineer. The excavation shall not be more than two feet wider at the bottom than the outside diameter of the pipe or structure. If there is no interference with construction, or adjacent property, and if soil permits, the Contractor at his own expense shall be permitted to slope the side walls of the excavation starting at a point two (2) feet above the top of pipe.

2. The trench shall be excavated to the depth required so as to provide a uniform and continuous bearing and support for the pipe on bedding material at every point between joints, except where pipe slings or other lifting tackle are withdrawn.

3. Excavation Below Grade:

   1) Where excavation indicates that the subsurface materials at the bottom of the trench are in a loose or soft state, the Contractor shall be advised to excavate to a depth where suitable material is encountered, as directed by the Architect/Engineer.

   2) Where the bottom of the trench has been excavated by mistake to a greater depth than required, the Contractor shall refill this area using approved material. No additional compensation shall be given to the Contractor. Refilling with earth to bring the bottom of the trench to the proper grade will not be permitted.

4. Excavation within 24 inches of existing utilities shall be governed by specifications of the Owner of the respective utility. The Contractor shall obtain these specifications and follow the same at no extra cost.

5. Excavation and shoring shall adhere to the requirements and safety standards set by OSHA.

B. Trenching in Advance of Pipe Laying: The trench for the pipe lines shall not be opened for a distance of more than 200 feet at any one time, unless authorized by the Architect/Engineer. At no time will the Contractor be permitted to leave more than 50 feet of trench open at the end of a working day. Adequate protection of open trench shall be provided by the Contractor and the Contractor shall be responsible therefore.

3.5 SHEETING AND BRACING

A. General:

1. Sheeting and bracing of all excavations shall conform to the latest statutes of the State of California governing safety of workers in the construction industry. When necessary, in the opinion of the Contractor, adequate sheeting and bracing shall be installed to prevent ground movement that may cause damage or settlement to adjacent structures, pipelines and utilities. Any damage due to settlement because of failure to use sheeting or because of inadequate bracing, or through negligence or fault of the Contractor in any other manner, shall be repaired at the Contractor's expense.

2. Sides of trenches in unsuitable, loose or soft material, five feet or more in depth, shall be shored, sheeted, braced, sloped, or otherwise supported by means of sufficient strength to protect employees working within them.

B. Sheeting Requirements:

1. Where excavations are made with vertical sides which require supporting, the sheeting and bracing shall be of sufficient strength to sustain the sides of the excavations and to prevent movement which could in any way injure the Work, or adjacent structures, or diminish the working space sufficiently to delay the Work. Special precautions shall be taken where there is additional pressure due to the presence of other structures.

2. It shall be the Contractor's responsibility to select sheeting and bracing of sufficient dimensions and strength and type to adequately support the sides of trenches and excavations.

3. Sheeting and bracing shall be removed before the completion of the Work.

3.6 BACKFILLING

A. Backfill trenches to contours and elevations shown on the drawings.

B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces.

C. Fill materials shall be as per the Caltrans.

D. Employ a placement method that does not disturb or damage utilities in trench. Jetting of backfill

materials to achieve compaction shall not be permitted.

E. Maintain optimum moisture content of fill materials to attain required compaction density.

F. Remove surplus fill materials from site.

3.7 TOLERANCES

A. Section 01 40 00 - Quality Requirements.

B. Top Surface of Backfilling Under Paved Areas: Plus or minus 0.05 feet from required elevations.

C. Top Surface of General Backfilling: Plus or minus 1/10 feet from required elevations.

3.8 FIELD QUALITY CONTROL

A. Compaction testing will be performed by the project Soils Engineer.

B. If tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.

3.9 PROTECTION OF FINISHED WORK

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Reshape and re-compact fills subjected to vehicular traffic during construction.

END OF SECTION 31 23 16.13

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SECTION 31 23 23.13 - BACKFILL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes building perimeter and site structure, filling and backfilling to subgrade elevations; fill under slabs-on-grade, paving; fill for over-excavation; consolidation and compaction.

B. Related Sections:

1. Section 31 05 13 – Soils for Earthwork.
2. Section 31 23 00 – Excavation and Fill.
3. Section 31 23 16.13 – Trenching.
4. Section 32 96 00 – Planting.
5. Section 03 30 00 – Cast-in-Place Concrete.

PART 2 - PRODUCTS

2.1 FILL MATERIALS

A. Fill and Structural Fill as approved by the Civil Engineer.

2.2 ACCESSORIES

A. Geotextile Fabric: Non-biodegradable, woven as manufactured by TC Mirafi, Tensar Earth Technologies, Inc. or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.

C. Verify structural ability of unsupported walls to support loads imposed by the fill.

3.2 PREPARATION

A. Compact subgrade to density requirements for subsequent backfill materials.

B. Cut out soft areas of subgrade not capable of compaction in place. Backfill and compact to

density equal to or greater than requirements for subsequent fill material.

C. Roll subgrade surface to identify soft spots; fill and compact to density equal to or greater than requirements for subsequent fill material.

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3.3 BACKFILLING

A. Backfill areas to contours and elevations shown on drawings.

B. Employ a placement method that does not disturb or damage other work.

C. Maintain optimum moisture content of backfill materials to attain required compaction density.

D. Backfill against supported walls and structures. Do not backfill against unsupported walls or structures.

E. Backfill simultaneously on each side of unsupported walls and structures until supports are in place.

F. Slope grade away from building at a minimum slope of two (2%) percent, unless noted otherwise.

G. Make gradual grade changes. Blend slope into level areas.

H. Remove surplus backfill materials from site.

3.4 TOLERANCES

A. Section 01 40 00 - Quality Requirements.

B. Top Surface of Backfilling Under Paved Areas: Plus or minus 0.05 feet from required elevations.

C. Top Surface of General Backfilling: Plus or minus 1/10 feet from required elevations.

3.5 FIELD QUALITY CONTROL

A. The project Soils Engineer shall provide testing and inspection services.

3.6 PROTECTION OF FINISHED WORK

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Reshape and re-compact fills subjected to vehicular traffic.

END OF SECTION 31 23 23.13

SECTION 32 11 23 – AGGREGATE BASE COURSE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes aggregate base course.

B. Related Sections:

1. Section 31 05 13 - Soils for Earthwork.
2. Section 31 22 13 - Rough Grading.
3. Section 31 23 23.13 - Backfill.
4. Section 31 23 16.13 - Trenching.
5. Section 32 12 16 - Asphalt Pavement.
6. Section 32 13 13 - Concrete Paving.
7. Section 33 49 13 - Storm Drainage Manholes, Frames, and Covers.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Class II Aggregate Base per Caltrans Standard Specifications, or Local Municipality.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

3.2 PREPARATION

A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.

B. Do not place fill on soft, muddy, or frozen surfaces.

3.3 AGGREGATE PLACEMENT

A. Place aggregate in maximum 6-inch layers and compact to specified density.

B. Level and contour surfaces to elevations and gradients indicated.

C. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.

D. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.

E. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.4 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.

B. Flatness: Maximum variation of 1/4 inch measured with 10-foot straight edge.

C. Scheduled Compacted Thickness: Within 1/4 inch.

D. Variation From Design Elevation: Within 1/2 inch.

3.5 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Testing and inspection services.

B. Compaction testing will be performed in accordance with ASTM D1557.

C. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to owner.

END OF SECTION 32 11 23

SECTION 32 12 16 – ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

B. Related Sections

1. Section 31 05 13 – Soil for Earthwork
2. Section 31 22 13 – Rough Grading: Preparation of site for paving and base
3. Section 31 23 23.13 – Backfill: Compact subbase for Paving
4. Section 32 11 23 – Aggregate Base Course
5. Section 32 17 00 – Pavement Specialties
6. Section 32 17 23.13 – Painted Pavement Markings

1.2 REFERENCES

A. ASTM D946 - Penetration-Graded Asphalt Cement for Use in Pavement Construction.

B. ASTM D3381 - Viscosity Graded Asphalt Cement for Use in Pavement Construction.

C. TAI - (The Asphalt Institute) - MS-2 Mix Design Methods for Asphalt Concrete and Other Hot Mix Types.

D. TAI – (The Asphalt Institute) – MS-3 Asphalt Plant Manual.

E. TAI – (The Asphalt Institute) – MS-8 Asphalt Paving Manual.

F. TAI – (The Asphalt Institute) – MS-19 Basic Asphalt Emulsion Manual.

G. Caltrans Standard Specifications, 2010 Edition, Section 39.

1.3 SUBMITTALS:

A. Product Data: Submit product information and mix designs.

1.4 SITE CONDITIONS:

A. Weather Limitations: Apply prime and tack coats when ambient temperature is above 50 deg F (10 deg C), and when temperature has not been below 35 deg F (1 deg C) for 12 hours immediately prior to application. Do not apply when base is wet or contains an excess of moisture.

B. Construct asphalt concrete surface course when atmospheric temperature is above 40 deg F (4 deg C), and when base is dry. Base course may be placed when air temperature is above 30 deg F (-1 deg C) and rising.

C. Grade Control: Establish and maintain required lines and elevations.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. General: Use locally available materials and gradations which exhibit a satisfactory record of previous installations.

B. Asphalt Paving Pedestrian:

1. Base Course Aggregate: Refer to Aggregate Base Courses, specification section 32 11 23 for base course aggregates.

2. Surface Course Aggregate: 3/8" maximum crushed stone, crushed gravel, crushed slag, and sharp-edged natural sand.

3. Herbicide Treatment: Ronstar-G.

4. Asphalt Cement: Comply with AASHTO M 226 (ASTM D 3381) for viscosity-graded material and AASHTO M 20 (ASTM D 946) for penetration-graded material.

5. Prime Coat: Cut-back asphalt type; AASHTO M 82 (ASTM D 2027) MC-30, MC-70 or MC-250.

6. Tack Coat: Emulsified asphalt, AASHTO M 140 (ASTM D 997) or M 208 (D 2397); SS-1, SS-1h, CSS-1 or CSS-1h, diluted with one part water to one-part emulsified asphalt.

7. Slurry Seal: OverKote Asphalt Pavement Coating manufactured by Reed & Graham, Inc. (408) 287-1400 conforming to the following:

a.	Residue at 300 to 400 degrees F	55-65
b.	Dehydration, 96 hours at 100 degrees F	0.6 min

c. Solubility of residue in C2HCL 15-20

d. Loss on ignition of insoluble reside % 16 max

e. Cone penetration at 77 degrees F dmm 400-700

8. Redwood Headerboard: Construction Heart Redwood. Size per detail.

C. Asphalt Paving Vehicular:

1. Base Course Aggregate: Refer to Aggregate Base Courses, specification section 32 11 23 for base course aggregates.

2. Surface Course Aggregate: 3/8" maximum crushed stone, crushed gravel, crushed slag, and sharp-edged natural sand.

3. Herbicide Treatment: Ronstar-G.

4. Asphalt Cement: Comply with AASHTO M 226 (ASTM D 3381) for viscosity-graded material and AASHTO M 20 (ASTM D 946) for penetration-graded material.

5. Prime Coat: Cut-back asphalt type; AASHTO M 82 (ASTM D 2027) SC-70.

6. Tack Coat: Emulsified asphalt, AASHTO M 140 (ASTM D 997) or M 208 (D 2397); SS-1, SS-1h, CSS-1 or CSS-1h, diluted with one part water to one-part emulsified asphalt.

7. Slurry Seal: OverKote Asphalt Pavement Coating manufactured by Reed & Graham, Inc. (408) 287-1400 conforming to the following:

a. Residue at 300 to 400 degrees F 55-65

b. Dehydration, 96 hours at 100 degrees F 0.6 min

c. Solubility of residue in C2HCL 15-20

d. Loss on ignition of insoluble reside % 16 max

e. Cone penetration at 77 degrees F dmm 400-700

8. Redwood Headerboard: Construction Heart Redwood. Size per detail.

2.2 ASPHALT-AGGREGATE MIXTURE:

A. Provide asphalt-aggregate mixture in accordance with Section 39, State of California "Standard Specifications", Latest Edition.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION:

A. Remove loose material from compacted subbase surface immediately before applying herbicide treatment or prime coat.

B. Proof roll prepared subbase surface to check for unstable areas and areas requiring additional compaction.

C. Notify Contractor of unsatisfactory conditions. Do not begin paving work until deficient sub-base areas have been corrected and are ready to receive paving.

D. Herbicide Treatment: Apply chemical weed control agent in strict compliance with manufacturer's recommended dosages and application instructions. Apply to compacted, dry subbase prior to application of prime coat.

E. Base Course Aggregate: Refer to Aggregate Base Courses, specification section 32 11 23 for base course aggregate installation.

F. Prime Coat: Apply at rate of 0.20 to 0.50 gal. per sq. yd., over compacted aggregate base. Apply material to penetrate and seal, but not flood, surface. Cure and dry as long as necessary to attain penetration and evaporation of volatile.

G. Tack Coat: Apply to contact surfaces of previously constructed asphalt or Portland cement concrete and surfaces abutting or projecting into asphalt concrete pavement. Distribute at rate of 0.05 to 0.15 gal. per square yard of surface. Allow to dry until at proper condition to receive paving.

H. Exercise care in applying bituminous materials to avoid smearing of adjoining concrete surfaces. Remove and clean damaged surfaces.

I. Rigid Edging:

1. Redwood Headerboard: Install wood headers or edgings where indicated on Drawings and where edge of asphalt paving does not abut a firm, vertical edge. Anchor with wood stakes, spaced per detail, driven at least one (1) inch below top elevation of header or

edging. Use two (2) galvanized nails per stake to fasten headers and edging; length as needed to penetrate both members and provide ½-inch clinch at point. Predrill stakes if needed to avoid splitting.

3.2 PLACING MIX:

A. General: Place asphalt concrete mixture on prepared surface, spread and strike off. Spread mixture at minimum temperature of 225 deg F (107 deg C). Place inaccessible and small areas by hand. Place each course to required grade, cross-section, and compacted thickness.

B. Paver Placing: Place in strips not less than 10' wide, unless otherwise acceptable to Architect. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete base course for a section before placing surface course.

C. Joints: Make joints between old and new pavements, or between successive days' work, to ensure continuous bond between adjoining work. Construct joints to have same texture, density and smoothness as other sections of asphalt concrete course. Clean contact surfaces and apply tack coat.

D. Asphalt paving shall be installed in lifts not exceeding two (2) inches in thickness per lift.

3.3 ROLLING:

A. General: Begin rolling when mixture will bear roller weight without excessive displacement.

B. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.

C. Breakdown Rolling: Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge. Check surface after breakdown rolling, and repair displaced areas by loosening and filling, if required, with hot material.

D. Second Rolling: Follow breakdown as soon as possible, while mixture is still hot. Continue second rolling until mixture has been thoroughly compacted.

E. Finish Rolling: Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated and course has attained maximum density.

F. Patching: Remove and replace paving areas mixed with foreign materials and defective areas. Cut-out such areas and fill with fresh, hot asphalt concrete. Compact by rolling to maximum surface density and smoothness.

G. Protection: After final rolling, do not permit vehicular or pedestrian traffic on pavement until it has cooled and hardened.

H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

I. Slurry Seal: Apply slurry seal per manufacturer recommendations.

1. Apply to a clean, smooth, and uniform surface.

2. Apply when the ambient conditions are 50°F and rising with no precipitation or freezing temperatures in forecast for 24 hours.

3. Substrate temperature must be 50°F and rising.

4. Keep traffic off coating until it is completely dry.

5. Spray with a texture sprayer or can be applied by squeegee.

6. Apply (2) coats at a rate of 1 gallon per 100 square feet of surface area for both coats.

7. Apply second coat as soon as the first coat is dry enough to walk on.

3.4 FIELD QUALITY CONTROL:

A. General: Test in-place asphalt concrete courses for compliance with requirements for thickness and surface smoothness. Repair or remove and replace unacceptable paving as directed by Architect.

B. Thickness In-place compacted thickness will not be acceptable if exceeding following allowable variation from required thickness:

C. Base Course: 3/8", plus or minus.

D. Surface Course: 1/4", plus or minus.

E. Surface Smoothness: Test finished surface of each asphalt concrete course for smoothness, using 10' straightedge applied parallel with, and at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding the following tolerances for smoothness.

1. Base Course Surface: 1/4".

2. Wearing Course Surface: 3/16".

3. Check surface areas at intervals as directed by Owner’s Representative.

END OF SECTION 32 12 16

(Revised 5/19/2026)

SECTION 32 12 36 – SLURRY SEAL EXISTING ASPHALT PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

B. All grading, earthwork, excavations, backfills, compaction, and other grading operations shall be accomplished in accordance with the soils report (which shall be part of the Contract Documents). Contractor shall be responsible for securing a copy of the soils report. The project soils engineer shall be present during all grading operations. The soils engineer shall direct samples to be submitted and tests to be taken. Contractor shall cooperate with the requirements of the soils engineer.

1.2 DESCRIPTION OF WORK:

A. Extent of asphalt slurry work is shown on drawings.

1.3 SUBMITTALS:

A. Material Certificates: Provide copies of materials certificates signed by material producer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

1.4 SITE CONDITIONS:

A. Weather Limitations: Do not apply when base is wet or contains an excess of moisture.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. General: Use locally available materials and gradations which exhibit a satisfactory record of previous installations.

B. OverKote Seal: Asphalt pavement coating as manufactured by Reed & Graham, Inc. or approved equal.

C. OverKote Crackfiller as manufactured by Reed & Graham, Inc. or approved equal.

D. OverKote Oil Spot Sealer as manufactured by Reed & Graham, Inc. or approved equal.

E. 30 Mesh Sand

PART 3 - EXECUTION

3.1 CRACK FILLING AND SURFACE PREPARATION:

A. Cracks 1/8" or larger shall be cleaned and filled to a level surface with OverKote Crackfiller. A "V" shaped squeegee is recommended for this application. Mix and apply per manufacturer recommendations.

B. All areas to be sealed shall be thoroughly cleaned. Dirt, loose pieces and other obstructions in joints or cracks shall be removed with an air jet and/or pressurized water.

C. Excessive oil spots shall be removed with a scraper, stiff brush and detergent. OverKote Oil Spot Sealer shall be applied to prepared oil spots.

D. In exceptionally hot weather, dampen the surface with water. Remove any excess water to leave the surface only slightly damp.

3.2 SLURRY SEAL APPLICATION –OverKote Asphalt Paving Coating

A. Prior to bidding, consult manufacturer for recommendations on mix and number of applications required to result in a smooth and uniform surface for this application. A minimum of two applications shall be required, more if necessary.

B. Depending on the surface, one or more applications may be required at the rate of 25 to 35 gallons per 1,000 square feet of surface area. The surface shall be smooth and uniform upon completion. For excessively rough areas, add 2 to 3 pounds of 30 mesh sand per gallon of OverKote Sealer. Additional sand may be added per custom specification request.

C. Apply OverKote slurry seal to surface course in accordance with manufacturer recommendations. Spread immediately by machine, squeegee, stiff plastic bristle or soft hair push broom. Spread poured parallel lines by pulling material at an angle toward operator. Tools shall be wet before using. Repeat as necessary to spread sealer uniformly, eliminating all laps and ridges. Apply 2nd coat as soon as first coat is dry.

D. A second application shall be made after first coat has dried to the touch. When sand is added to the first seal coat, two additional coats without extra sand shall be applied.

E. Protect from trespass until sealed area is dry.

F. Allow slurry seal to dry before permitting traffic or striping.

3.3 FIELD QUALITY CONTROL:

A. Contractor shall obtain approval of surface preparation from Owner's Representative prior to application of slurry seal.

B. Contractor shall obtain approval of slurry seal application finish surfaces from Owner's Representative prior to completion and prior to striping.

END OF SECTION 32 12 36

SECTION 32 13 13.1 – CONCRETE PAVING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS:

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

B. All grading, earthwork, excavations, backfills, compaction, and other grading operations shall be accomplished in accordance with the soils report (which shall be part of the Contract Documents). Contractor shall be responsible for securing a copy of the soils report. The project soils engineer shall be present during all grading operations. The soils engineer shall direct samples to be submitted and tests to be taken. Contractor shall cooperate with the requirements of the soils engineer.

C. Specification Division 31, Earthwork, Soils and Earthwork, Rough Grading, and Excavation and Fill.

D. Specification 32 11 23 Aggregate Base Course.

1.2 DESCRIPTION OF WORK:

A. The extent of concrete work is shown on the landscape architectural drawings and details and shall include, but is not limited to, pedestrian concrete walkways, steps, ramps, curbs, mowbands, footings and walls.

1.3 QUALITY ASSURANCE:

A. Codes and Standards: Comply with provisions of following codes, specifications and standards, except where more stringent requirements are shown or specified:

1. Concrete Reinforcing Steel Institute, "Manual of Standard Practice".
2. ACI 318 Building Code Requirements for Structural Concrete.
3. ASTM C150, for Type I, Type II or Type III Portland cement concrete.
4. Chapter 19A, 2022 C.B.C.

B. Certification: Weighmaster Certificate

C. Duties of the Inspector: The inspector shall notify the Architect, Structural Engineer and the Division of State Architect at least 48 hours in advance of the first pour of concrete and sufficiently in advance of subsequent pours. Comply with Section 4-333.1 and Chapter 7, Part I, Title 24, California Code of Regulations (CCR).

D. Installer Qualifications:

1. Experience: The concrete installing firm shall have contracted for and successfully completed construction of a minimum of five (5) California public school district construction projects, approved by the Division of the State Architect (DSA), within the past five (5) years of similar size, complexity, budget and scope.

2. Licensure: The concrete installation firm shall hold a current, active C8 "Concrete Contractor" license classification by the California State License Board that has been consistently active for at least five (5) years and that has not been suspended or revoked.

3. Supervision: The concrete installing firm shall have a qualified and experienced concrete technician on site during concrete installation.

E. "Colored" Concrete Installer Qualifications: Installer of "colored" concrete shall be qualified by Scofield. Contact local Scofield Representative or the Division Office (323) 720-3055 for a list of locally qualified installers.

1.4 SUBMITTALS:

A. Shop Drawings Reinforcement: Submit shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, stirrup spacing, diagrams of bent bars, arrangement of concrete reinforcement. Include special reinforcement required and openings through concrete structures.

B. Design Mixes Submittal: Submit written reports of design mixes to the Architect of each proposed mix for each class of concrete within thirty-five (35) days after the issuance of the "Notice to Proceed", but no later than ten (10) days prior to the first scheduled concrete pour. Do not begin concrete production until all design mixes have been reviewed by the Architect and independent testing facility.

Separate submittal data shall be submitted for each mixture for the following:

1) Concrete Paving – Pedestrian, steps, curbs, walls and footings.
2) Concrete Paving – Vehicular.

C. Job-site Samples: Contractor shall pour concrete samples as indicated below for each concrete color and finish specified on Drawings for written approval from Owner's Representative prior to installation as follows:

1. Minimum two (2) foot by two (2) foot concrete flatwork that includes an expansion joint, score joint, and the concrete finish and color for each application.

2. Two linear feet by width and height detailed for each concrete wall specified to include decorative tile if specified.

PART 2 - PRODUCTS

2.1 FORM MATERIALS:

A. Forms for Exposed Finish Concrete: Unless otherwise indicated, construct formwork for exposed concrete surfaces with plywood, metal, metal-framed plywood faced or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings. Provide form material with sufficient thickness to withstand pressure of newly-placed concrete without bow or deflection.

B. Forms for Unexposed Finish Concrete: Form concrete surfaces which will be unexposed in finished structure with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.

C. Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain nor adversely affect concrete surfaces, and will not impair subsequent treatments.

D. Expansion Joint for flatwork that does not have a stamp pattern: Asphalt impregnated felt fiber expansion material, one half inch (1/2") thick by full depth of concrete, in compliance with ASTM D1751.

E. Expansion Joint for poured-in-place walls: Asphalt impregnated felt fiber expansion material, one half inch (1/2") thick by full depth of concrete, in compliance with ASTM D1751.

2.2 REINFORCING MATERIALS:

A. Reinforcing Bars (Rebar): ASTM A 615, Grade 60, deformed, except #3 and smaller may be Grade 40. Test in accordance with Section 1903A and 1910A.2, 2022 C.B.C.

B. Supports for Reinforcement: Provide supports for reinforcement including bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcing bars and welded wire fabric in place.

2.3 CONCRETE MATERIALS:

A. Portland Cement: ASTM C 150, Type V, conforming to ACI 318-14 and test in accordance with Section 1903A, 2022 C.B.C.

B. Fly Ash or other pozzolan can be used as a partial substitute for ASTM 150 Portland cement as follows:

1. Fly Ash conforming to ASTM C618, Class F, the maximum Loss on Ignition (LOI) shall be less than 3%. Class C is not permitted.

2. Slag, Ground Granulated Blast Furnace Slag Cement (GGBFS) shall conform to ASTM C989 or AASHTO M 302 Grade 100 or 120.

3. Silica Fume: ASTM C1240, Standard Specification for Silica Fume used in cementitious mixtures.

4. High-Reactivity Metakaolin (HRM): ASTM C618, aluminosilicate pozzolan.

C. Water: Water used in mixing concrete shall be clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials or other substances that may be deleterious to concrete or reinforcement and shall be tested and verified through ASTM C1602.

D. Admixtures: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material and to be compatible with other admixtures and cementitious materials. Do not use admixtures containing calcium chloride.

1. Air-Entraining Admixture: ASTM C 260.

2. Water-Reducing Admixture: ANSI/ASTM C 494, Type A, and contain not more than 1% chloride ions.

3. High-Range, Water-Reducing Admixture: ASTM C 494, Type F

4. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E

5. Water-Reducing and Retarding Admixture: ASTM C 494, Type D

E. Crushed Aggregate Base Rock: Shall be coarse aggregate for regular weight concrete. Aggregate shall be hard, durable, uncoated, graded, cleaned and screened crushed rock or gravel conforming to current requirements of ASTM C33. Crusher-run stone or bank-run gravel will not be permitted.

F. Liquid Membrane-Forming Curing Compound: Liquid type membrane-forming curing compound complying with ASTM C-309, Type I, Class A unless other type acceptable to Architect. Comply with Volatile Organic Compounds (VOC) content limits, as required by Air Pollution Control Regulations on Architectural Coatings (less than 350 g/l).

G. Curing Methods:

1. Moist Curing: continuous misting, sprinkling or ponding.

2. Moisture-retaining cover curing: After wetting the concrete surface, cover with wet-curing blanket. Lay blanket in accordance with manufacturer's instructions, over-lapping edges and extending edges twelve (12) inches beyond area of concrete to be cured. Remove air pockets. Repair any holes or tears that occur using sheeting material and waterproof tape.

3. Compound curing: Apply specified curing compound as soon as final finishing operations are complete. Use as recommended by the manufacturer's written instructions.

H. Color Materials:

1. Liquid lamp black shall be default color for concrete not specified on drawings as "Natural" or "Colored". Add one pint of liquid lamp black per cubic yard of exterior concrete.

2. Concrete specified as "Natural" shall have no color added.

3. Concrete specified as "Colored" shall be LM Scofield Systems Chromix Admixtures for Color-Conditioned Concrete and/or Scofield Integral Color SG Standard Grade, to include Standard Colors, Custom Colors and Special Order Colors for all concrete

specified on drawing as “colored”. Colored concrete shall be sealed per manufacturer with LM Scofield Cureseal-W with matte gloss finish, LM Scofield Cureseal-100 with glossy, wet-look, LM Scofield Lithochrome Colorwax concrete curing compound or equal as selected by Architect or Owner’s Representative. Contractor shall pour samples on site as necessary for architect and/or owner’s representative to select final color(s) for project.

2.4 PROPORTIONING AND DESIGN OF MIXES:

A. Prepare design mixes for each type and strength of concrete. Use an independent testing facility acceptable to Architect for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing unless otherwise acceptable to Architect.

B. Comply with Section ACI 318-14. The compressive strength of concrete shall be proportioned by one of the following methods: Design Mix (Method B) or Pre-Test Mix (Method C).

C. Submit written reports to Architect of each proposed mix for each class of concrete at least 10 days prior to the first scheduled concrete pour. Do not begin concrete production until mixes have been reviewed by Architect.

D. Design mixes to provide normal weight concrete with the following properties:

1. Concrete Paving – Pedestrian, steps, curbs, walls and footings:

   a. 3,000 psi 28-day compressive strength
   b. 0.60, maximum, water to cement (W/C) ratio
   c. Minimum cementitious content shall be 470 pounds, minimum, per cubic yard.
   d. Aggregate to be 1” maximum.
   e. 28-day shrinkage, SEAONC Method: 0.050 maximum.

2. Concrete Paving – Vehicular:

   a. 4,000 psi 28-day compressive strength
   b. 0.50, maximum, water to cement (W/C) ratio
   c. Minimum cementitious content shall be 470 pounds, minimum, per cubic yard.
   d. Aggregate to be 1” maximum.
   e. 28-day shrinkage, SEAONC Method: 0.050 maximum.

E. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant; at no additional cost to Owner and as accepted by Architect. Laboratory test data for revised mix design and strength results must be submitted to and accepted by Architect before using in work.

F. Admixtures: Use only as indicated by approved design mix.

G. Color Additive for concrete not specified as “colored”: add one pint of liquid lamp black per cubic yard of all exterior concrete which will be visible when cured.

H. Color for concrete specified as “colored”: Color mixture as determined by manufacturer in accordance with color selected and sealed per manufacturer recommendations.

I. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:

All concrete: Shall be four (4) inches, plus or minus one (1) inch.

2.5 CONCRETE MIXES:

Ready-Mix Concrete: Comply with ASTM C94. Measure, batch and mix concrete materials and concrete according to ASTM C-94. Furnish batch certificates, indicating project identification, name and number, date, mixture type, mixing time, quantity and amount of water added for each batch discharged and used in the Work to the Architect.

2.6 SACK FINISH MORTAR

A. Mortar shall be composed of Portland cement, sand, and water proportioned and mixed as specified in this Section 51-1.135.

B. Mortar shall be furnished and placed in recesses and holes, on surfaces, under structural members, and at other locations specified in these specifications, the special provisions or shown on the plans.

C. The proportion of cement to sand, measured by volume, shall be one to two (1:2) unless otherwise specified.

D. Materials shall conform to the provisions in Section 90, "Portland Cement Concrete."

E. The maximum size of sand shall not be larger than 0.5 of the size of the recess, hole or space where the mortar is to be placed.

F. The mortar shall contain only enough water to permit placing and packing.

G. Concrete areas to be in contact with the mortar shall be cleaned of all loose or foreign material that would in any way prevent bond between the mortar and the concrete surfaces and shall be flushed with water and allowed to dry to a surface dry condition immediately prior to placing the mortar.

H. The mortar shall completely fill and shall be tightly packed into recesses and holes, on surfaces, under structural members, and at other locations specified. After placing, all surfaces of mortar shall be cured by the water method as provided in Section 90-7, "Curing Concrete," for a period of not less than 3 days.

I. Keyways, spaces between structural members, holes, spaces under structural members and other locations where mortar could escape shall be mortar-tight before placing mortar.

J. No load shall be allowed on mortar that has been in place less than 72 hours, unless otherwise permitted by the Engineer.

K. All improperly cured or otherwise defective mortar shall be removed and replaced by the Contractor at the Contractor's expense.

2.7 WATERPROOF MEMBRANE:

Rolled, self-adhering waterproof membrane, composed of nominally 56 millimeter thick layer of polymeric waterproofing membrane on a heavy duty, four-millimeter thick, cross-laminated polyethylene carrier film laminated together, MEL-ROL, product of W. R. Meadows/Sea Tight, or equal conforming to A.R.E.M.A. Specifications Chapter 29, Waterproofing.

PART 3 - EXECUTION

3.1 FORMS:

A. Design, erect, support, brace and maintain formwork to support vertical and lateral loads that might be applied until such loads can be supported by concrete structure. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation and position.

B. Form removal shall comply with ACI 318 Section 26.11.2.

C. Design formwork to be readily removable without impact, shock or damage to cast-in-place concrete surfaces and adjacent materials.

D. Construct forms to sizes, shapes, lines and dimensions shown, and to obtain accurate alignment, location, grades, level and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages and inserts and other features required in work. Use selected materials to obtain required finishes. Solidly butt joints and provide backup at joints to prevent leakage of cement paste.

E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to place concrete with bottom forms only. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and for easy removal.

F. Provisions for Other Trades: Provide openings in concrete formwork to accommodate work of other trades. Determine size and location of openings, recesses and chases from trades providing such items. Accurately place and securely support items build into forms. Comply with ACI 318 Section 26.11.2.

G. Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt or other debris just before concrete is placed. Retighten forms and bracing after concrete placement is required to eliminate mortar leaks and maintain proper alignment.

H. Nonstructural concrete has a negligible freeze-thaw exposure class as defined in ACI 318 based on the anticipated exposure of nonstructural concrete.

3.2 PLACING REINFORCEMENT:

A. Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars", for details and methods of reinforcement placement and supports, and as herein specified.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials which reduce or destroy bond with concrete.

C. Accurately position, support and secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as required.

D. Place reinforcement to obtain at least minimum coverage for concrete protection. Arrange, space and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

E. Where concrete is installed at door thresholds and/or transitions to building interior spaces, 24” length, #3 smooth rebar dowels shall be installed12” into the new concrete paving and 12” into the adjacent building structure, spaced at 18” on center with a minimum of two in each location. Epoxy to secure end of dowel set into building and lubricate end cast into new concrete paving.

F. Where concrete is installed at door thresholds of modular buildings with steel framing, #5 rebar shall be welded securely to building floor plate, extending 12” into new concrete paving, spaced 18” on center with a minimum of two at each door threshold. Lubricate end cast into new concrete paving.

G. Where concrete is installed adjacent to concrete walkways that are part of the building structural pad, 24” length, #3 smooth rebar dowels shall be installed12” into the new concrete paving and 12” into the adjacent building structure pad, spaced at 18” on center spacing. Epoxy to secure end of dowel set into building structural pad and lubricate end cast into new concrete paving.

3.3 EXPANSION AND CONTROL JOINTS:

A. Locate and install joints so as not to impair strength and appearance of the structure, and as acceptable to Architect.

B. Continue reinforcement across expansion and control joints or install smooth rebar dowels.

C. Control/score joints (for walkways, steps, ramps and curbs): Unless shown otherwise on plan, install ½” radius score joints evenly spaced at a maximum of eight feet in two perpendicular directions, continuous and one third the depth of the slab.

D. Control/score joints (for walls, steps and vertical surfaces): Unless shown otherwise on plan, install ½” radius score joints evenly spaced at a maximum of eight feet in on center. Align vertical wall score joints with horizontal paving joints whenever possible. Install ½” radius or chamfered edge at each side of joint as called for in drawings, continuous and 1 ½” in depth.

E. Expansion Joints (for walkways, steps, ramps and curbs): Unless shown otherwise on plan, install expansions joints where walkways meet existing or proposed structures and evenly spaced at a maximum of 24 feet in two perpendicular directions. Install ½" asphalt saturated felt expansion joint material 1/4" below the finish surface and continuously throughout the full depth of slab.

F. Expansion Joints (for walls, steps and vertical surfaces): Unless shown otherwise on plan, install expansions joints where walls meet existing or proposed structures and evenly spaced at a maximum of 24 feet in two perpendicular directions. Align vertical wall expansion joints with horizontal paving joints whenever possible. Install ½" asphalt saturated felt expansion joint material ½" below the finish surface where ½" radius concrete edges are indicated and flush with base of chamfer were chamfer edges are indicated and continuously throughout the concrete section. Install ½" radius or chamfered edge at each side of joint as called for in drawings.

3.4 INSTALLATION OF EMBEDDED ITEMS:

A. General: Set and build into work anchorage devices and other embedded items required for other work that is attached to, or supported by, cast-in-place concrete. Use setting drawings, diagrams, instructions and directions provided by suppliers of items to be attached thereto.

B. Edge Forms and Screed Strips for Slabs: Set edge forms or bulkheads and intermediate screed strips for slabs to obtain required elevations and contours in finished slab surface. Provide and secure units sufficiently strong to support types of screed strips by use of strike-off templates or accepted compacting type screeds.

3.5 PREPARATION OF FORM SURFACES:

A. Coat contact surfaces of forms with a form-coating compound before reinforcement is placed.

3.6 CONCRETE PLACEMENT:

A. Pre-placement Inspection: Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast-in, in accordance with ACI 318-08. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work. Moisten wood dorms immediately before placing concrete where form coatings are not used.

B. Coordinate the installation of joint materials with placement of forms and reinforcing steel.

C. General: Comply with ACI 304, and as herein specified.

D. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete as nearly as practicable to its final location to avoid segregation.

E. Placing Concrete in Forms: Deposit concrete in forms in horizontal layers not deeper than 24" and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.

F. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI recommended practices.

G. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6" in to preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.

H. Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous operation, within limits of construction (expansion) joints, until the placing of a panel or section is completed.

I. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.

J. Bring slab surfaces to correct level with straightedge and strikeoff. Use bull floats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.

K. Maintain reinforcing in proper position during concrete placement operations.

L. Cold Weather Placing: Do not place concrete when air temperature is below 40 degrees F., or expected to fall below within 24 hours. Comply with ACI 306.

M. Hot Weather Placing: When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305.

N. Concrete flatwork over-pour: Over-pour is excess concrete spilling beyond the limits of the concrete forms. Contractor shall remove over-pour to allow for installation of tree root barriers, irrigation and similar landscape improvements.

3.7 FINISH OF FORMED SURFACES:

A. Rough Form Finish: For formed concrete surfaces not exposed-to-view in the finish work or by other construction, unless otherwise indicated. This is the concrete surface having texture impaired by form facing material used, with tie holes and defective areas repaired and patched and fine and other projections exceeding 1/4" in height rubbed down or chipped off.

B. Smooth Form Finish: For formed concrete surfaces exposed-to-view, or that are to be covered with a coating material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, damp proofing, painting or other similar system. For "as-cast" concrete surface obtained with selected form facing material, arranged orderly and symmetrically with a minimum of seams, repair and patch defective areas with fins or other projections completely removed and smoothed

C. Related Unformed Surfaces: At tops of walls, horizontal offsets surfaces occurring adjacent to formed surfaces, strike-off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.8 CONCRETE EXTERIOR FLATWORK FINISHES:

A. Float Finish: Apply float finish to concrete slab surfaces to receive trowel finish and other finishes as hereinafter specified.

B. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating when surface water has disappeared or when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Consolidate surface with power-driven floats, or by hand-floating if area is small or inaccessible to power units. Check and level surface plane to a tolerance not exceeding 1/8" in 10' when tested with a 10' straightedge. Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to a uniform, smooth, granular texture.

C. Round top edges of all exposed slabs, nosing, etc. with 3/8" radius edging tool, unless chamfered or otherwise noted.

D. Non-Slip Broom Finish (NSBrm-Fn): Unless specified otherwise, apply non-slip broom finish to exterior concrete walks, platforms, steps and ramps, and elsewhere as indicated. Slopes less than 6% shall have a medium broom finish. Slopes 6% and greater shall be heavy broom slip resistant. Concrete finish to be stable, firm and slip resistant per CBC Section 11B-302 and 11B-403.

E. Immediately after trowel finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

3.9 CONCRETE CURING AND PROTECTION:

A. General: Protect freshly placed concrete from premature drying and excessive hot temperatures. Comply with ACI 305R-10, Guide to Hot Weather Concreting.

B. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting, keep continuously moist for not less than 7 days and above 50 deg. F.

C. Begin final curing procedures immediately following initial curing and before concrete has dried. Continue final curing for at least 7 days in accordance with ACI 301 procedures. Avoid rapid drying at end of final curing period.

D. Curing Method: Perform curing of concrete by moist curing, by moisture-retaining cover curing, by curing compound, and/or by combinations thereof, at contractor's option except as noted during hot weather.

E. Cold Weather Requirements: Protect concrete from freezing conditions during the first seven (7) days after placement.

F. Hot Weather Requirements: When hot weather conditions will cause an evaporation rate exceeding 0.2 pounds of water per square foot per hour, as determined by Figure 2.1.5 of ACI 305, cure for initial 24 hours minimum by moisture retaining cover methods.

3.10 REMOVAL OF FORMS:

A. Formwork not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provided curing and protection operations are maintained.

3.11 RE-USE OF FORMS:

A. Clean and repair surfaces of forms to be re-used in work. Split, frayed, delaminated or otherwise damaged form facing material will not be acceptable for exposed surfaces. Apply new form coating compound as specified for new formwork.

B. When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets. Do not use "patched" forms for exposed concrete surfaces, except as acceptable to Architect.

3.12 MISCELLANEOUS CONCRETE ITEMS:

A. Filling-In: Fill-in holes and openings left in concrete structures for passage of work by other trades, unless otherwise shown or directed, after work of other trades is in place. Mix, place and cure concrete as herein specified, to blend with in-place construction. Provide other miscellaneous concrete filling shown or required to complete work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and steel-troweling surfaces to a hard, dense finish with corners, intersections and terminations slightly rounded.

C. Equipment and Enclosure Bases and Foundations: Provide machine and equipment bases and foundations, as shown on drawings. Set anchor bolts for machines and equipment to template at correct elevations, complying with certified diagrams or templates of manufacturer furnishing machines and equipment.

3.13 CONCRETE SURFACE REPAIRS

A. Patching Defective Areas: Repair and patch defective areas with cement mortar immediately after removal of forms, when acceptable to Owner’s Representative.

B. Cut out honeycomb, rock pockets, voids over 1/4" in any dimension, and holes left by tie rods and bolts, down to solid concrete but, in no case to a depth of less than 1". Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water and brush-coat the area to be patched with specified bonding agent. Place patching mortar, colored to match surrounding surfaces after bonding compound has dried. Surfaces exposed-to-view shall be sacked with colored mortar as directed by Owner’s Representative.

C. Repair of Formed Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Owner’s Representative. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets; fins and other projections on surface; and stains and other discolorations that cannot be removed by cleaning.

D. Flush out form tie holes, fill with dry pack mortar.

E. Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. If defects cannot be repaired, remove and replace concrete.

F. Repair of Unformed Surfaces: Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope, in addition to smoothness, using a template having required slope.

G. Repair finished unformed surfaces that contain defects, which affect durability of concrete. Surface defects, as such, include crazing, cracks in excess of 0.01" wide or which penetrate reinforcement or completely through non-reinforced sections regardless of width, spalling, pop-outs, honeycomb, rock pockets, and other objectionable conditions. Color of repair shall match surrounding surface color.

H. Correct high areas in unformed surfaces by grinding, after concrete has cured at least 14 days.

I. Correct low areas in unformed surfaces during, or immediately after completion of surface finishing operations by cutting out low areas and replacing with fresh concrete. Finish repaired areas to blend into adjacent concrete. Proprietary patching compounds may be used when acceptable to Owner's Representative.

J. Repair methods not specified above may be used, subject to acceptance of Owner's Representative.

3.14 WATERPROOFING SITE RETAINING WALLS:

A. Contractor shall apply waterproof membrane to site retaining walls. Membrane shall continuously cover the surface in contact with soil, vertically from the footing to 2" above the finished grade level of the soil retained.

B. Prepare surface as recommended by manufacturer by filling cracks, priming, filling joint and voids, penetrations and corners.

C. Apply waterproof membrane as recommended by manufacturer.

3.15 SACK FINISH WALLS, STEP SEATING AND CURBS

A. Sack finish shall consist of filling holes or depressions in the surface of the concrete, repairing all rock pockets, removing fins, and removing stains and discolorations visible from traveled ways. Sack finish, unless otherwise specified, shall be considered as a final finish where designated on the plans and details.

B. Except as provided herein, form bolts and any metal placed for the convenience of the Contractor shall be removed to a depth of at least one inch below the surface of the concrete. All rock pockets and other unsound concrete shall be removed. The resulting holes or depressions shall be cleaned and filled with mortar. Form bolts projecting into the cells of box girders need not be removed unless deck forms are removed from the cells, in which case the bolts shall be removed flush with the surface of the concrete.

C. Mortar used to fill bolt holes shall conform to the provisions in this Section for "Mortar." Other depressions and pockets shall be filled with packed mortar as directed by the Architect and the mortar shall be cured in conformance with the provisions in this Section.

D. For exposed surfaces, integral concrete color (LM Scofield Chromix) cement shall be added to the mortar in an amount sufficient to result in a patch which, when dry, matches the surrounding concrete.

E. If rock pockets, in the opinion of the Architect, are of such an extent or character as to affect the strength of the structure materially or to endanger the life of the steel reinforcement, the Architect may declare the concrete defective and require the removal and replacement of the portions of the structure affected.

3.16 QUALITY CONTROL TESTING DURING CONSTRUCTION:

A. The Owner will employ a testing laboratory to perform other tests and to submit test reports.

B. Reinforcing steel shall be supplied with heat number and mill analysis per ACI 318-89.

C. Shrinkage Limitation: All concrete shall meet drying shrinkage limitations as follows:

D. 0.032 percent at age 21 days, with tolerance of +25% for specimens taken during the course of the work.

E. The use of aggregates with a proven history of compliance with the above limitations will be accepted as fulfilling this requirement. In the absence of satisfactory evidence, the laboratory shall prepare specimens (4" x 4" prisms 10" gage length, ASTM C-157-64T) and test for compliance prior to approval.

PROJECT CLOSE-OUT: (not applicable)

END OF SECTION 32 13 13 (Revised 05/18/2026)

SECTION 32 17 00 – PAVEMENT SPECIALTIES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Parking lot striping.
B. Disabled loading zone striping and disabled parking symbol.
C. Traffic symbols.
D. Curb painting.
E. Traffic and parking control signage.
F. Sport Court striping.

1.2 RELATED SECTIONS

A. Section 32 12 16 - Asphalt Pavement.
B. Section 32 13 13 - Concrete Paving.
C. Section 10 14 00 - Signage.

1.3 QUALITY ASSURANCE

A. Materials and work of this section shall conform with Local Municipality Public Works standards and specifications.

1.4 REGULATORY REQUIREMENTS

A. Conform to regulations of Bay Area Air Quality Management District and California Air Resources Board regarding use of paint.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Do no painting when surface and air temperatures are below 40 degrees F or below those temperatures recommended by the paint manufacturer.

PART 2 - PRODUCTS

2.1 STANDARD CATALOG PRODUCTS

A. Symbol Marking Paint and Traffic Marking Paint: Water borne product conforming to State Specification 8010-426-30; Dunn-Edwards Traffic Paint W801, Sinclair 160 Vinyl Traffic Paint, or equal product.

1. ISA Symbol Background: Color - Blue. Size: As indicated in the drawings.

2. Parking Stall Striping, Traffic Symbols and Disabled Loading Zone Striping and Lettering: Color - White. Width for all striping: Three inches, or as indicated in the drawings. Blue border around access aisle.

3. Disabled Stall Curbs: Color - Blue. Width for all striping: Three inches, or as indicated in the drawings.

4. Sport Court Striping: Color - White.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine receiving surfaces and verify that surfaces are proper for installation.

B. Do not start work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove dirt, oil, grease, and other foreign matter from the areas of the pavement and curbs to be painted.

B. Do not apply traffic paint to surfaces which are excessively dirty, damp, and cold.

3.3 INSTALLATION

A. Apply parking lot as a 4 inch wide solid line. Apply loading zone striping as 8 inch wide solid line.

B. Stripe parking stalls to the dimensions as shown on the Drawings; traffic symbols shall be as shown. Stripe loading zone to dimensions shown on Drawings.

C. Paint the ISA parking symbol in each accessible parking stall as indicated on the Drawings and in accordance with the American National Standard Institute Figure A117.1.

D. Paint horizontal and vertical face of curbs abutting accessible parking stalls. See Drawings for extent of painted curbs.

E. Apply traffic paint with atomizing spray type striping machine equipped with separate thermostatically controlled heating devices for each paint pot and capable of applying paint whereby the lines and markings have clear-cut edges, true and smooth alignments and uniform thicknesses.

F. Apply paint with completed lines and marking clean, sharp and to dimensions.

1. Ragged ends of segments, fogginess along the sides or objectionable dribbling of paint along the unpainted portions of the strips will not be permitted.

2. The finished paint shall have an opaque, well painted appearance with no black or other discolorations showing through.

G. Set posts for parking sign plumb in minimum 12 inch diameter concrete footings with top of footing 6 inches below finished grade and bottom of footing minimum 36 inches below finished grade. Slope top of concrete for water runoff. Cap top of pipe.

H. Secure signs to posts with saddles and vandal-proof nuts.

I. Install parking control signs with bottom of upper sign 60 inches above finished grade. Install accessible parking signs with bottom of upper sign 80 inches above finished grade. Install lower signs in two sign assemblies with top within 1 inch of bottom of upper sign.

3.4 PROTECTION

A. Exercise reasonable precautions to protect the paint, as applied, during drying time. Remove objectionable tracking.

END OF SECTION 32 17 00 (Revised 12/11/2024)

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SECTION 32 17 23.13 – PAINTED PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. Related Sections:

1. Section 32 12 16 - Asphalt Paving
2. Section 32 13 13 – Concrete Paving
3. Section 32 12 36 – Slurry Seal Existing Asphalt

1.2 SUMMARY

A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.

B. Description of Work:

1. This Section pertains to the application of pavement marking as indicated on the drawings and as specified herein.

1.3 SUBMITTALS

A. Product Data: Include material certificates, finishes and color charts

B. Accreditation Certificate for applicators.

1.4 PROJECT CONDITIONS

A. For new asphalt paving, Contractor shall review asphalt paving to receive pavement markings and verify the asphalt is free of defects and structurally stable. Notify Owner’s Representative prior to proceeding with pavement markings to make necessary repairs.

B. For new asphalt paving, the surface shall be dry and free from all foreign matter, including, but not limited to dirt, dust, de-icing materials, and chemical residue. Notify Owner’s Representative prior to proceeding with pavement markings to make necessary repairs.

C. For existing asphalt paving, Contractor shall review the asphalt does not contain any defects including cracks, ruts or potholes nor demonstrate any flushing, raveling or like deficiencies.

Notify Owner's Representative prior to proceeding with pavement markings to make necessary repairs.

D. For existing asphalt paving, Contractor shall review the surface conditions prior to placing bid. Bid shall include removal of existing pavement markings by sand-blasting, water-blasting, grinding, or other approved mechanical methods. The removal shall, to the fullest extent possible, cause no significant damage to the pavement surface. Obtain approval from Owner's Representative in writing if the removal of surface markings is satisfactory. Work shall not proceed until this approval is granted.

E. Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 deg F (4 deg C) for oil-based materials, 50 deg F (10 deg C) for water-based materials, and not exceeding 95 deg F (35 deg C).

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver pavement marking materials to Project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage.

B. Store pavement markings materials to Project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Painted Pavement Markings shall consist of a product formulated to provide a balance of performance properties for a durable, long-lasting, color and a texture finish for asphalt pavement surfaces. Paint for Pavement Markings shall be environmentally safe and meet EPA requirements for Volatile Organic Compounds (VOC).

B. Manufacturer: Painted Pavement Markings shall be Sherwin-Williams Acryshield Exterior Paint or equal, with H&C SharkGrip additivie for non-skid finish.

1. Products available through:

a. Sherwin-Williams at www.Sherwin-Williams.com available through retail stores that cater to commercial clients. Allow a minimum of 1 week lead time to order.

b. H&C Concrete at www.hcconcrete.com, 1-800-867-8246

C. Painted Pavement Markings / Game Line Paint shall be white, unless noted otherwise on the plans, water based, 100% acrylic, lead free striping and marking materials manufactured for permanent, exterior game line marking.

D. Equipment for Painted Pavement Marking Application: Contractor shall execute work using equipment appropriate for the design / layout of the painted pavement markings. Contractor

shall not use equipment not suitable for this application which may compromise the performance of the coatings.

1. Brush: Synthetic Bristle, size of brush as required.
2. Roll: 3/8” – 3/4" Synthetic Cover
3. Sprayer: 2000 – 2500 PSI / .015” - .021” Tip

E. Painted Pavement Marking Templates:

1. Contractor shall create and fabricate sturdy, non-flexible, waterproof templates for each Challenge Course Activity Station, Map, Symbol, or other pavement marking.
2. Acceptable Template Materials are plastic, metal, or approved equal.
3. Contractor shall clean and thoroughly dry each template prior to re-use.
4. Refer to section 3.6 for Close-Out items related to this section.

PART 3 - EXECUTION.

3.1 APPLICATION

A. Do not apply pavement marking paint until layout, colors, and placement have been verified with Owner’s Representative.

B. Allow paving to age for 30-days before starting pavement marking or as specified by manufacturer’s recommendations.

C. Pavement surface to receive the striping shall be thoroughly cleaned of all dirt, organic growth, oil, grease, or other materials that will prevent adhesion of the paint to the roadway surface.

D. Paints shall applied by brush, spray or flow methods to clean and dry surfaces with surface temperature 50 F or above.

1. Paint shall be applied after OverKote Asphalt Pavement Coating application has had adequate time to cure. Refer to manufacture’s recommendations for cure time.
2. Paint shall be applied with mechanical equipment to produce uniform straight edges. Apply two (2) coats at manufacturer’s recommended rates.
3. Paint shall be applied as shown on drawings.

3.2 FIELD QUALITY CONTROL

A. Do not apply pavement -marking paint until layout, colors and placement have been verified with Owner’s Representative.

END OF SECTION 32 17 23.13 (Revised 11/07/2025)

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SECTION 32 13 13 - CHAIN LINK FENCING AND GATES

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 the following:

1. Chain-Link Fences: Industrial.
2. Gates: Horizontal slide and swing.

B. Related Sections include the following:

1. Division 31 Section "Earthwork" for site excavation, fill, and backfill where chain-link fences and gates are located.
2. Specification 32 13 13.1 Concrete Work (Landscape).

1.3 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.

1. Fence and gate posts, rails, and fittings.
2. Chain-link fabric, reinforcements, and attachments.
3. Gates and hardware.
4. Accessories: Privacy slats.

B. Samples for Initial Selection: Manufacturer's color charts or 6-inch lengths of actual units showing the full range of colors available for components with factory-applied color finishes.

C. Samples for Verification: For each type of chain-link fence and gate indicated.

1. Polymer-coated steel wire (for fabric) in 6-inch lengths.
2. Polymer coating, in 6-inch lengths on shapes for posts, rails, wires, and] gate framing and on full-sized units for accessories.
3. Vinyl slat material.

D. Product Certificates: For each type of chain-link fence, and gate, signed by product manufacturer.

1. Strength test results for framing according to ASTM F 1043.

E. Qualification Data: For Installer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed chain-link fences and gates similar in material, design, and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

C. Gates within accessible path of travel shall conform with the requirements of C.B.C. Section 11B-404.

1.5 PROJECT 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.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Chain-Link Fences and Gates:

a. Builders Fence Company, Inc., Sacramento, CA 916 381-4065

b. Master Halco, Hayward, CA 800 899-4174

c. Security Contractor Services, Inc., San Jose, CA 800 843-7893

d. Steel and Fence Supply, San Jose, CA 408 573-3779

2.2 CHAIN-LINK FENCE FABRIC

A. General: Height indicated on Drawings. Provide fabric in one-piece heights measured between top and bottom of outer edge of knuckled selvage. Comply with ASTM A 392, CLFMI CLF 2445.

B. Zinc-coated fabric shall be galvanized after weaving with a minimum 1.2 ounces of zinc per square foot or surface area and conform to ASTM A392, Class 1. Fabric to be 9 gauge wire woven in a 2" or 1" diamond mesh (or sized as required for privacy slat inserts). Top and bottom selvage to be knuckled.

C. Polymer Coating (PVC Coated): Minimum 7 mil PVC plastic resin finish. ASTM D 668, Class 2 over metallic-coated steel wire.

1. Color: Black from the manufacture's standard color range, complying with ASTM F 934.
2. Coat selvage ends of fabric that is metallic coated before the weaving process with manufacturer's standard clear protective coating.
3. Furnish one piece fabric widths for fencing up to 12 feet high.
4. When PVC coating is specified on drawing, fabric and all exposed fence components shall also be PVC coated.

D. Vinyl Slat/Privacy Fencing: Viewguard plus slatted fencing from Security Contractor Services, 1 (800) 843-7893, www.scsfence.com, local supplier San Jose/SF Bay Area (408 295-8556.

1. Wire mesh: Galvanized wire is woven using 9 gauge weaving wire (.148 inch diameter) with an average of 1.2 ounce Zinc coating per square foot. The diamond size to accommodate slats shall be 3.5" x 5". Wire mesh shall be 8 gauge vinyl coated fused bonded wire available in standard colors of black, green, brown, beige and white.
2. Slats: factory installed, 2 3/8" wide, high density, UV stablilized, polyethylene slat inserted vertically and individually secured to the wire with stainless steel staple using optional PVC coated bonded (fusion adhered) wire to match the plastic slat color. Slat color shall match wire mesh color.
3. Selvage: Knuckle both selvages for chain link fence mesh and vinyl slatted fence mesh.
4. Color to be selected by Architect from standard colors.

2.3 INDUSTRIAL FENCE FRAMING

A. Posts and Rails: Comply with ASTM F 1043 for framing, ASTM F 1083 for Group IC round pipe, schedule 40 minimum, hot-dipped galvanized, and the following:

1.

End, Corner and Pull Post height	Pipe Size
Up to 6 foot fabric height	2.375" OD steel pipe, 3.65 lbs./ lin. ft.
Over 6 and up to 8 foot fabric height	2.875" OD steel pipe, 5.79 lbs./lin. ft.
Over 8 and up to 10 foot fabric height	4.00" OD steel pipe, 9.12 lbs./lin. ft.
Over 10 and up to 12 foot fabric height	4.00" OD steel pipe, 9.12 lbs./lin. ft.

2.

Line Posts	Pipe Size
Up to 6 foot fabric height	1.90" OD steel pipe, 2.70 lbs./ lin. ft.
Over 6 and up to 8 foot fabric height	2.375" OD steel pipe, 3.65 lbs./lin. ft.
Over 8 foot up to 10 foot fabric height	2.875" OD steel pipe, 5.79 lbs./lin.ft.
Over 10 and up to 12 foot fabric height	2.875" OD steel pipe, 5.79 lbs./lin.ft.

3. Top, Mid and Bottom Rails Pipe Size

Up to 12 foot fabric height	1.66” OD steel pipe, 2.27 lbs./lin.ft.

4. Posts, bracing and framing for fences supporting signs, windscreens, shade cloths or anything increasing the load, shall be installed as recommended by a structural engineer for that purpose.

B. Swing Gate Post: Furnish posts for supporting single gate leaf, or one leaf of a double gate installation, for nominal gate widths as follows:

1. Gate fabric height up to and including six (6) feet in height (1.2 m):

Gate Leaf Width	Gate Post Outside Diameter
Up to 4 feet (1.2 m)	2.375 inches (60.3 mm)
Over 4 feet to 10 feet (1.2 to 3.05 m)	2.875 inches (73.0 mm)
Over 10 feet to 18 feet (3.05 to 5.5 m)	4.000 inches (101.6 mm)

2. Gate fabric height over six (6) feet (1.2 m), up to and including twelve (12) feet in height:

Gate Leaf Width	Gate Post Outside Diameter
Up to 6 feet (1.8 m)	2.875 inches (73.0 mm)
Over 6 feet to 12 feet (1.8 to 3.7 m)	4.000 inches (101.6 mm)
Over 12 feet to 18 feet (3.7 to 5.5 m)	6.625 inches (168.3 mm)
Over 18 feet to 24 feet (5.5 m to 7.3 m)	8.625 inches (219.1 mm)

C. Horizontal-Slide Gate Post: According to ASTM F 1184.

1. Openings up to 12 Feet: Steel post, 2.875” OD steel pipe, 4.64-lbs. per lin. ft.
2. Openings Wider than 12 Feet: Steel post, 4.00” OD, 8.65 lbs. per lin. ft..
3. Guide posts for Class 1 horizontal-slide gates equal the gate post height, 1 size smaller, but weight is not less than 3.11 lb/ft.; installed adjacent to gate post to permit gate to slide in space between.

D. Coating for Steel Framing:

1. Metallic Coating:
   a. Type A, consisting of not less than minimum 2.0-oz./sq. ft. average zinc coating per ASTM A 123/A 123M or 4.0-oz./sq. ft. zinc coating per ASTM A 653/A 653M.
   b. Thermally bonded (PVC) plastic resin finish over metallic coating (galv) not less than 10 mils. Color to match chain link fabric.

2.4 INDUSTRIAL SWING GATES

A. General: Comply with ASTM F 900 for single and double swing gate types.

1. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1043 and ASTM F 1083 for materials and protective coatings.

2. Fabric and finish: shall match adjacent fencing.

B. Frames and Bracing: Fabricate members from round, galvanized steel tubing with outside dimension and weight according to ASTM F 900 and the following:

1. Gate Fabric Height: 2 inches less than adjacent fence height.

2. Gate Frame: Assembly using 1 7/8" OD pipe (Group IA or IC) with welded joints. Weld areas repaired with zinc rich coating applied per manufacturer's directions.

3. Leaf Width: As indicated.

C. Frame Corner Construction:

1. Welded or assembled with corner fittings and rivets, and 3/8-inch diameter, adjustable truss rods for gate panels.

D. Hardware: Provide hardware and accessories for each gate, galvanized per ASTM A153, finish to match adjacent fencing, quality for commercial and industrial applications and in accordance with the following:

1. Latches for maintenance gates, fork type or plunger-bar type, permitting operation from both sides of gate, hinges, center gate stops and keepers for each gate leaf more than 5 feet wide. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate. Install concrete footing to receive drop rod in closed position. Install gate latches at a consistent height above grade throughout the campus, recommended 36" minimum and 44" maximum.

2. Latches for gates in the ADA Path of Travel: refer to Drawings for "accessible gate latch" detail. Install gate latches at a consistent height above grade throughout the campus, recommended 36" minimum and 44" maximum.

3. Panic Hardware: Refer to Architectural Drawings for panic hardware locations and specifications.

4. Kick Plate: Install on accessible path of travel gates. Fabricate 10" high by width of gate, 1/8" thickness steel, finish to match fence material.

5. Hinges: Size and material to suit gate size, non-lift-off type, offset to permit 180 degree gate opening. Provide one (1) pair of hinges for each leaf under 6' in nominal height and one and one-half (1-1/2) pair of hinges for each leaf 6' and over in nominal height. Adjust and maintain gate spring hinges on accessible man-gates per CBC 11B-404.2.8.2 so that from the open position of 70 degrees, the door shall move to the closed position in 1.5 seconds minimum.

6. Keeper: Provide keeper for vehicle gates, which automatically engages gate leaf and holds it open position until manually released.

7. Double Gates: Provide gate stops for double gates (one for each gate), consisting of standard drop rod with concrete footings installed to receive and secure drop rods. Install fork-type, drop latch with padlock eyes as integral part of latch, permitting both gate leaves to be locked with a single padlock.

E. INDUSTRIAL HORIZONTAL-SLIDE GATES

1. General: Comply with ASTM F 1184 for single or double slide gate types. Provide manufacturer's standard heavy-duty inverted channel track, ball bearing hanger sheaves, overhead framing and supports, guides, stays, bracing, hardware, and accessories as required for commercial and industrial quality applications. Finish for gate and fittings to match adjacent fencing.

2.5 FITTINGS

A. General: Comply with ASTM F 626.

B. Post and Line Caps: Provide for each post.

1. Pressed steel, cast iron or cast aluminum alloy designed to fit snugly over posts to exclude moisture. Fittings to conform to ASTM F626.

2. Supply dome style caps for terminal posts.

3. Supply post caps with loop to receive tension wire or top rail on line posts.

C. Rail and Brace Ends: Pressed steel, cast iron or cast alloy, cup shaped to receive rail brace ends.

D. Rail Fittings: Provide the following:

1. Top Rail Sleeves: Pressed-steel or round-steel tubing 0.051 thickness by 7" long, expansion type.

2. Rail Clamps: Line and corner boulevard clamps for connecting intermediate and bottom rails in the fence line-to-line posts.

E. Brace Bands: Pressed steel, 12 gauge thickness by ¾" wide.

F. Tension Bands: Pressed steel, 14 gauge thickness by ¾" wide.

G. Tension Bars: Steel, length not less than 2 inches shorter than full height of chain-link fabric. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post. Bars shall be 3/4" wide by 3/16" thick.

H. Truss Rod Assemblies: Steel rod, 3/8" diameter merchant quality with turnbuckle, hot-dip galvanized.

I. Tie Wires, Clips, and Fasteners: According to ASTM F 626.

1. Standard Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, complying with the following:

a. Hot-Dip Galvanized Steel: 0.148-inch diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.

2.6 CAST-IN-PLACE CONCRETE

A. Materials: Portland cement complying with ASTM C 150, Type I aggregates complying with ASTM C 33, and potable water. Measure, batch, and mix Project-site-mixed concrete according to ASTM C 94/C 94M.

1. Concrete Mixes: Normal-weight concrete, 2% to 4% air entrained with not less than 3000-psi compressive strength (28 days), 3-inch slump, and 1-inch maximum size aggregate.

B. Materials: Dry-packaged concrete mix complying with ASTM C 387 for normal-weight concrete mixed with potable water according to manufacturer's written instructions.

2.7 POLYMER FINISHES

A. Supplemental Color Coating: In addition to specified metallic coatings for steel, provide fence components with polymer coating.

B. Metallic-Coated Steel Tension Wire: PVC-coated wire complying with ASTM F 1664, Class 2b.

C. Metallic-Coated Steel Framing and Fittings: Comply with ASTM F 626 and ASTM F 1043 for polymer coating applied to exterior surfaces and, except inside cap shapes, to exposed interior surfaces.

1. Polymer Coating: Not less than 10-mil- thick PVC finish.

D. Color: As selected by Architect from manufacturer's full range, complying with ASTM F 934.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance.

1. Do not begin installation before final grading is completed, unless otherwise permitted by Architect.

2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 INSTALLATION, GENERAL

A. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements specified.

1. Install fencing on established boundary lines inside property line or as indicated.

3.4 CHAIN-LINK FENCE INSTALLATION

A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated and not more than ten 10 feet, in firm, undisturbed soil.

1. If diameter is not indicated, excavate holes for line and end posts to twelve (12) inches minimum width. If depth is not indicated, excavate holes for line and end posts to not less than 24" minimum plus an additional 3" for each 12" over 4' fence height. Gate posts shall be larger and as required to support heavy lateral loads. Trowel finish surface and slope to drain away from posts and flush with finish grade.

B. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.

1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.

2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Extend concrete 2 inches above grade; shape and smooth to shed water. Protect aboveground portion of posts from concrete splatter.

3. Center and align posts in holes 3 inches above bottom of excavation.

C. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more.

D. Line Posts: Space line posts uniformly at 10 feet on center maximum unless specified otherwise on Drawing.

E. Post Tops: Provide weather tight closure cap with loop to receive top rail. One cap for each post.

F. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Install braces at end and gate posts and at both sides of corner and pull posts.

1. Locate horizontal braces at mid-height of fabric 6 feet or higher, on fences with top rail. Install so posts are plumb when diagonal rod is under proper tension.

G. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch- diameter hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches o.c. Install tension wire in locations indicated before stretching fabric.

1. Top Tension Wire: Install tension wire through post cap loops.

2. Bottom Tension Wire: Install tension wire within 6 inches of bottom of fabric and tie to each post with not less than same diameter and type of wire.

H. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.

I. Bottom Rails: Install as indicated on drawing in same fashion as top rail installation, spanning between posts. Install tension wire if bottom rail is not called for on drawing.

J. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 2 inches between finish grade or surface and bottom selvage (except at Tennis Courts, which shall be 1 inch), unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.

K. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c. At gates, install fabric with stretcher bars at vertical edges and top and bottom edges. Attach stretcher bars to gate frame at not more than 15 inches o.c.

L. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at 1 end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.

1. Maximum Spacing: Tie fabric to line posts at 12 inches o.c. and to braces at 24 inches o.c.

M. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

N. Privacy Slats: Install slats in vertical direction, securely locked in place.

O. Tennis Court Fencing: Construct tennis court fence according to ASTM F 969.

3.5 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 and lubricate where necessary.

B. Install kick-plate on bottom of gate as shown on details, weld ends to gate frame at 8” o.c. spacing, finish to match fencing material.

3.6 CANTILEVER FENCE SECTIONS

A. If Contractor elects to install cantilever fence sections where support posts cannot be installed immediately adjacent to a structure:

1. Cantilever section shall terminate 1-1/2” from adjacent structure.
2. Cantilever section shall not extend more than 30” from center of post to adjacent structure.
3. Cantilever section shall be securely welded to nearest post to prevent rotational movement around nearest post.

3.7 ADJUSTING

A. Gate: Adjust gate 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. Lubricate hardware and other moving parts.

3.8 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain gates. Refer to Division 1 Section "Demonstration and Training."

END OF SECTION 32 31 13

SECTION 32 84 00 - PLANTING IRRIGATION

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. Provide complete, automatically controlled, spray sprinkler, turf rotor, bubbler and/or drip underground irrigation system as shown on Drawings.

B. This Section includes but is not limited to: excavating, backfilling, finish grading, piping, valves, sprinklers, specialties, controls, and wiring for automatic control irrigation system.

C. Related Sections include the following:

1. Specification Section 31 23 16.13 Trenching
2. Specification Section 31 23 23.13 Backfilling.
3. Specification Section 32 13 13 Concrete Paving
4. Specification Section 32 90 00 Planting.
5. Specification Section 32 92 00 Turf Planting

1.3 DEFINITIONS

A. Certified Landscape Irrigation Auditor (CLIA): a person certified to perform landscape irrigation audits by the Irrigation Association Certification Board.

B. Lateral (Circuit) Piping: Downstream from control valves to sprinklers, rotors, emitters and specialties. Piping is under pressure during flow.

C. Mainline Piping: Downstream from point of connection to water distribution piping to, and including, control valves. Piping is under water-distribution-system pressure.

D. The following are industry abbreviations for plastic materials:

1. ASME: American Society of Mechanical Engineers.
2. ASTM: American Society for Testing and Materials.
3. AWG-UF: American Wire Gauge - Underground Feeder
4. NFPA: National Fire Protection Association.

5. PSIG: Pounds per Square Inch Gauge.
6. PVC: Polyvinyl Chloride Plastic.
7. SDR: Standard Direct Ratio.
8. V: Volt

1.4 PERFORMANCE REQUIREMENTS

A. Location of Sprinklers, Rotors, Emitters and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain 100 percent, head to head, water coverage of turf and planting areas indicated with uniform coverage and minimum over-spray onto paving and no spray onto buildings and structures.

B. Minimum Working Pressures: The following are minimum rated pressure requirements for piping, valves, and specialties, unless otherwise indicated:

1. Irrigation Main Piping: 200 psig.
2. Lateral (Circuit) Piping: 150 psig.

C. Irrigation Schedule: In accordance with DSA Title 24, Part 11 – Outdoor Water Use Requirements, Contractor shall prepare two (2) – three (3) irrigation schedules, one for plant establishment, one for the established landscape and one for temporarily irrigated areas if applicable. Each schedule shall indicate the number of gallons used and shall target the Estimated Total Water Use (ETWU) and not exceed the Maximum Applied Water Allowance (MAWA) calculated on the Irrigation Plan "California Water Efficient Landscape Worksheet." Irrigation Schedule shall be submitted at substantial completion. After acceptance of substantial completion, Contractor shall laminate schedule in plastic and place in controller enclosure prior to final completion and end of maintenance. In preparing the Irrigation Schedule, the Contractor shall consider the following:

1. Irrigation interval (days between irrigation).
2. Irrigation run times.
3. Number of cycle starts to avoid runoff.
4. Amount of applied water scheduled to be applied on a monthly basis.
5. Application rate setting.
6. Root depth setting.
7. Plant type setting.
8. Soil type.
9. Slope factor setting.
10. Shade factor setting.

11. Irrigation uniformity or efficiency setting.

1.5 SUBMITTALS

A. Product and Project Data: With-in 14 days after award of the contract, furnish the Owner's Representative with submittal data on all items intended for installation. Substitute equipment or material installed without the approval of the Owner's Representative will be removed and replaced with specified items at this Contractor's expense. Submit manufacturer's technical data and installation instructions for irrigation components conforming to requirements of Division 1, Section 01 33 00 Submittal Procedures. Include pressure ratings, rated capacities, and settings of irrigation components. Submittal shall include the following:

1. Backflow device including cage and/or blanket.
2. Master control valve
3. Flow Sensor(s)
4. Hydrometer
5. Main, lateral (circuit) and sleeving pipe.
6. Pipe fittings, primer and cement.
7. Tracer wire and/or warning tape.
8. Isolation valves.
9. Remote control valves.
10. Valve boxes.
11. Sprinklers, rotors, bubblers, drip emitters.
12. Swing joints.
13. Tree bubbler drain tubes.
14. Controllers. Include wiring diagrams, enclosures and mounting methods.
15. Control wires. Include splice kits and conduit.
16. Valve identification tags.
17. Irrigation Wiring Diagram: Contractor shall prepare and submit an irrigation wire diagram showing location of control wire, common wire, spare control wire and spare common wire with quantities noted at each run shown on copy of irrigation plan in a legible size and format.
18. Irrigation installation firm qualifications in accordance with "quality assurance".
19. Name and contact information of certified irrigation auditor performing the irrigation audit for this project.

B. Coordination Drawings: During the course of construction, maintain orderly set of irrigation drawings and details on project site during installation of irrigation system. Record daily changes showing piping and major system components. Measure and neatly record dimensions for all mainlines, control wire runs, and all other pertinent information facilitating maintenance and extension of the irrigation system to within one (1) foot horizontally and six (6) inches vertically. Indicate interface and spatial relationship between piping, system components, adjacent utilities, and proximate structures. Up to date coordination drawings shall be available for review prior to meetings with the Owner's Representative.

C. Submittals at Substantial Completion:

1. Irrigation Record Drawings. Contractor shall record information gathered on "Coordination Drawings" onto a clean set of Irrigation Plans for documentation of as-built conditions.

2. Controller Legend: Upon approval of record drawing submittal, prepare two (2) legible, reduced to 11" by 17" in size, non-fading, waterproof copies of the Record Irrigation Drawings, laminated between two (2) .020 mm (minimum) plastic sheets, printed on front side only. Attach one (1) copy to door of controller or enclosure and deliver one (1) copy to Owner. Plan sheet shall include the following information:

   a. Installing Contractor's company name, phone number and address.

   b. Color coded zone identification by valve.

   c. Zone start time.

   d. Zone water duration.

   e. Type of planting irrigated.

   f. Valve size, station numbers and controller designations.

3. Contractor shall retain the services of a third party Certified Landscape Irrigation Auditor to perform a landscape irrigation water audit and prepare an irrigation audit report compliant with MWELO 492.12 including, but not limited to inspection, system tune-up, system test with distribution uniformity, correcting over-spray or run-off and configuring controllers with application rate, soil type, plant factors, slope, sun exposure and other factors necessary for accurate programming. Submit preliminary report at substantial completion, allow for adjustments during maintenance and submit report confirming irrigation installation is compliant with DSA MWELO at final completion.

4. Submit Irrigation Schedule for review and approval in accordance with DSA Title 24, Part 1 at substantial completion. Once approved, laminate in plastic and place inside controller enclosure for final completion at end of maintenance period.

5. Contractor shall provide the owner with one (1) quick coupler key with hose swivel per each five (5) quick couplers.

6. Irrigation System Leak Test Results.

7. Irrigation backflow preventer certification.

8. Central control installation certification.

9. Operation and Maintenance Data: For irrigation systems, to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 1 Section "Closeout Procedures," include data for the following:

   a. Automatic-control valves.

   b. Sprinklers, rotors and/or emitters.

   c. Controllers.

1.6 QUALITY ASSURANCE

A. Governing Agency Requirements:

1. For projects subject to review and approval by local governing agencies, Contractor shall comply with the State of California Model Water Efficient Landscape Ordinance at a minimum and shall conform to local codes and/or ordinances, whichever may be more stringent.

2. For projects under review of DSA, Contractor shall comply with the State of California Model Water Efficient Landscape Ordinance requirements at a minimum.

B. Installer Qualifications:

1. Experience: The irrigation installation firm shall have contracted for and successfully completed construction of a minimum of five (5) California public school district construction projects, approved by the Division of the State Architect (DSA), within the past five (5) years of similar size, complexity, budget and scope.

2. Licensure: The irrigation installation firm shall hold a current, active C27 “Landscaping Contractor” license classification by the California State License Board that has been consistently active for at least five (5) years and that has not been suspended or revoked.

3. Supervision: The irrigation installation firm shall have a qualified and experienced irrigation technician on site during irrigation installation.

4. Drip Irrigation: The irrigation installation firm shall have contracted for and successfully complete construction of a minimum of five (5) drip irrigation installations within the past five (5) years of similar size and complexity.

C. Manufacturer Qualifications: Provide underground irrigation system as a complete unit. Each type component produced by a single acceptable manufacturer, including heads, valves, controls and accessories.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

E. Pipe crossings beneath fire Lanes: Comply with NFPA 24-10, Depth of Cover at Fire Access Lanes.

F. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination"

G. All work and materials shall be in strict accordance with the latest rules and regulations of the State Fire Marshall, Safety Orders of the Division of Industrial Safety, National Electrical Code, California Administrative Code, part 4, Title 24, "Basic Mechanical Regulations" and other applicable state or local laws or ordinances. Nothing in these drawings or specifications is to be construed as permitting work which does not conform to the codes or regulations.

H. Contractor shall provide all licenses, fees and other charges required for completion of the work.

1.7 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. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.

1.8 PROJECT CONDITIONS

A. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:

1. Notify Owner's Representative no fewer than two days in advance of proposed interruption of water service.
2. Do not proceed with interruption of water service without Owner's Representative's written permission.

B. Interruption of Existing Irrigation Service: Do not interrupt existing to remain irrigation service. Prior to demolition work and prior to beginning irrigation work, review project site and meet with Owner Representative to review locations and connections of existing to remain irrigation system. Coordinate with General Contractor to ensure existing irrigation remains in place and operable through the duration of construction. In the event existing irrigation is shut off or damaged during construction, contractor shall provide temporary connections or modifications to continue water

service to existing to remain planting material or turf to maintain in a healthy growing condition throughout construction. In the event water service is not available, contractor shall apply water through manual delivery means as necessary. Obtain approval from Owner's Representation two days in advance of any planned disruptions in water service.

1.9 COORDINATION

A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 3.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Use new materials of brands shown or Drawings, specified herein or approved equal.

B. Use existing materials if shown on Drawings.

C. Substitution of sprinklers, rotors, drip, valves and controllers will not be allowed due to variation in flows, precipitation rates, friction losses, and sizing and maintaining consistency with client equipment standards.

2.2 PIPES, TUBES, AND FITTINGS

A. Steel Pipe: ASTM A 53/A 53M, Schedule 40, Type S or E, Grade A or B, galvanized with threaded ends.

1. Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106, Schedule 40, galvanized, seamless steel pipe with threaded ends.
2. Malleable-Iron Unions: ASME B16.39, Class 150, hexagonal-stock body with ball-and-socket, metal-to-metal, bronze seating surface, and female threaded ends.
3. Gray-Iron Threaded Fittings: ASME B16.4, Class 125, galvanized, standard pattern.
4. Cast-Iron Flanges: ASME B16.1, Class 125.
5. Cast-Iron Flanged Fittings: ASME B16.1, Class 125, galvanized.

B. Mainline Piping: (unless specified otherwise on Drawings):

1. Class 315 purple reclaimed water PVC pipe, ASTM D 1785, NSF approved (2" and larger)
2. Schedule 40 purple reclaimed water PVC pipe, ASTM D 2466, NSF approved (1.5" and smaller).
3. Fittings to be schedule 80 PVC.

C. Lateral Line Piping (unless specified otherwise on Drawings):

1. Schedule 40 purple reclaimed water PVC pipe, ASTM D 2466, NSF approved.
2. Fittings to be schedule 80 PVC.

D. Sleeves (unless specified otherwise on Drawings):

1. For irrigation piping, use schedule 40 purple PVC pipe, NSF approved, two, three (3) inch minimum size for irrigation piping.
2. For irrigation wiring, use schedule 40 PVC pipe, UL listed, NEMA TC-6, ANSI/UL651, ASTM F512, for outdoor, direct bury applications, PVC, two (2) inch minimum size.

2.3 Valves:

A. BACKFLOW PREVENTION DEVICE:

1. As indicated on the Drawings.

B. ISOLATION VALVES:

1. As indicated on the drawings.

C. QUICK-COUPLING VALVES:

1. As indicated on the drawings.

D. VALVE BOXES:

1. In paved areas, use Christy or Carson concrete utility box, size as required.
2. In planting areas, use Carson plastic underground enclosure with locking lid, bolt and washer, size as required, color to be green for potable water and purple for non-potable water systems.
3. Valve boxes to be rectangular for remote control valves and ball or gate valves and round for quick coupling valves.
4. Valve box lid shall be labeled “IRRIGATION”.

E. PULL BOXES AND SPLICE BOXES:

1. In paved areas, use Christy concrete utility box, size as required.
2. In planting areas, use Carson plastic underground enclosure with locking lid, bolt and washer, size as required, color to be green for potable water and purple for non-potable water systems.
3. Box lid to be labeled “IRRIGATION”.

F. WIRE MESH AT VALVE BOXES:

1. 1/2 inch by ½", 16 gauge, galvanized wire mesh hardware cloth.

G. VALVE IDENTIFICATION TAGS:

1. Shall be plastic yellow in color for potable water systems and purple in color for recycled water systems with 1 1/8" stamped black letters indicating controller/station number.

H. SAND BACKFILL:

1. Shall consist of natural sand, manufactured sand, existing of native material, or combinations thereof, and shall conform to ASTM C-40 Organic Impurities, ASTM D-2419 Sand Equivalent and a pH value between 4.5 and 9.

I. VALVE BOX ROCK:

1. Shall be ¾" or smaller drain rock or pea gravel unless specified otherwise on Drawings.

J. VALVE BOX SUPPORT BRICK:

1. Shall be common red brick unless specified otherwise on Drawings.

2.4 AUTOMATIC-CONTROL SYSTEM:

A. CONTROLLER: As indicated on Drawings.

B. AUTOMATIC CONTROLLER GROUNDING:

1. Contractor shall install grounding recommended by manufacturer for installation method detailed on this product.

C. 24 VOLT WIRING:

1. All 24 V line to be #14-1 AWG-UF. Control wire insulation to be red in color and spare wire to be yellow in color. 24 V common wire to be #12-1 AWG-UF, insulation to be white in color and spare common insulation shall be black in color.

D. SPLICING MATERIALS:

1. Manufacturer's packaged kit consisting of insulating, spring-type connector or crimped joint and epoxy resin moisture seal; suitable for direct burial.

E. CONNECTORS:

1. Shall be Splice-Kote, Dura Seal heat shrink waterproof nylon wire connectors, or 3M “DBY” connectors.

2.5 TRACER WIRE/DETECTABLE WARNING TAPE:

A. Install tracer wire or detectable warning tape as indicated on Drawings.

B. Tracer Wire: #8 solid Bare Copper Wire.

C. Detectable Warning Tape: Electronically detectable plastic tape with metallic core, Terra Tape D, manufactured by Griffolyn Co., or equal, two (2) inches in width, continuously imprinted “caution buried water line”.

2.6 CONCRETE THRUST BLOCKING:

A. Shall be clean, Portland Cement Concrete, cast in place, five sacks of cement per cubic yard mixture with a 28-day compressive strength of 2,500 PSI.

2.7 SPRINKLERS AND/OR EMITTERS:

A. As indicated on the drawings. Drip system fittings shall be of same manufacturer and/or as recommended by manufacturer.

2.8 SPRINKLER SPECIALTIES:

A. As indicated on the drawings.

PART 3 - EXECUTION

3.1 EARTHWORK

A. Refer to Division 31 "Earthwork" for excavating, trenching, and backfilling.

B. Install piping and wiring in sleeves under sidewalks, roadways, and parking lots, and under or through footings and building walls.

1. Install piping sleeves by boring or jacking under existing paving if possible.
2. Install a minimum of two (2) three (3) inch diameter sleeves in each location for irrigation piping and a minimum of one (1) two (2) inch diameter electrical conduit sleeving in each location for irrigation wire.

C. Provide minimum cover over top of underground piping according to the following:

1. Irrigation Mainline Piping: Minimum depth of 24 inches below finished grade to top of pipe.
2. Lateral Piping: Minimum depth of 18 inches below finished grade to top of pipe.
3. Sleeves containing control wires, mainline and/or lateral piping beneath standard paving: Minimum depth of 24 inches from finish surface to top of sleeve.
4. Sleeves containing control wires, mainline and/or lateral piping beneath vehicular paving including fire lanes/emergency vehicle access (EVA): Minimum depth of 36 inches from finish surface to top of sleeve.
5. Drip Irrigation: Install drip and/or emitter lines and tubing as detailed on Drawings.

D. Excavate trenches with vertical sides, uniform bottom, free of deleterious materials, and wide enough for pipes to lay side by side, fully supported on bottom. Minimum 3” clearance between pipes. Twelve (12”) inch minimum width for mainlines and six (6”) inch minimum width for lateral lines.

E. Trenches with pressure pipe and control wiring to be backfilled with sand to 6 inches minimum above top of pipe. Continue backfilling in 6 inch layers with soil free of rocks or waste materials. Compact soil to a density equal to the surrounding undisturbed soil, but not less than 90%. Any subsequent depressions filled at the Contractor’s expense. Particular attention is directed to firmly tamp and moistening around sprinkler heads and quick-couplers.

1. For Irrigation pipe three (3) inches and larger in size, install additional six (6) inch depth sand beneath piping.

F. Trenches and backfill installed under paving, asphalt concrete or concrete shall be backfilled with sand and compacted in layers equal in density to the adjacent undisturbed soil or to 90% compaction, using manual or mechanical tamping devices. All trenches shall be left flush with the adjoining grade.

1. The Contractor shall set in place, cap and pressure test pressurized mainline under paving prior to the paving installation.

2. For irrigation pipes three (3) inches and larger in size, install additional six (6) inch depth sand beneath piping.

3.2 PREPARATION

A. Set stakes to identify locations of proposed irrigation system. Obtain Owner's Representative's approval before excavation.

3.3 PIPING APPLICATIONS

A. Install components having pressure rating equal to or greater than system operating pressure.

B. Piping in control valve boxes and above ground may be joined with flanges instead of joints indicated.

C. Aboveground Irrigation Main Piping: Use any of the following piping materials for each size range:

1. NPS 4 and Smaller: Steel pipe; malleable-, gray-, or cast-iron fittings; and threaded joints.
2. NPS 5 and Larger: Steel pipe; malleable-, gray-, or cast-iron fittings; and threaded joints.

D. Underground irrigation main piping shall be purple recycled water pipe, polyvinyl chloride (Type I) plastic pipe PVC 1120 and NSF approved, Schedule 40 PVC solvent-weld.

E. Underground Irrigation Lateral (Circuit) piping shall be purple recycled water pipe, polyvinyl chloride (Type I) plastic pipe PVC 1120 and NSF approved, schedule 40 PVC solvent-weld.

F. Mainline pipe sizes 6" and larger shall use gasketed pipe with bell fittings. Where solvent weld joints are required, contractor shall additionally install concrete thrust blocking.

G. Underground Branches and Offsets at Sprinklers and Devices: Schedule 80, PVC pipe; threaded PVC fittings; and threaded joints.

H. Mainline Fittings and Couplings: Schedule 80, PVC pipe, solvent weld up to 4" and gasketed with bell fittings 6" and larger pipe.

I. Risers to Aboveground Sprinklers and Specialties: ASTM A-120 Schedule 40 galvanized steel pipe with 150 lb. banded galvanized malleable iron fittings.

J. Double Swing Joint Assembly:

1. Install double swing joint at all sprinkler heads and quick couplers.
2. Elbows shall be PVC Class 1220, Schedule 40.
3. Install as follows:
    a. Screw 2 inch long nipple horizontally into plastic tee or ell at lateral line.

b. Screw on elbow and a 6 inch long nipple.

c. Screw on another elbow and a 2 inch long nipple and install riser vertically to head, or quick coupler valve.

d. Swing joint must offset to the right.

K. Sleeves: Schedule 40 PVC pipe and socket fittings; and solvent-cemented joints.

L. Transition Fittings: Use transition fittings for plastic-to-metal pipe connections according to the following:

1. Couplings:

a. Underground Piping NPS 1-1/2 and Smaller: Manufactured fitting or coupling.

b. Underground Piping NPS 2 and Larger: AWWA transition coupling.

2. Fittings:

a. Aboveground Piping: Plastic-to-metal transition fittings.

b. Underground Piping: Union with plastic end of same material as plastic piping.

M. Dielectric Fittings: Use dielectric fittings for dissimilar-metal pipe connections according to the following.

1. Underground Piping:

a. NPS 2 and Smaller: Dielectric couplings or dielectric nipples.

b. NPS 2-1/2 and Larger: Prohibited except in valve box.

2. Above ground Piping:

a. NPS 2 and Smaller: Dielectric unions.

b. NPS 2-1/2 to NPS 4: Dielectric flanges.

3. Piping in Valve Boxes or Vaults:

a. NPS 2 and Smaller: Dielectric unions.

b. NPS 2-1/2 to NPS 4: Dielectric flanges.

4. Dielectric fittings are specified in Division 22 Plumbing.

3.4 VALVE APPLICATIONS

A. Backflow Prevention Devices:

1. New and relocated backflow devices must be tested at time of installation. Contractor shall have test performed by a Certified Backflow Tester who has a current State of California Contractor's license C-36 or General Contracting License.

2. For new backflow preventer installation, a Certified Tester shall test and provide results and certification to the Owner's Representative within five (5) days of the date of testing and to provide any testing data or certification required by the local water provider. A Department of Public Health sticker shall be place on backflow device before the system is accepted by the Owner's Representative.

3. Install per local codes and water purveyor requirements.

4. A Department of Public Health sticker shall be placed on backflow device before the system is accepted by the Owner's Representative.

B. Underground Gate/Ball Valves: Install in control-valve box as detailed on drawings.

C. Underground, Manual Control Valves: Install in manual control-valve box as detailed on drawings.

D. Remote Control Valves: Install in control-valve box as detailed on drawings.

E. Drain Valves: Install in control-valve box as detailed on drawings.

F. Install each valve in a separate valve box (unless noted otherwise in Drawings and details) and in appropriate locations as shown on Drawings. Allow 12 inches between valve boxes and between valve boxes and walls or walks or landscape edges. Boxes shall be arranged perpendicular and parallel to each other and aligned in a row.

3.5 PIPING INSTALLATION

A. Location and Arrangement: Drawings indicate location and arrangement of piping systems. Install piping as indicated unless deviations are approved on Coordination Drawings. Piping shown on drawings is diagrammatic. General arrangement of piping shall be followed as near as practical. Where piping is shown running continuously in paving and adjacent to planting area, intent is to install piping within planting areas where practical.

B. Install pipe sleeves at all points where pipes pass through concrete, asphalt or masonry. In footings, allow 1 inch clearance around pipe, and in other locations allow ½ inch. Each end of sleeve shall extend 6 inches beyond edge of paving or structure above. Provide removable non-decaying plug at each end of sleeve to prevent intrusion of earth and debris.

C. If drain valves are used, install piping at minimum uniform slope of 0.5 percent down toward drain valves.

D. Install piping free of sags and vertical bends.

E. Install groups of pipes parallel to each other, spaced to permit valve servicing.

F. Install fittings for changes in direction and branch connections. Pipe bending shall not exceed manufacturer recommended radii.

G. Install flanges adjacent to valves and to final connections to other components with NPS 2-1/2 or larger pipe connection.

H. Install dielectric fittings to connect piping of dissimilar metals.

I. Install underground thermoplastic piping according to ASTM D 2774 and ASTM F 690.

J. Lay piping on solid sub-base, fully and evenly supported by bedding, uniformly sloped without humps or depressions.

K. Install PVC piping in dry weather when temperature is above 40 degrees F (5 degrees C). Allow joints to cure at least 24 hours at temperatures above 40 degrees F (5 degrees C) before testing unless otherwise recommended by manufacturer.

L. Snake pipe a minimum of one (1) additional foot per one hundred (100) feet of pipe to allow for expansion and contraction.

M. Cap or plug openings as soon as lines have been installed to prevent intrusion of debris.

N. Install concrete thrust blocking, at a minimum, on pressurized mainline three (3) inches and larger in size at changes in direction, connections or branches from mainline and dead ends and as necessary to prevent pipe movement thrusts created by internal water pressure. Concrete shall be placed directly on the fitting perpendicular to the line of thrust and also against the undisturbed earth. The amount of concrete shall be in accordance to the pressure, angle and soil type. Refer to pipe manufacturer for calculating exact size of thrust blocking material, 2010 CPC and IAPMO installation standards.

O. After installation of pipe lines and sprinkler risers, and prior to installation of sprinkler heads, automatic valves and quick couplers, thoroughly flush all lines with a full head of water to remove any foreign material, scale, sediment, etc.

3.6 TRACER WIRE

A. Install as detailed along all new irrigation mainline piping on bottom of trench, carefully run to avoid stress from backfilling and shall be continuous throughout the mainline pipe runs. Fasten tracer wire to mainline at eight (8) foot intervals with tape. Take precautions to ensure tape is not damaged or misplaced during backfill operations.

B. Tracer wire shall follow mainline pipe and branch lines, originating in irrigation valve box at gate, ball or remote control valve located closest to irrigation point of connection and run to ball, gate

and/or remote control valves at the end of mainline runs or shall loop entire system where mainlines are looped.

C. Record locations of tracer wire origin and terminations on project record drawings.

3.7 DETECTABLE WARNING TAPE

A. Install tape with printed side up, directly over mainline pipe and on top of sand backfill, 18 inches below grade. Take precautions to ensure tape is not damaged or misplaced during backfill operations.

3.8 JOINT CONSTRUCTION

A. Refer to Division 22 Section "Piped Utilities -- Basic Materials and Methods" for basic pipe joint construction.

B. Install threaded pipe joints as follows:

1. Use pipe joint sealant for all plastic to plastic and plastic to steel joints, do not apply to sprinkler inlet ports.
2. For PVC, hand tighten only. Do not over tighten threaded joints. Thread until fitting stops, then add a half turn.
3. Use pipe joint compound and/or Teflon tape for all steel to steel joints.

C. Install gasketed joint per manufacturer recommendations (printed on pipe material) and using the lubricant supplied with the pipe.

3.9 VALVE INSTALLATION

A. Underground Gate/Ball Valves: Install in valve box as detailed on drawings.

B. Underground, Manual Control Valves: Install in manual control valve box as detailed on drawings.

C. Remote Control Valves: Install in control valve box as detailed on drawings.

D. Drain Valves: Install in control valve box as detailed on drawings.

E. Install each valve in a separate valve box (unless noted otherwise in Drawings and details) and in appropriate locations as shown on Drawings. Allow 12 inches between valve boxes and between valve boxes and walls or walks or landscape edges. Boxes shall be arranged perpendicular and parallel to each other and aligned in a row.

3.10 SPRINKLER INSTALLATION

A. Locate part-circle sprinklers to maintain a minimum distance of six (6) inches from adjacent paving and edges and twelve (12) inches clearance from walls, fences and other structures, unless otherwise indicated on Drawings.

B. Spray sprinklers shall not be installed less than 24" from non-permeable surfaces unless the adjacent non-permeable surface is constructed to drain entirely to the landscape area.

C. Swing Joint Assembly:

1. Install triple swing joint at all sprinkler heads and quick couplers.
2. Elbows shall be PVC Class 1220, Schedule 40.
3. Install as follows:

a. Screw 2 inch long nipple horizontally into plastic tee or ell at lateral line.
b. Screw on elbow and a 6 inch long nipple.
c. Screw on another elbow and a 2 inch long nipple.
d. Screw on another elbow and install riser vertically to head, or quick coupler valve.
e. Swing joint must offset to the right.

D. Sprinkler Installation:

1. Install sprinklers heads as shown on drawings and details.
2. Install plumb to finish grade.
3. Tool tighten all sprinkler body covers and nozzles.

3.11 DRIP/EMITTER INSTALLATION

A. Minimum cover sub-surface drip tubing: drip and/or emitter lines shall be installed as detailed with drip tubing installed four (4) inches grade and below the mulch top dressing layer.

B. Minimum cover of tubing to individual shrubs: shrub bubbler tubing shall be installed to a depth of (4) inches and rising to the surface at target shrub rootball. No more than one (1) inch of tubing shall be exposed at shrub rootball.

C. Backfill after lines have been reviewed, tested for leaks and approved by Owner's Representative.

D. Assembling drip system shall keep pipe and tubing free from dirt and debris, pipe ends shall be cut square, deburred and cleaned.

E. Flush piping prior to installing remote control valve assembly (control zone kit assembly).

F. Follow manufacturer recommendations.

3.12 AUTOMATIC-CONTROL SYSTEM INSTALLATION:

A. Exact location of controllers shall be reviewed and approved by Owner's Representative.

B. Provide connection to nearest available 110 volt electrical service.

C. Contractor shall install grounding system per manufacturer recommendations.

D. Prior to installation of hardscape, coordinate and install electrical supply and control wire conduit, size and quantity as required for each controller and spare wiring. Install pull boxes and conduit from clock location.

E. Control wiring shall be neatly coiled beneath controller terminal strip and labeled with corresponding station number. Controller terminal strip cover plate shall fasten securely in place.

F. Contractor is responsible to provide fully automatic system operated by specified controller(s). Contractor shall install quantity of red wiring equal to the number of stations on the specified irrigation controller(s), plus five (5) yellow spare control wires for each controller, a common white wire and a spare common black wire. Example, 24 station clock shall have 24 control wires, 5 spare control wires and 2 common wires installed with mainline and running through all associated valve boxes. Wires shall be installed per plans and details from remote control valve(s) to controller(s).

G. Example of mainline that is not looped and terminates in 3 locations with a 24 station clock and 18 stations used:

1. Wire quantities shall be:
    a. 18 red control wires for stations 1-18
    b. 6 red control wires for un-used stations 19-24
    c. 1 white common wire
    d. 1 black spare common wire
    e. 5 yellow spare wires

2. Wire runs:
    a. 18 red control wires (stations 1-18) shall run from controller to corresponding valve.
    b. 6 red control wires (un-used stations 19-24) shall run from controller with 2 running down each of the 3 mainline terminations and looping through each valve box.
    c. 1 white common wire shall run from controller and connect to each valve associated with that controller.
    d. 1 black spare common wire shall run from controller and connect to each valve associated with that controller.

e. 5 yellow spare control wires shall run from controller and loop through each valve box associated with that controller.

3. Contractor shall label all wires with water-proof marking with corresponding station number or as spare control wire, spare common wire or spare stations 19-24.

H. Wiring path is not shown on drawings and shall run from specified controller(s) to irrigation pull box if shown, then to the nearest irrigation mainline location, follow mainline (existing and/or new) to each remote control valve. Indicate wire location on record drawings where it does not follow main-line. Common and spare wires shall loop through entire system. Wiring may be shown on drawings only where required for future irrigation extensions.

I. Wiring may be shown on drawings only where required for future irrigation extensions.

J. Irrigation Central Control system is standard for this project.

K. Irrigation Central Control System must be compatible with owners central control software and hard-ware. Contractor shall ensure controller communicates properly with project central computer and receives daily downloads for weather updates.

3.13 CONNECTIONS/ELECTRICAL WIRING

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Ground equipment according to Division 26 Section.

C. Connect wiring according to Division 26 Section.

D. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

E. 24 volt splices to be made with 3M Co. #3577 splice kit, as to manufacturer’s instructions. Splices to be made only at valve box or pull box.

3.14 REMOTE CONTROL VALVE WIRING

A. Wires shall be installed in electrical conduit between controller and pull box. Pull box to be located in ground nearest controller. Top of box to be flush with finish grade.

B. Provide separate irrigation wire sleeves, schedule 40 PVC, under concrete or asphalt for irrigation wires, size and quantity as required, three (3) inches minimum in diameter, 24” minimum cover in planting areas and 36” minimum cover under fire lanes and pavements. All wires from the pull box shall be direct burial. The wiring shall be bundled and secured to the lower side of the irrigation pipe at 10 foot intervals with plastic electrical tape.

C. Wires from the pull box shall be direct burial. The wiring shall be bundled and secured to the lower side of the irrigation pipe at ten (10) foot intervals with plastic electrical tape. Provide a minimum of 24 inches excess of coil of control wires in each 100 feet of run to controller. Sufficient slack shall be left in the wire to provide for expansion and contraction.

D. Provide 24 inches excess of coil of control wires in each 100 feet of run to controller.

E. Provide 24 inches excess of coil of control wires in each valve box and pull box.

F. Control wires to be buried a minimum of 24 inches below finish grade.

G. Wiring shall be tested for continuity, open circuits and unintentional grounds prior to connecting to equipment.

H. Install irrigation wire splice boxes where wire splices are necessary.

3.15 LABELING AND IDENTIFYING

A. Valve Identification Tags: Install valve identification tag on each remote control valve with corresponding controller station number.

3.16 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including connections. Report results in writing.

B. Perform the following field tests and inspections in the presence of the Inspector and/or Owner’s Representative with 72 hours advance notice. Contractor shall record date, time, names of those present and results and submit to Owner’s Representative prior to requesting substantial completion review:

1. Leak test of pressurized mainline: After installation of mainline and prior to installing remote control valves, quick coupling valves or other valve assemblies and prior to backfilling trenches, test the mainline for leaks as follows:

    a. Testing shall occur with trenches open. Center load piping with small amounts of backfill between fittings to prevent pipe displacement, arching or slipping. Fittings to be visible for testing.

    b. Exercise care in filling the system with water to prevent excessive surge pressure and water hammer

    c. Test pressurized mainline piping under hydrostatic pressure of 150 psi for eight continuous hours with no drop in pressure. Coordinate with Owner’s Representative for initial observation of beginning test and observation after test.

d. Correct deficiencies revealed by test and repeat pressure test to the satisfaction of the Owner's Representative.

2. Operational Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation.

3. Coverage Test: When the irrigation system has been completed, the Contractor, in the presence of the Architect and Owner's Representative, shall perform a Coverage Test to determine if the coverage of water is complete and adequate, the sprinkler heads and/or emitters function according to manufacturers' data and according to the intent of the construction documents. Replace irrigation components not performing satisfactorily and/or respace sprinklers and/or nozzles and/or emitters as necessary to provide complete irrigation coverage of plant material.

   a. For new turf areas, Contractor shall demonstrate irrigation coverage over amended planting area and prior to installation of sod and/or seeded turf.

4. Substantial Completion Review: At substantial completion of this Section, work shall be reviewed for conformance with the Drawings and Contractor shall make recommended repairs and/or corrections in a timely manner and prior to final completion.

   a. At substantial completion, Contractor shall submit documentation per 1.5 "Submittals at substantial completion" to Architect for review and acceptance.

   b. At substantial completion, Contractor shall deliver spare parts to Owner's Representative per 1.5 "Submittals at substantial completion".

   c. At substantial completion, contractor shall submit Certified Landscape Irrigation Auditor preliminary report on irrigation system.

5. Final Completion Review: After substantial completion repairs and/or corrections have been completed and at the end of the maintenance period, work shall be reviewed for final completion and approved by Owner's Representative in writing.

   a. At final completion, Contractor shall submit Certified Landscape Irrigation Auditor final report confirming irrigation installation is compliant with DSA MWELO requirements.

3.17 CLOSING IN UN-INSPECTED WORK

A. The Contractor will pay all costs necessitated by required opening, restoration and correction of all work closed in or concealed before inspection, testing as required, and approval by authorized inspections.

3.18 STARTUP SERVICE

A. Verify that controllers are installed and connected according to the Contract Documents.

B. Verify that electrical wiring installation complies with manufacturer's submittal and installation requirements in Division 26 Sections.

C. Complete startup checks according to manufacturer's written instructions.

3.19 MAINTENANCE SCHEDULE

A. Fine tune and adjust irrigation system weekly coinciding with the landscape and/or turf planting maintenance period.

B. Adjust settings of controllers within WELO water budget and with seasonal changes.

C. Adjust automatic control valves to provide flow rate of rated operating pressure required for each sprinkler circuit.

D. Adjust sprinklers so they will be flush with, or not more than 1/2 inch above, finish grade.

E. Fill irrigation trenches due to settling.

3.20 CLEANING

A. Completely flush dirt and debris from piping before installing sprinklers and other devices.

B. After completion, cleanup and remove all resultant debris from site.

3.21 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain controller and automatic control valves. Refer to Division 1 Section “Demonstration and Training."

3.22 GUARANTEE (Project Close-out Item)

A. Furnish a written Guarantee to the Owner, dated from the date of Final Acceptance, against defective workmanship, materials or components and guaranteeing repair or replacement for a period of 1 year; further guarantee restoration of all damage caused by leaks in the Irrigation System for a like period.

B. Guarantee that the entire installation was made in accordance with the drawings, specifications and manufacturer’s recommendations, using designated materials and installation procedures.

C. Submit duplicate copies of the Guarantee for approval by the Owner’s Representative. Approval is mandatory before final payment and acceptance.

D. The guarantee for the irrigation system shall be made in accordance with the form attached at the end of this Section. The guarantee form shall be retyped onto the Contractors letterhead and contain the information shown.

GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM

We hereby guarantee that the sprinkler system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications, ordinary wear and tear and unusual abuse or neglect excepted.

We agree to repair or replace any defects in materials and workmanship which may develop during the period for one (1) year from the date of acceptance and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the Owner. We shall make such repairs or replacements within a reasonable time, as determined by the Owner, after receipt of written notice.

The Owner reserves the right to make temporary repairs as necessary to keep the irrigation system and equipment in operating conditions. This shall not relieve the Contractor of his responsibilities under this Guarantee.

In the event of failure to make such repairs or replacements within a reasonable time after receipt of written notice form the Owner, we authorize the Owner to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefore upon demand.

Project:_____

Location:_____

_____

Name of Contractor:_____

Signed: (Authorized Signature)_____

Print Name of Authorized Signature_____

Address:_____

_____

Phone:_____ Date of Acceptance:_____

END OF SECTION 32 84 00 (Revised 05/19/2026)

SECTION 32 90 00 - PLANTING

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 the following:

1. Trees.
2. Shrubs.
3. Ground cover.
4. Vines.
5. Edgings.
6. Planters.
7. Bio-retention Basin.

B. Related Sections include the following:

1. Specification Section 01 56 39 “Tree and Plant Protection”.
2. Specification Section 31 05 13 “Earthwork” for excavation, filling and rough grading and for subsurface aggregate drainage and drainage backfill materials.
3. Specification Section 32 84 00 “Planting Irrigation”.

1.3 DEFINITIONS

A. Container-Grown Stock: Healthy, vigorous, well-rooted exterior plants grown in a container with well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for kind, type, and size of exterior plant required.

B. Finish Grade: Elevation of finished surface of planting soil.

C. Import Topsoil: Shall be obtained from a local source and coming from a site with similar soil characteristics as the project site. Topsoil shall be fertile, friable, natural loam surface soil, reasonably free of subsoil, clay lumps, brush, weeds and other litter and free of roots, stumps, stones and rocks and other extraneous or toxic matter harmful to plant growth.

D. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

E. On-site Topsoil: Naturally occurring, on-site, surface soil, usually occurring in the top four (4) to twelve (12) inches of original, undisturbed surface soil containing organic material, micro-organisms, necessary nutrients and minerals to sustain plant growth and be approved to sustain plant life by an approved soil and plant lab.

F. Planting Soil: On-site topsoil, import topsoil or manufactured topsoil.

G. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

H. Plant material: Exterior plants contained within the planting plan legend in categories of Trees, Shrubs, Vines, Perennials, Annuals and/or Ground Covers.

I. Substantial completion for landscape and irrigation: Work shall be considered substantially complete when irrigation, planting, turf planting and seeding are installed correctly per plans and specifications with only minor adjustments required and approval has been submitted in writing by Owner's Representative.

J. Final completion for landscape and irrigation: Work shall be considered complete when irrigation, planting, turf planting and seeding are installed correctly per plans and specifications and the maintenance period has been completed per plans and specifications and approval has been submitted in writing by Owner's Representative.

1.4 SUBMITTALS

A. Product, Material Data and/or Samples: For each type of product specified. Submit manufacturer’s technical data and installation instructions for landscape products conforming to requirements of Section 01 33 00 Submittal Procedures to include, but not be limited to:

1. Samples for the following:

a. Organic mulch top dressing (1/2 c.f. each)

b. Edging materials and accessories, of manufacturer's standard size, to verify color selected.

2. Manufacturer's certified analysis for standard products.

3. Material Test Reports: For on-site topsoil, import topsoil and/or manufactured soil proposed for use on this project.

4. Planting soil amendments as recommended by the soil testing laboratory (Lucchesi Plant & Soil Consulting, Waypoint Analytical California, Inc, or approved equal).

5. Qualification Data: For landscape Installer in compliance with "Quality Assurance".

6. Plant Materials List: Submit confirmation from supplier 30 days prior to planting that all plant material has been ordered.

7. Product Certificates: For soil amendments and fertilizers, signed by product manufacturer shall be delivered to Owner's Representative upon delivery.

8. Qualification Data: For landscape Installer prior to performing work.

9. Planting Schedule: Indicating anticipated planting dates for each type of planting.

1.5 QUALITY ASSURANCE

A. Installer Qualifications:

1. Experience: The landscape installation firm shall have contracted for and successfully completed construction of a minimum of five (5) California public school district construction projects, approved by the Division of the State Architect (DSA), within the past five (5) years of similar size, complexity, budget and scope.

2. Licensure: The landscape installation firm shall hold a current, active C27 "Landscaping Contractor" license classification by the California State License Board that has been consistently active for at least five (5) years and that has not been suspended or revoked.

3. Supervision: The landscape installation firm shall have a qualified and experienced landscape technician on site during landscape installation.

B. Soil-Testing Laboratory Qualifications: Testing lab shall be one of the following:

1. Lucchesi Plant & Soil Consulting, located in Los Gatos, CA (408) 337-2575

2. Waypoint Analytical California, Inc. located in Anaheim, CA (714) 282-8777

3. Or approved equal independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

C. Soil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity (CEC) or total exchangeable cations (TEC); sodium absorption ratio; deleterious material; pH; soluble salts, boron, mineral and plant-nutrient content of planting soil.

1. Report suitability of planting soil for plant growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory planting soil.

D. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section “Project Management and Coordination.”

E. Protect existing to remain and newly installed lawn and/or landscape areas from damage or trespass by maintaining construction fencing during construction and maintenance.

F. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."

G. Tree and Shrub Measurements: Measure according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.

H. Observation: Owner’s Representative may observe trees and shrubs either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. Owner’s Representative retains right to observe trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.

1. Notify Owner’s Representative of sources of planting materials 30 days in advance of delivery to site.

I. Pre-installation Conference: Conduct conference at Project site with General Contractor and/or Owner’s Representative to comply with requirements in Division 1 Section "Project Management and Coordination."

J. Protect all planting areas from trespass or damage by installing temporary barriers or protective fencing during construction. Barrier and/or fencing material and installation method shall be approved by Owner’s Representative prior to installation.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Notify Owner’s Representative fourteen (14) days prior to anticipated plant material delivery to schedule review of plant material prior to installation.

B. Do not prune trees and shrubs before delivery, except as approved by Owner’s Representative. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling

and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery.

C. Handle planting stock by root ball.

D. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants trees in shade, protect from weather and mechanical damage, and keep roots moist.

1. Do not remove container-grown stock from containers before time of planting.

2. Water root systems of exterior plants stored on-site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.7 PROJECT/SITE CONDITIONS

A. Prior to placing topsoil, Contractor shall collect and submit soil samples representative of on-site topsoil and/or import topsoil proposed for use in all planting and lawn areas to a Soil-Testing Laboratory for analysis and soil amending recommendations. Submit test results analysis and recommendations to Owner’s Representative for review and approval prior to beginning work.

B. Weather Limitations: Proceed with planting only when weather conditions permit.

C. Coordination with Lawns: Plant trees and shrubs after finish grades are established and before planting lawns, unless otherwise acceptable to Owner’s Representative.

1. When planting trees and shrubs after lawns, protect lawn areas and promptly repair damage caused by planting operations.

D. Contractor shall protect new plantings and/or delay planting in event of forecasted freezing temperatures.

1.8 WARRANTY

A. Special Warranty: Warrant the following exterior plants, for the warranty period indicated, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner or users, or incidents that are beyond Contractor's control.

1. Warranty Period for Trees, Shrubs, Vines, Lawns and Ground Covers: One year from date of Final Completion.

2. Remove dead exterior plants immediately. Replace immediately unless required to plant in the succeeding planting season.

3. Replace exterior plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.

4. A limit of one replacement of each exterior plant will be required, except for losses or replacements due to failure to comply with requirements.

1.9 MAINTENANCE

A. Plant Material and Planting Areas: Maintain for the following maintenance period by pruning, cultivating, watering, weeding, fertilizing, restoring planting basins, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Refer to "Maintenance Schedule."

1. Maintenance Period: Ninety (90) days from date of Owners Representative's written approval of Substantial Completion of the planting and irrigation.

PART 2 - PRODUCTS

2.1 TREE, SHRUB AND VINE MATERIAL

A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

B. Grade: Provide trees and shrubs of sizes and grades complying with ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Owner's Representative, with a proportionate increase in size of roots or balls.

C. Label at least one tree and one shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.

D. If formal arrangements or consecutive order of trees or shrubs is shown, select stock for uniform height and spread, and number label to assure symmetry in planting.

E. Provide plant material as specified on the Drawings including size, genus, species and variety.

2.2 SINGLE-TRUNK AND MULTI-TRUNK TREES

A. Trees: Single-trunk or multi-trunk trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required.

1. Branching Height: typical of tree species and container size, single trunk unless specified as multi-trunk on Planting Plan Legend. Select branching height in accordance with planting

location. Low branching trees shall not be planted in conflict with pathways, driveways and/or structures.

2. Single-stem trees shall have straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required.

3. Multi-stem trees shall branch naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60.1.

2.3 GROUND COVER PLANTS

A. Ground Cover: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1.

2.4 PLANTS

A. Annuals: Provide healthy, disease-free plants of species and variety shown or listed. Provide only plants that are acclimated to outdoor conditions before delivery and that are in bud and bloom.

B. Perennials: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed, remove dead flowers.

2.5 TOPSOIL

A. Prior to placing bid, Contractor to coordinate with General Contractor, Demolition and/or Grading Contractors and verify quantity and source of planting soil for all planting areas. Identify Contractor responsible for stockpiling on-site topsoil and/or acquiring import planting soil and installing a minimum of twelve (12) inches of planting soil in all landscape planting areas and any raised planters and rough grading in accordance with these specifications, details, notes, grading and drainage plans.

B. Coordinate with General Contractor, Demolition and/or Grading Contractors for removal and replacement of lime treated soils and replacement with planting soil prior to planting to depth required to remove lime treatment. In event trees are planted in lime treated soils, trees shall have a minimum six (6) inch layer of planting soil below their rootball to provide a suitable substrate to root into for establishment.

C. On-site topsoil: Re-use existing topsoil or existing surface soil, top twelve (12) inches excavated and stockpiled on-site. Verify suitability of existing and/or stockpiled surface soil to produce planting soil by submitting a sample to a soil testing laboratory. Acceptable on-site topsoil shall be ASTM D 5268, pH range of 6.0 to 7.0, representative of productive soils in the vicinity, a range of 4 to 20 percent organic material content; free of stones one (1) inch or larger in any dimension, roots, plants, sod, clay lumps and other extraneous materials harmful to plant growth. Sodium absorption rate (SAR) shall not exceed 5.0, conductivity of the saturation extract solution shall not exceed 3.0, and boron concentration in the saturation shall not exceed 1.0 ppm.

D. Import Topsoil: Supplement with imported or manufactured topsoil from off-site, local sources, when quantities of on-site topsoil are insufficient. Do not obtain topsoil from bogs or marshes. If soil is obtained from agricultural land, Contractor shall submit proof soil is nematode free. Import topsoil shall meet the following requirements:

1. USDA Classification of fraction passing 2.0 mm sieve: sandy loam, sandy clay loam or loam.

Class	Particle Size Range	Maximum %	Minimum %
Coarse Sand	0.5 – 2mm	15	0
Silt	.002 - .05 mm	30	10
Clay	< .002 mm	25	10
Other Classes			
Gravel	2 – 13 mm	15	0
Rock	½ - 1 inch	5% by volume with none > 1 inch	
Organic		15	0

2. Chemistry – Suitability Considerations

Salinity: Saturation Extract Conductivity (ECe)	Less than 3.0 dS/m @ 25 degrees C.
Sodium: Sodium Adsorption Ratio (SAR)	Less than 6.00 ppm
Boron: Saturation Extract Concentration	Less than 1.00 ppm
Reaction: pH of Saturated Paste:	5.5 – 7.5 without high lime content.

3. Soil to contain sufficient quantities of available nitrogen, phosphorus, potassium, calcium and magnesium to support normal plant growth. In the event of nutrient inadequacies, provisions shall be made to add required materials prior to planting.

4. Soil testing: Contractor shall submit to the Owner's representative for approval, certification from an agricultural soils testing laboratory that the import topsoil provided conforms to the specifications prior to delivery of import or placement on on-site topsoil. Soil testing shall have been performed on import topsoil source within the previous year.

2.6 BIO-RETENTION BASIN

A. Refer to civil drawings for construction of bio-retention basin swales.

B. Line bio-retention basin swale with Lenox Blend soil mixture.

1. Lenox Blend soil mixture available from LH Voss Materials, Inc., www.lhvoss.com, Local Representative: Nyoka Corley (510) 773-7063, nyoka.corley@gmail.com

2. Depth shall be a minimum of 18" unless specified otherwise within plans and/or details.

2.7 FERTILIZER AND SOIL AMENDMENTS

A. Contractor shall collect and submit sample of proposed planting soil, representative of the top eight (8) inches of planting soil, to a locally known soil testing laboratory, (Lucchesi Plant & Soil Consulting, Waypoint Analytical California, Inc, or approved equal), for analysis and amendment recommendations. Sample shall be representative of typical on-site topsoil proposed for use in planting areas.

B. If import topsoil is proposed, import topsoil sample shall be submitted to a locally known soil testing laboratory, (Lucchesi Plant & Soil Consulting, Waypoint Analytical California, Inc., or approved equal) for analysis, amendment recommendations and installation recommendations.

C. Contractor shall provide to the soil testing laboratory (Lucchesi Plant & Soil Consulting, Waypoint Analytical California, Inc., or approved equal), the following information when submitting soil for analysis:

1. Project type (public school, commercial building, etc.).

2. Anticipated maintenance (regular, low, none, etc.).

3. Irrigation water source (potable or recycled).

4. Proposed plant material type such as California native plants, turf, shrub and ground covers.

5. Copy of this specification.

D. Fertilizers: All fertilizers shall be of an approved brand with a guaranteed chemical analysis as required by USDA regulations and shall be dry and (except for plant tabs) free flowing.

E. Soil Conditioner: 0-1/4 inch nitrogen-fortified organic amendment contributing at least 270 pounds of organic matter per cubic yard. Greenwaste compost is acceptable if recommended by the soil testing laboratory (Lucchesi Plant & Soil Consulting, Waypoint Analytical California, Inc., or approved equal). Compost shall be obtained from a supplier participating in the Seal of Testing Assurance (STA) program of the U.S. Composting Council.

F. Soil Preparation: The following materials and quantities are given for bidding purposes only and Contractor shall amend soil using products, quantities and methods specified by Soil-Testing Laboratory, or approved equal.

1. 6-20-20 granular fertilizer.
2. Soil sulfur.

G. Planting Tablets: 21 gram controlled release fertilizer supplying nitrogen for up to 1 ½ years and 20-10-5 content.

H. Backfill Mix: Shall be a mixture of on-site or import topsoil, soil conditioner and fertilizer. For bidding purposes, backfill mix shall include 2/3 topsoil and 1/3 soil conditioner with 6-20-20 granular fertilizer, quantity per manufacturer, according to container or root stock size, mixed thoroughly.

2.8 MULCHES

A. Organic Mulch for non-bio-retention planting areas: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of organic bark from Vision Recycling. Mahogany Wood Chip, available from Vision Recycling (510) 429-1300, www.visionrecycling.com, 41900 Boscell Road, Fremont, CA 94538. Color to be Mahogany. Submit sample to Owners Representative's for review and approval.

B. Organic Mulch for non-bio-retention planting areas: Consisting of recycled wood with particle sizes ranging from one (1) inch to three (3) inches in size and produced to place around plants to retain moisture, control weeds and help prevent erosion, free of metals and non-toxic. Color shall be mahogany brown dyed using organic, water-based pigment that is durable and safe for kids and pets. Mulch is available from Z-Best Products (408) 313-0444, www.zankerrecycling.com. Submit sample to Owners Representative's for review and approval.

C. Organic Mulch for Bio-retention basin swales: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of organic shredded cedar bark from Pacific Landscape Supply, (805) 595-2295, www.pacificlandscapesupply.com, sales@pacificlandscapesupply.com. Submit sample to Owners Representative's for review and approval.

2.9 HERBICIDES

A. Pre-emergent: Ronstar-G, or approved equal.

B. Selective and non-selective Herbicides: EPA registered and approved, of type recommended by manufacturer for application.

C. Contact Owner and obtain School District, Local, State and Federal policies and procedures for regulating application of chemical controls. Contractor shall comply with all applicable policies and/or procedures for application, posting and notifications.

2.10 STAKES AND GUYS

A. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated Douglas Fir or Lodgepole Pine, free of knots, holes, cross grain, and other defects, two (2) inches in diameter by length required, and pointed at one end.

B. Guy and Tie Wire: ASTM A 641/A 641M, Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch in diameter.

C. Guy Cable: 5-strand, 3/16-inch- diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches long, with two 3/8-inch galvanized eyebolts.

D. Tree Ties: Z-Strap tree ties, or equal, made of one (1) inch wide black rubber with pre-punched nail holes, a tensile strength of 400 psi, a breaking strength of 75 pounds per inch of width and resistant to ozone deterioration. Contact Sullivan & Mann Lumber Company, Inc. (800) 847-6562.

E. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long

2.11 LANDSCAPE EDGINGS/HEADERBOARD

A. Of sizes shown, and as follows:

1. Species: Construction Heart Redwood.

2. Stakes: Construction heart redwood, 1 by 2 by 16 inches long in nominal size, with galvanized nails for anchoring edging.

3. Splice Plate: Same species as edging, 1 by 6 by 24 inches long in nominal size, with galvanized nails for securing in place.

2.12 WATER

A. Water shall be suitable for irrigation and free from ingredients harmful to planting areas.

2.13 MISCELLANEOUS PRODUCTS

A. Tree Trunk Guard: nine (9) inch high by four (4) inch diameter plastic, corrugated tube, Arbor Guard + or equal.

B. Tree Root Barriers: 18" high by 24" wide, interlocking panels of not less than 0.080" (2.032 mm) thickness, black in color, at least 50% recycled material, injection molded plastic product for linear applications with ultra-violet inhibitors with anti-lift ground lock tabs, vertical root deflecting ribs and double top edge consisting of two parallel, horizontal ribs on the top.

C. Jute Netting: Biodegradable in two (2) to three (3) years from installation, absorbing water four to five times fabric weight, open area 60% to 65%, available in rolls four (4) feet in width. Use galvanized steel staples as recommended by manufacturer to secure netting in place.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive exterior plants for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Planting operations shall be performed when weather and soil conditions are suitable for planting.

3.2 PREPARATION

A. 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.

B. Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.

C. Install protective barriers and/or fencing as necessary.

D. Contact and obtain Owner's Representative, Local, State and Federal policies and procedures for regulating application of fertilizers, fungicides, insecticides, pesticides and herbicides. Contractor shall comply with all applicable policies and/or procedures for application, posting and notifications.

E. Do not excavate, place soils or amend soils during wet or saturated conditions.

F. If lime treated soils have not been removed from proposed planting areas, remove and replace with acceptable topsoil.

G. Verify depth of planting soil in proposed planting areas. If depth of planting soil is less than twelve (12) inches in depth, install additional planting soil to ensure twelve (12) inch minimum depth of topsoil.

H. Import topsoil Installation:

1. Remove and disposed of stones larger than one (1) inch in any dimension, vegetation and foreign inorganic material from surface to receive import topsoil.

2. Scarify or plow the subgrade by crossripping or equivalent to a minimum depth of four (4) inches until it is loose and uncompacted to provide bonding of imported planting soil layer to subgrade.

3. Place planting soil on loosened material in four (4) inch layers. Crossrip first import planting soil layer to a depth of eight (8) inches and blend import planting soil with loose native surface soil. Roll lightly with appropriate lawn roller to consolidate soil and compact to 85% density.

4. Continue placement of planting soil after blending first layer with native soil in four (4) inch layers and rolling lightly to consolidate and compact each layer of soil and compact to 85% density.

5. Place topsoil to the lines and grades in accordance with grading Drawings.

6. Verify installation of topsoil to minimum depth of twelve (12) inches over subgrade soil and rough grading is completed to proper slopes and elevations.

3.3 SOIL AMENDING AND FINE GRADING (Amend per Soil-Testing Laboratory recommendations. The following amendment recommendations are given for bidding purposes only.) Contractor shall prepare and amend soil over entire planting areas and as recommended for backfill at individual planting pits.

A. Soil Preparation: Loosen subgrade of planting beds by crossripping or equivalent cultivation to a minimum depth of ten (10) inches. Remove stones larger than one (1) inch in any dimension and sticks, roots, rubbish, and other extraneous matter in the top six (6) inches of soil and legally dispose of them off Owner's property.

B. Soil Amending: (Amend per Soil-Testing Laboratory recommendations. The following recommendations are provided for bidding purposes only. Contractor shall amend soil for over-all preparation and amendment recommendations and for planting pit preparation, amendments and backfill). Add the following and thoroughly till into the top eight (8) inches of planting soil at the following rates per 1,000 square feet. Till planting soil to a homogeneous mixture of fine texture, free of lumps, clods, stones, roots and other extraneous matter. Float, rake and roll all planter areas to establish finished grades, maintaining drainage patterns and swales for grading and drainage plans, creating smooth, uniform surface plane.

1. 6 cubic yards nitrogen fortified organic soil amendment.

a. In order to comply with MWELO 492.6, 3. (C). Soil Preparation, Mulch and Amendments, at a minimum, compost shall be applied at a rate of four (4) cubic yards per 1,000 square feet of permeable area incorporated to a depth of six (6) inches into the soil. Soils with greater than 6% of organic matter in the top six (6) inches are exempt from adding compost.

2. 14 pounds all-purpose granular fertilizer (6-20-20).

3. 15 pounds soil sulfur.

4. Soil conditioner: three cubic yards per 1,000 SF sufficient for 3% to 5% soil organic matter on a dry weight basis.

C. Fine Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Refer to civil grading plans and conform to designed grades, drainage patterns, swales, and ridges.

D. There shall be no areas that hold water or drain toward buildings or structures, unless designed per civil grading plans.

E. In planting areas, set finish grade of soil one and one half (1 1/2) inches below adjacent paved surfaces, utility boxes, tops of curbs, and the like to allow for installation of organic mulch top dressing above.

F. Regrade as necessary to restore grades and drainage patterns after installation of plant material.

3.4 BIO-RETENTION SOIL AND INSTALLATION

A. Preparation:

1. Prior to installation of bio-retention soil, protect native soil at excavated bio-retention area from compaction by preventing traffic and installing a fence or covering with plywood.

2. Protect bio-retention soil stockpile from compaction and contamination from foreign matter by covering with a protective tarp.

3. Verify installation of subsurface and surface drainage with Civil Engineer prior to placing bio-retention soil.

4. Drainage should be directed away from bio-retention soils until upslope areas are stabilized and compacted.

B. Bio-Retention Soil Mixing and Placing:

1. Operate equipment adjacent to bio-retention area and not in bio-retention area to avoid compaction.
2. If machinery must operate in the bio-retention area or adjacent planting area, use light weight, low ground-contact pressure equipment.
3. Where bio-retention soil meets native soil, rip or scarify the bottom native soils of the bio-retention area to a depth of four (4) inches.
4. If mixing bio-retention soil and amendments on-site, use an adjacent impervious area or plastic sheeting to prevent intrusion of foreign material.
5. Place bio-retention soil in 12” lifts. Do not place or work bio-retention soil if it is saturated or raining.
6. Allow bio-retention soil lifts to settle naturally, boot pack (walk around to compact) lifts to achieve 85% compaction or compact by lightly watering until soils are just saturated and allow bio-retention soils to dry between lifts.
7. Verify bio-retention soil elevations comply with grading design prior to applying mulch or installing plants.
8. After all lifts are placed, wait three (3) days to check for settlement, and add additional bio-retention soil as needed.

3.5 EDGING/HEADERBOARD INSTALLATION

A. Redwood Headerboard: Install wood headers or edgings where indicated. Anchor with wood stakes spaced per detail, driven at least 1 inch below top elevation of header or edging. Use 2 galvanized nails per stake to fasten headers and edging; length as needed to penetrate both members and provide 1/2-inch clinch at point. Chamfer top of stakes as indicated on detail and pre-drill stakes if needed to avoid splitting

3.6 PLANT MATERIAL EXCAVATION

A. Lay out individual tree and shrub locations and areas for multiple exterior plantings. Stake locations, outline areas, adjust locations when requested, and obtain Owner’s Representative's acceptance of layout before planting. Make minor adjustments as required.

B. Lay out exterior plants at locations directed by Owner’s Representative. Stake locations of individual trees and shrubs and outline areas for multiple plantings.

C. Pits and Trenches: Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.

1. Excavate approximately planting pit sizes as indicated on planting details.

2. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots.

3. Set rootball onto compacted native soil so that rootball sits one (1) inch above adjacent finish grade.

D. Obstructions: Notify Owner's Representative if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

E. Drainage: Notify Owner's Representative if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.

F. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.7 PLANT MATERIAL PLANTING

A. Carefully remove root ball from container without damaging root ball or plant.

B. Set container grown planting stock plumb and in center of pit or trench with top of root ball one (1) inch above adjacent finish grades. Face plant material for best appearance.

C. Place planting soil around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly.

D. Place planting tablets in hole about one (1) to two (2) inches away from root tips. Refer to manufacturer's recommendation for exact quantity, but not less than:

Plant Size	Quantity	Plant Size	Quantity
1 Gallon Container	1	**7-Gallon Container**	5
2-Gallon Container	2	**15-Gallon Container**	8
3-Gallon Container	3	**24" box container**	20
5-Gallon Container	3	**36" box container**	30

E. Finish placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil.

3.8 TREE AND SHRUB PRUNING

A. Prune, thin, and shape trees and shrubs as directed by Owner's Representative.

B. Trees:

1. Prune, thin, and shape trees according to standard horticultural practices.
2. Prune trees if necessary to remove lower branches for clearance above pedestrian or vehicular pathways. Unless otherwise indicated by Owner's Representative, do not cut tree leaders.
3. Prune trees as required to properly stake trees straight and plumb without branches rubbing stakes.
4. Prune to thin a heavy canopy and prune for a strong branching structure as appropriate to individual tree species.
5. Prune to remove injured or dead branches from trees.

C. Shrubs, Vines and Ground Covers:

1. Prune, thin and shape shrubs according to standard horticultural practices.
2. Prune to remove injured or dead branches from shrubs.

3.9 GUYING AND STAKING

A. Upright Staking and Tying: Unless detailed otherwise, use a minimum of 2 stakes of length required to penetrate at least six (6) inches below bottom of backfilled excavation and to extend at least 72 inches above grade. Set vertical stakes and space to avoid penetrating root balls or root masses. Brace tree stakes with wood horizontal bracing screwed in place. Support trees with two rubber tree tie sections at contact points with the tree trunk installed in a "figure 8" wrap. Allow enough slack to avoid rigid restraint of tree. Trim stakes below tree canopy and to matching heights. Use the number of stakes as follows:

1. Use 2 stakes for trees up to 12 feet high and 2-1/2 inches or less in caliper.
2. Use 3 stakes for trees less than 14 feet high and up to 4 inches in caliper. Space stakes equally around trees.
3. Use 3 stakes for trees of all sizes if detailed otherwise on Drawings.

B. Guying and Staking: Guy and stake trees exceeding 14 feet in height and more than 3 inches in caliper, unless otherwise indicated. Securely attach no fewer than 3 guys to stakes 30 inches long, driven to grade.

1. For trees more than 6 inches in caliper, anchor guys to pressure-preservative-treated deadmen 8 inches in diameter and 48 inches long buried at least 36 inches below grade. Provide turnbuckles for each guy wire and tighten securely.
2. Attach flags to each guy wire, 30 inches above finish grade.
3. Paint turnbuckles with luminescent white paint.

3.10 TREE ROOT BARRIERS

A. Install root barriers where trees are planted within six (6) feet of any pavement or structures.

B. A linear root barrier shall be installed flush with the vertical edge of pavement or structure, one half (1/2) inch below the top of the pavement and shall extend six (6) feet in each direction for a total of twelve (12) feet in length. Contractor shall remove concrete spillage if necessary to install barrier flush against vertical concrete edge.

3.11 TREE TRUNK GUARD: install to protect newly planted tree trunks planted in lawns according to manufacturer recommendations.

3.12 RAISED PLANTERS

A. Fill raised planters with amended planting soil. Place planting soil in twelve (12) inch deep, compacted layers to 85% relative density to an elevation of four (4) inches below the top of the raised planter (unless detailed otherwise on Drawings).

3.13 GROUND COVER AND PLANT PLANTING

A. Set out and space ground cover and plants spaced as indicated on planting legend.

B. Dig holes large enough to allow spreading of roots, and backfill with planting soil.

C. Work planting soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.

D. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

E. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.14 PRE-EMERGENT

A. Apply pre-emergent herbicide per manufacturer recommendations in new planting areas.

3.15 JUTE NETTING

A. Install jute netting on slopes exceeding 3:1 ratio slope. Apply jute netting after preparing planting soil for planting and fine grading. Secure jute netting starting at the top of the slope by laying six (6) inches of fabric below grade to a minimum depth of six (6) inches. Roll jute netting down slope and terminate where grade becomes level by folding six (6) inches of fabric underneath. Overlap seems four (4) to six (6) inches. Secure in place using staples placed eighteen (18) inches on center spacing. After completion of planting operations, install top dressing organic mulch as specified herein.

3.16 PLANTING BED MULCHING

A. Apply three (3) inch minimum thickness of organic mulch, unless specified otherwise on Drawings, continuously throughout planting areas. Do not place mulch within two (2) inches of stems and six (6) inches of tree trunks.

3.17 CLEANUP AND PROTECTION

A. During exterior planting, keep adjacent paving and construction clean and work area in an orderly condition.

B. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation treat, repair, or replace damaged exterior planting.

C. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

3.18 MAINTENANCE SCHEDULE

A. Protection: Protect work from damage, erosion and trespass. Maintain temporary fencing and/or barriers in proper condition. Remove temporary fencing and/or barriers prior to final completion and at end of maintenance period.

B. After substantial completion, Contractor shall schedule an Irrigation Audit to be performed by a third-party certified landscape irrigation auditor. Contractor shall make necessary adjustments, if any, during maintenance period and provide written certification of installation from certified landscape irrigation auditor as part of final completion and end of maintenance.

C. Water: Contractor shall be solely responsible for ensuring that all planting is sufficiently watered to promote vigorous growth. Test and inspect irrigation system on a regular basis, each week during plant establishment and monthly thereafter. Adjust and repair the irrigation system and its components as necessary for plant establishment and growth and for watering efficiency. Check and adjust any obstructions to emission devices.

D. Fertilizing recommendations (confirm with the soil testing laboratory: Lucchesi Plant & Soil Consulting, Waypoint Analytical California, Inc., or approved equal): Immediately after completion of planting, fertilize landscape areas with ammonium sulfate (21-0-0) fertilizer at a rate of five (5) pounds per 1000 square feet. Fertilize with specified fertilizer after 45 days, prior to end of maintenance period. After landscape becomes well-established, fertilize in fall and spring with (16-6-8) commercial fertilizer at a rate of six (6) pounds per 1000 square feet.

E. Weed Control: Maintain planting beds (planted or not) in a weed-free condition to be performed weekly during maintenance period. Weeding may be done manually or by the use of selective herbicides. (Contractor shall obtain written approval from project owner prior to application of herbicide) No herbicide shall be used without the Owner Representative's prior consent. Use only approved herbicides, use in accordance with manufacturer's recommendations and per Pest Control Advisor's recommendations. If selective herbicides are used, extreme caution shall be observed so as not to damage any other plants. Spraying shall be done only under windless conditions.

F. Disease, Pest and Insect Control: Disease, pest (including, but not limited to, birds and rodents) and insect damage shall be controlled by the use of fungicides, insecticides pesticides, poisons and/or mechanical means. (Contractor shall obtain written approval from project owner prior to application of fungicides, insecticides or pesticides or mechanical methods). Review and perform weekly during maintenance period.

G. Plant Material: Maintain trees, shrubs and other plants by pruning, cultivating and weeding as required for healthy growth. Restore planting pits as necessary. Tighten and repair stake supports and reset trees and shrubs to proper grades or vertical position as required. Review and perform weekly during maintenance period.

H. Organic Mulch: Re-apply organic mulch top dressing after initial settling and again prior to end of maintenance to ensure specified depth is achieved.

I. End of maintenance shall be reviewed and approved in writing by Owner's Representative. Upon approval, Contractor shall notify Owner's Representative in writing when maintenance is complete with a date which maintenance transfers to Owner.

3.19 FIELD QUALITY CONTROL, SUBSTANTIAL COMPLETION AND FINAL COMPLETION

A. Owner's Representative shall inspect and approve the following prior to proceeding with subsequent work:

1. Preparation: at completion of finish grading and prior to planting, grading tolerances and soil preparation shall be checked for conformance to Drawings and as specified herein.
2. Layout: Layout of all plants, headerboard and other major elements shall be directed and/or ap-proved by Owner's Representative.
3. Substantial Completion Review: At substantial completion of this Section, work shall be reviewed for conformance with the Drawings and Contractor shall make recommended repairs and/or corrections in a timely manner.
4. Final Completion Review: After substantial completion repairs and/or corrections have been completed, work shall be reviewed for final completion and approved by Owner's Representative in writing.

B. Re-inspections required due to Contractor not being prepared or non-conformance to Drawings shall be back charged to the Contractor.

C. Contractor shall remove protective fencing and/or barriers prior to final completion review.

END OF SECTION 32 90 00 (Revised 05/19/2026)

SECTION 33 40 00 – STORM DRAINAGE UTILITIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes gravity site storm sewerage drainage piping, fittings and accessories, and bedding; bio-retention facilities connection of drainage system to municipal sewers and on-site points of connection; and catch basins, area drains, and cleanouts.

B. Related Sections:

1. Section 31 05 13 - Soils for Earthwork.
2. Section 31 23 00 - Excavation.
3. Section 31 23 16.13 - Trenching.
4. Section 31 23 23.13 - Backfill.
5. Section 33 30 00 - Sanitary Sewerage Utilities.
6. Section 33 49 13 - Storm Drainage Manholes, Frames, and Covers.
7. Section 03 30 00 - Cast-in-Place Concrete.

1.2 REFERENCES

A. AASHTO M36 (American Association of State Highway and Transportation Officials) - Metallic (Zinc or Aluminum) Coated Corrugated Steel Culverts and Underdrains.

B. ASTM A74 - Cast Iron Soil Pipe and Fittings.

C. ASTM C14 - Concrete Sewer, Storm Drain, and Culvert Pipe.

D. ASTM C76 - Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.

E. ASTM C425 - Compression Joints for Vitrified Clay Pipe and Fittings.

F. ASTM C443 - Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.

G. ASTM C564 - Rubber Gaskets for Cast Iron Soil Pipe and Fittings.

H. ASTM D2729 - Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.

I. ASTM D2751 - Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings.

J. ASTM D3033 - Type PSP Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.

K. ASTM D3034 - Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.

L. ASTM D7613 – Polypropylene Liner.

M. Class II Permeable Materials – To meet the requirements of Caltrans Standard Specification 68-1.025.

N. ASTM D6707 – Mirafi Filter Fabric.

1.3 SUBMITTALS

A. Section 01 34 00 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit data indicating pipe, pipe accessories, and fittings.

C. Manufacturer's Installation Instructions: Submit special procedures required to install Products specified.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.4 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Project Record Documents:

1. Accurately record actual locations of pipe runs, connections, catch basins, cleanouts, and invert elevations.

2. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

C. Operation and Maintenance Data: Procedures for submittals.

1.5 COORDINATION

A. Section 01 50 50 - Temporary Facilities and Controls.

B. Coordinate the Work with termination of storm sewer connection outside building, trenching, connection to foundation drainage system, municipal sewer utility service, and on-site points of connection.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Sewer Pipe Materials:

1. Cast Iron Pipe: ASTM A74, Service type, inside nominal diameter of 4 to 12 inches, bell and spigot end.

2. Cast Iron Pipe Joint Device: ASTM C564, rubber gasket joint devices.

3. Concrete Pipe: ASTM C14, Class 3; unreinforced; inside nominal diameter of 10 inches, bell and spigot end joints.

4. Concrete Pipe Joint Devices: ASTM C443, rubber compression gasket joint.

5. Reinforced Concrete Pipe: ASTM C76, Class III or IV; inside nominal diameter of 12 to 60 inches, bell and spigot end joints.

6. Reinforced Concrete Pipe Joint Device: ASTM C443, rubber compression gasket joint.

7. Plastic Pipe: ASTM D2751, SDR 26, Acrylonitrile-Butadiene-Styrene (ABS) material; inside nominal diameter of 4 to 24 inches, bell and spigot style solvent sealed joint end.

8. Plastic Pipe: ASTM D3034, Type PSM, Poly(Vinyl Chloride) (PVC) SDR-26 material; inside nominal diameter of 4 to 24 inches, bell and spigot style rubber ring sealed gasket joint.

9. Corrugated Steel Pipe: AASHTO M36; nominal diameter of 12 to 60 inches, end joints; helical lock seam; coated inside and out with 0.050 inch thick bituminous coating.

10. Corrugated Steel Pipe Coupling Bands: Galvanized steel, 0.052 inches thick x 10 inches wide; connected with two neoprene "O" ring gaskets and two galvanized steel bolts.

11. Perforated Plastic Pipe: ASTM D3034, PVC with perforations.

B. Liner:

1. 30 mil polypropylene liner.

2.2 ACCESSORIES

A. Fittings: Same material as pipe molded or formed to suit pipe size and end design, in required tee, bends, elbows, cleanouts, reducers, traps and other configurations required.

B. Grout: Specified in Section 03 30 00.

2.3 CATCH BASINS AND PLANT AREA DRAINS

A. NEW - As specified on the drawings.

B. EXISTING – Adjust as specified on the drawings. For inlets in pedestrian areas, ensure grates are ADA compliant. Replace non-compliant grates as necessary.

2.4 CLEANOUTS

A. As specified on the drawings.

2.5 BEDDING AND COVER MATERIALS

A. Bedding: Fill as specified by pipe manufacturer and approved by Soils Engineer.

B. Cover: Fill as specified in the project Soils Report and any supplements to the Soils Report.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 06 00 - Administrative Requirements: Coordination and project conditions.

B. Verify that trench cut is ready to receive work and excavations, dimensions, and elevations are as indicated on drawings.

3.2 PREPARATION

A. Hand trim excavations to required elevations. Correct over excavation with bedding material.

B. Remove large stones or other hard matter which could damage piping or impede consistent backfilling or compaction.

3.3 BEDDING

A. Excavate pipe trench in accordance with Section 31 23 16.13 for work of this Section. Hand trim excavation for accurate placement of pipe to elevations indicated.

B. Place bedding material at trench bottom, level materials in continuous layer not exceeding 6 inches compacted depth.

C. Maintain optimum moisture content of bedding material to attain required compaction density.

3.4 INSTALLATION - PIPE

A. Install pipe, fittings, and accessories in accordance with ASTM D2321. Seal joints watertight.

B. Lay pipe to slope gradients noted on drawings with maximum variation from true slope of 1/8 inch in 10 feet.

C. Perforated pipe shall be installed with perforations down.

D. Install trench fill at sides and over top of pipe. Provide top cover to minimum compacted thickness of 12 inches, compact to 95 percent.

E. Refer to Section 31 23 23.13 for backfilling and compacting requirements. Do not displace or damage pipe when compacting.

F. Refer to Section 33 49 13 for manhole requirements.

3.5 INSTALLATION - CATCH BASINS AND CLEANOUTS

A. Form bottom of excavation clean and smooth to correct elevation.

B. Form and place Cast-In-Place Concrete base pad, with provision for storm sewer pipe end sections.

C. Level top surface of base pad; sleeve concrete shaft sections to receive storm sewer pipe sections.

D. Establish elevations and pipe inverts for inlets and outlets as indicated.

E. Mount lid and frame level in grout, secured to top cone section to elevation indicated.

3.6 INSTALLATION – BIO-RETENTION FACILITIES

A. Form bottom of excavation smooth to correct elevation.

B. Install welded seam 30 mil polypropylene liner in basin bottom.

C. Install Class II permeable material minimum 2” under perforated pipe.

D. Install remainder of Class II permeable material.

E. Install Mirafi Filber Fabric over permeable materials.

F. Install top soil.

3.7 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Testing and inspection services.

B. Request inspection prior to and immediately after placing aggregate cover over pipe.

C. Compaction testing will be performed in accordance with ASTM D1557.

D. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to owner.

3.8 INSTALLATION, FLUSHING & CLEANING

A. All new pipe installed and existing pipe connected to shall be flushed, cleaned and videoed for at least 200 feet downstream, or to the next downstream inlet or manhole, whichever is farther, of last point of connection to ensure clean and functioning system.

3.9 PROTECTION OF FINISHED WORK

A. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.

1. Take care not to damage or displace installed pipe and joints during construction of pipe supports, backfilling, testing, and other operations.

2. Where pipe is damaged or displaced, take remedial measures as directed by the Architect/Engineer including, but not limited to, retesting of joints, relaying pipe or replacing pipe. Provide remedial measures at no additional cost to the Owner.

END OF SECTION 33 40 00

SECTION 33 49 13 – STORM DRAINAGE MANHOLES, FRAMES, AND COVERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Modular precast concrete manhole sections with tongue-and-groove joints, covers, anchorage, and accessories.

B. Related Sections:

1. Section 31 23 00 - Excavation and Fill.
2. Section 31 23 23.13 - Backfill.
3. Section 03 30 00 - Cast-In-Place Concrete.

1.2 REFERENCES

A. ACI (American Concrete Institute) 318 - Building Code Requirements for Reinforced Concrete.

B. ASTM A48 - Gray Iron Castings.

C. ASTM A536 - Ductile Iron Castings.

D. ASTM C39 - Test Method for Compressive Strength of cylindrical Concrete Specimens.

E. ASTM C478 - Precast Reinforced Concrete Manhole Sections.

F. ASTM C923 - Resilient Connectors Between Reinforced Concrete Manhole Structures and Pipes.

1.3 DESIGN REQUIREMENTS

A. Equivalent strength shall be based on structural design of reinforced concrete as outlined in ACI 318.

B. Design of lifting devices for precast structures shall conform to ASTM C 913.

C. Design of joints for precast structures shall conform to ASTM C 913.

1.4 SUBMITTALS

A. Section 01 34 00 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate manhole locations, elevations, piping, and sizes and elevations of

penetrations.

C. Product Data: Submit manhole covers, component construction, features, configuration, and dimensions.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with local municipality Public Work's standard.

B. Maintain one copy of each document on site.

1.6 DELIVERY, STORAGE AND HANDLING

A. Section 01 63 10 - Product Requirements: Product storage and handling requirements.

B. Comply with precast concrete manufacturer’s instructions for unloading, storing and moving precast manholes and drainage structures.

C. Store precast concrete manholes and drainage structures to prevent damage to the Owner’s property or other public or private property, and any property so damaged shall be repaired at the Contractor’s expense.

D. Clearly mark each precast structure by indentation or waterproof paint to indicate the date of manufacture, manufacturer and identifying symbols and/or numbers shown on the Contract Drawings to indicate its intended use.

PART 2 - PRODUCTS

2.1 MANHOLES, FRAMES, AND COVERS

A. As specified by the local municipality.

2.2 COMPONENTS

A. As specified by the local municipality.

2.3 CONFIGURATION

A. As specified by the local municipality.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 06 00 - Administrative Requirements: Coordination and Project Conditions.

B. Verify items provided by other sections of Work are properly sized and located.

C. Verify that built-in items are in proper location, and ready for roughing into Work.

D. Verify excavation for manholes is correct.

3.2 PREPARATION

A. Coordinate placement of inlet and outlet pipe or duct sleeves required by other sections.

B. Do not install structures under site conditions known to result in loads heavier than that for which the structure was designed.

C. Inspect precast concrete structures immediately prior to placement in the excavation to verify that they are internally clean and free from damage. Remove damaged units from the construction site and replaced, at no additional cost to the Owner.

3.3 INSTALLATION

A. Excavation and Backfill:

1. Excavate for manholes and drainage structures in accordance with Section 31 23 00 in the location and to depth shown. Provide clearance around the sidewalls of the structure as required for construction.

2. If groundwater is encountered, prevent accumulation of water in excavations. Place manholes or drainage structures in a dry trench.

3. Where the possibility exists of a watertight structure becoming buoyant in a flooded excavation, take necessary steps to avoid flotation of the structure.

B. Place base pad, trowel top surface level.

C. Place manhole sections plumb and level, trim to correct elevations, anchor to base pad.

D. Backfill excavations for manholes and drainage structures in accordance with Section 31 23 00.

E. Form and place manhole cylinder plumb and level, to correct dimensions and elevations.

F. Cut and fit for pipe.

G. Grout base of shaft sections to achieve slope to exit piping. Trowel smooth. Contour as required.

H. Set cover frames and covers level without tipping, to correct elevations.

I. Coordinate with other sections of Work to provide correct size, shape, and location.

3.4 PRECAST CONCRETE MANHOLE AND DRAINAGE STRUCTURE INSTALLATION

A. To ensure safety, lift precast structures at the lifting points designated by the manufacturer.

B. When lowering manholes and drainage structures into the excavations and joining pipe to the units, take precautions to ensure that the interior of the pipeline and structure remains clean.

C. Set precast structures so that they firmly and fully bear on crushed stone bedding, compacted in accordance with the provisions of Sections 31 23 00 and 31 23 23.13, or on other support system shown on the Contract Drawings.

D. Assemble multi-section structures by lowering each section into the excavation. Lower, set level, and firmly position the base section before placing additional sections.

E. Ensure joint integrity by removing all foreign materials from joint surfaces and verifying that sealing materials are placed properly. Avoid misalignment by using guide devices affixed to the lower section.

F. Joint sealing materials may be installed at the site or at the manufacturer's plant.

G. Verify that manholes and drainage structures installed satisfy required alignment and grade.

H. Remove knockouts or cut structure to receive piping so as not to create openings more than that required to receive pipe. Fill annular space with mortar.

I. Cut pipe to finish flush with interior of structure.

J. Shape inverts through manhole as shown on the Contract Drawings.

3.5 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Control: Testing and inspection services.

B. Field tests will be used to evaluate and approve cast-in-place concrete in accordance with Section 03 30 00.

C. Vertical Adjustment of Existing Manhole and Drainage Structures:

1. Where required, adjust the top elevation of existing manholes and drainage structures to suit finished grades shown on the Contract Drawings.

2. Reset existing frames, grates and covers, carefully removed, cleaned of all mortar fragments, to the required elevation in accordance with the requirements specified for installation of castings.

3. Remove the concrete so as not to damage the existing vertical reinforcing bars when removal of an existing concrete wall is required. The vertical bars shall be cleaned of all concrete and bent into the new concrete top slab or spliced to required vertical reinforcement, as shown on the Contract Drawings.

4. Clean and apply sand-cement bonding compound on all existing concrete surfaces to receive cast-in-place concrete. Sand-cement bonding compound and its application shall be in accordance with Section 03 30 00.

END OF SECTION 33 49 13